SECTION 4.2
AIR QUALITY

This section identifies federal, state and local regulations applicable to air quality and describes the environmental setting with regard to compliance with applicable standards. This section also analyzes potential air quality impacts associated with construction and operation of the proposed Project. Information contained in this section is summarized from the "Air Quality and Greenhouse Gas Impact Analysis" (AMBIENT 2018), prepared by AMBEINT Air Quality & Noise Consulting. This document and supporting attachments are provided as **Appendix B** on the attached CD of Technical Appendices of this EIR.

As an introduction to understanding the assessment air quality impacts, information regarding pollutants and health effects is provided.

HUMAN HEALTH & WELFARE EFFECTS

Table 4.2-1 summarizes common air pollutants and associated adverse health and welfare effects. Within the Salton Sea Air Basin (SSAB), the air pollutants of primary concern, with regard to human health, include Ozone (O3), Particulate Matter (PM) and Carbon Monoxide (CO). As noted in **Table 4.2-1**, exposure to increased pollutant concentrations of ozone, PM and CO can result in various heart and lung ailments, cardiovascular and nervous system impairment, and death.

TABLE 4.2-1
COMMON POLLUTANTS AND ADVERSE EFFECTS

Pollutant	Human Health & Welfare Effects
Particulate Matter (PM10 & PM2.5)	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; non-fatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
Ozone (O3)	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield. Damages rubber, some textiles and dyes.
Sulfur Dioxide (SO2)	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel; damage crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Carbon Monoxide (CO)	Reduces the ability of blood to deliver oxygen to vital tissues, effecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO2)	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to global warming, and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Lead (Pb)	Anemia, high blood pressure, brain and kidney damage, neurological disorders, cancer, lowered IQ. Affects animals, plants, and aquatic ecosystems.

Source: CAPCOA 2018.

A. ODORS

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from the psychological (i.e. irritation, anger, or anxiety) to the physiological, including circulatory and respiratory effects, nausea, vomiting, and headache.

The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals can smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor and in fact an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word strong to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Neither the state nor the federal governments have adopted rules or regulations for the control of odor sources. The Imperial County Air Pollution Control District (ICAPCD) does not have an individual rule or regulation that specifically addresses odors; however, odors would be applicable to ICAPCD's *Rule 407, Nuisance*. Any actions related to odors would be based on citizen complaints to local governments and the ICAPCD. The ICAPCD recommends that odor impacts be addressed in a qualitative manner. Such an analysis shall determine if the Project results in excessive nuisance odors, as defined under the California Code of Regulations, Health & Safety Code Section 41700, air quality public nuisance.

B. Toxic Air Contaminants

Toxic air contaminants (TACs) are air pollutants that may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air, but due to their high toxicity, they may pose a threat to public health even at very low concentrations. Because there is no threshold level below which adverse health impacts are not expected to occur, TACs differ from criteria pollutants for which acceptable levels of exposure can be determined and for which state and federal governments have set ambient air quality standards. TACs, therefore are not considered "criteria pollutants" under either the Federal Clean Air Act (FCAA) or the California Clean Air Act (CCAA) and are thus not subject to National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). TACs are not considered criteria pollutants in that the FCAA and CCAA do not address them specifically through the setting of NAAQS or CAAQS. Instead, the United States Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (CARB) regulate Hazardous Air Pollutants (HAPs) and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology to limit emissions. In conjunction with District rules, these federal and state statutes and regulations establish the regulatory framework for TACs. At the national levels, the U.S. EPA has established National Emission Standards for HAPs (NESHAPs), in accordance with the requirements of the FCAA and subsequent amendments. These are technology-based source-specific regulations that limit allowable emissions of HAPs.

Within California, TACs are regulated primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and

scientific peer review before ARB designates a substance as a TAC. Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

At the state level, the ARB has authority for the regulation of emissions from motor vehicles, fuels, and consumer products. Most recently, Diesel-exhaust particulate matter (DPM) was added to the ARB list of TACs. DPM is the primary TACs of concern for mobile sources. Of all controlled TACs, emissions of DPM are estimated to be responsible for about 70 percent of the total ambient TAC risk. The ARB has made the reduction of the public's exposure to DPM one of its highest priorities, with an aggressive plan to require cleaner diesel fuel and cleaner diesel engines and vehicles (CARB 2005).

At the local level, air districts have the authority over stationary or industrial sources. All projects that require air quality permits from the ICAPCD are evaluated for TAC emissions. The ICAPCD limits emissions and public exposure to TACs through several programs. The ICAPCD prioritizes TAC-emitting stationary sources, based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. The ICAPCD requires a comprehensive health risk assessment for facilities that are classified in the significant-risk category, pursuant to AB 2588. No major existing sources of TACs have been identified in the Project area.

C. ASBESTOS

The term "asbestos" describes naturally occurring fibrous minerals found in certain types of rock formations. It is a mineral compound of silicon, oxygen, hydrogen, and various metal cations. When mined and processed, asbestos is typically separated into very thin fibers. When these fibers are present in the air, they are normally invisible to the naked eye. Once airborne, asbestos fibers can cause serious health problems. If inhaled, asbestos fibers can impair normal lung functions, and increase the risk of developing lung cancer, mesothelioma, or asbestosis.

Naturally-occurring asbestos, which was identified as a TAC in 1986 by ARB, is located in many parts of California and is commonly associated with ultramafic rock. The Project site is not located in an area of known or suspected naturally-occurring asbestos (CARB n.d.).

D. VALLEY FEVER

Valley fever is an infection caused by the fungus *Coccidioides*. The scientific name for valley fever is "coccidioidomycosis," and it's also sometimes called "desert rheumatism." The term "valley fever" usually refers to *Coccidioides* infection in the lungs, but the infection can spread to other parts of the body in severe cases.

Coccidioides spores circulate in the air after contaminated soil and dust are disturbed by humans, animals, or the weather. The spores are too small to see without a microscope. When people breathe in the spores, they are at risk for developing valley fever. After the spores enter the lungs, the person's body temperature allows the spores to change shape and grow into spherules. When the spherules get large enough, they break open and releases smaller pieces (called endospores) which can then potentially spread within the lungs or to other organs and grow into new spherules. In extremely rare cases, the fungal spores can enter the skin through a cut, wound, or splinter and cause a skin infection.

Symptoms of valley fever may appear between 1 and 3 weeks after exposure. Symptoms commonly include: fatigue, coughing, fever, shortness of breath, headaches, night sweats, muscle aches and joint pain, and rashes on upper body or legs.

Approximately 5 to 10 percent of people who get valley fever will develop serious or long-term problems in their lungs. In an even smaller percent of people (about 1 percent), the infection spreads from the lungs

to other parts of the body, such as the central nervous system (brain and spinal cord), skin, or bones and joints. Certain groups of people may be at higher risk for developing the severe forms of valley fever, such as people who have weakened immune systems. The fungus that causes valley fever, *Coccidioides*, can't spread from the lungs between people or between people and animals. However, in extremely rare instances, a wound infection with *Coccidioides* can spread valley fever to someone else, or the infection can be spread through an organ transplant with an infected organ.

For many people, the symptoms of valley fever will go away within a few months without any treatment. Healthcare providers choose to prescribe antifungal medication for some people to try to reduce the severity of symptoms or prevent the infection from getting worse. Antifungal medication is typically given to people who are at higher risk for developing severe valley fever. The treatment typically occurs over a period of roughly 3 to 6 months. In some instances, longer treatment may be required. If Valley fever develops into meningitis life-long antifungal treatment is typically necessary.

Between the years 1998 to 2012, nearly 130,000 valley fever cases were reported to the Centers for Disease Control (CDC). In states where valley fever is endemic and reportable (Arizona, California, Nevada, New Mexico, and Utah), overall incidence in 2011 was 42.6 cases per 100,000 population and was highest among persons aged 60-79 years.

Scientists continue to study how weather and climate patterns affect the habitat of the fungus that causes valley fever. *Coccidioides* is thought to grow best in soil after heavy rainfall and then disperse into the air most effectively during hot, dry conditions. For example, hot and dry weather conditions have been shown to correlate with an increase in the number of valley fever cases in Arizona and in California. The ways in which climate change may be affecting the number of Valley fever infections, as well as the geographic range of *Coccidioides*, isn't known yet, but is a subject for further research.

4.2.1 REGULATORY FRAMEWORK

A. FEDERAL

Air quality within the SSAB is regulated by several jurisdictions including the U.S. EPA, ARB, and the ICAPCD. Each of these jurisdictions develops rules, regulations, and policies to attain the goals or directives imposed upon them through legislation. Although U.S. EPA regulations may not be superseded, both state and local regulations may be more stringent.

U.S. Environmental Protection Agency

At the federal level, the U.S. EPA has been charged with implementing national air quality programs. The U.S. EPA's air quality mandates are drawn primarily from the FCAA, which was signed into law in 1970. Congress substantially amended the FCAA in 1977 and again in 1990.

Clean Air Act

The FCAA required the U.S. EPA to establish NAAQS and set deadlines for their attainment. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect public welfare from non-health-related adverse effects, such as visibility restrictions. **Table 4.2-2** summarizes the NAAQS.

The FCAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The FCAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution.

TABLE 4.2-2
SUMMARY OF AMBIENT AIR QUALITY MONITORING DATA

Pollutant	Monitoring Year[1]		
	2014	2015	2016
Ozone			
Maximum concentration (1-hour/8-hour average)	0.105/0.086	0.106/0.082	0.098/0.077
Number of days state/national 1-hour standard exceeded	5/0	2/0	2/0
Number of days state/national 8-hour standard exceeded	13/11	13/12	9/9
Nitrogen Dioxide (NO_2)			
Maximum concentration (1-hour average)	93.6	83.4	84.5
Annual average	NA	11	11
Number of days state/national standard exceeded	0/0	0/0	0/0
Suspended Particulate Matter ($PM_{2.5}$)			
Maximum concentration (state/national)	51.7	87.1	45.3
Annual Average (national/state)	13.7/14.0	11.5/13	12.5/13
Number of days national standard exceeded (measured/calculated)[2]	9/9.9	3/3.5	4/4.5
Suspended Particulate Matter (PM_{10})			
Maximum concentration	131.8	134.2	66.4
Number of days state standard exceeded (measured/calculated)[2]	19/NA	21/128.2	188/NA
Number of days national standard exceeded (measured/calculated)[2]	0/0	0/0	0/NA

Source: ARB 2018 in AMBIENT 2018.

ppm = parts per million by volume, µg/m^3 = micrograms per cubic meter, NA=Not Available

1 Based on ambient concentrations obtained from the Calexico-Ethel Street Monitoring Station.

2. Measured days are those days that an actual measurement was greater than the standard. Calculated days are estimated days that a measurement would have exceeded the standard had measurements been collected every day.

The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The U.S. EPA has responsibility to review all state SIPs to determine conformance with the mandates of the FCAA, and the amendments thereof, and determine if implementation will achieve air quality goals. If the U.S. EPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area that imposes additional control measures.

National Ambient Air Quality Standards

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

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

Table 4.2-3 identifies the federal air quality standard for specific pollutants.

TABLE 4.2-3
SUMMARY OF AMBIENT AIR QUALITY STANDARDS AND ATTAINMENT DESIGNATIONS

Pollutant	Averaging Time	California Standards*		National Standards*	
		Concentration*	Attainment Status	Primary	Attainment Status
Ozone (O_3)	1-hour	0.09 ppm	Non-Attainment	–	Non-Attainment (Moderate)
	8-hour	0.070 ppm		0.075 ppm	
Particulate Matter (PM_{10})	AAM	20 µg/m3	Non-Attainment	–	Non-Attainment (Serious)
	24-hour	50 µg/m3		150 µg/m3	
Fine Particulate Matter ($PM_{2.5}$)	AAM	12 µg/m3	Attainment	15 µg/m3	Non-Attainment
	24-hour	No Standard		35 µg/m3	
Carbon Monoxide (CO)	1-hour	20 ppm	Attainment	35 ppm	Attainment/ Maintenance
	8-hour	9 ppm		9 ppm	
	8-hour (Lake Tahoe)	6 ppm		–	
Nitrogen Dioxide (NO_2)	AAM	0.030 ppm	Attainment	0.053 ppm	Attainment/ Unclassified
	1-hour	0.18 ppm		0.100 ppb	
Sulfur Dioxide (SO_2)	AAM	–	Attainment	0.03 ppm	Attainment/ Unclassified
	24-hour	0.04 ppm		0.14 ppm	
	3-hour	–		--	
	1-hour	0.25 ppm		75 ppb	
Lead	30-day Average	1.5 µg/m3	Attainment	–	No Designation/ Classification
	Calendar Quarter	–		1.5 µg/m3	
	Rolling 3-Month Average	–		0.15 µg/m3	
Sulfates	24-hour	25 µg/m3	Attainment	No Federal Standards	
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m3)	Unclassified		
Vinyl Chloride	24-hour	0.01 ppm (26 µg/m3)	Attainment		
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient: 0.23/kilometer-visibility of 10 miles or more (0.07-30 miles or more for Lake Tahoe) due to particles when the relative humidity is less than 70%.	Unclassified		

Source: ARB 2017; ICAPCD 2018
** For more information on standards visit :http//ww.arb.ca.gov.research/aaqs/aaqs2.pdf*
*** No federal 1-hour standard. Reclassified extreme nonattainment for the federal 8-hour standard May 5, 2010.*
****Secondary Standard*

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) first authorized the U.S. EPA to regulate asbestos in schools and Public and Commercial buildings under Title II of the law, which is also known as the Asbestos Hazard Emergency Response Act (AHERA). AHERA requires Local Education Agencies (LEAs) to inspect their schools for Asbestos Containing Building Materials (ACBM) and prepare management plans to reduce the asbestos hazard. AHERA also established a program for the training and accreditation of individuals performing certain types of asbestos work.

National Emission Standards for Hazardous Air Pollutants

Pursuant to the FCAA of 1970, the U.S. EPA established the National Emission Standards for Hazardous Air Pollutants (NESHAP). These are technology-based source-specific regulations that limit allowable emissions of HAPs.

B. STATE

California Air Resources Board

The ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the CCAA of 1988. Other ARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control districts and air quality management districts, establishing NAAQS, which in many cases are more stringent than the CAAQS and setting emissions standards for new motor vehicles. The CAAQS are summarized in **Table 4.2-3**, above. The emission standards established for motor vehicles differ depending on various factors including the model year, and the type of vehicle, fuel and engine used.

California Clean Air Act

Regulatory Attainment Designations

The CCAA requires that all air districts in the state endeavor to achieve and maintain CAAQS for Ozone, CO, SO_2, and NO_2 by the earliest practical date. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. Each district plan is required to either (1) achieve a five percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or (2) to provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

Under the CCAA, the ARB is required to designate areas of the state as attainment, nonattainment, or unclassified with respect to applicable standards. An "attainment" designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A "nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An "unclassified" designation signifies that the data does not support either an attainment or nonattainment designation. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The U.S. EPA designates areas for ozone, CO, and NO_2 as "does not meet the primary standards," "cannot be classified," or "better than national standards." For SO_2, areas are designated as "does not meet the primary standards," "does not meet the secondary standards," "cannot be classified," or "better than

national standards." However, the ARB terminology of attainment, nonattainment, and unclassified is more frequently used. The U.S. EPA uses the same sub-categories for nonattainment status: serious, severe, and extreme. In 1991, U.S. EPA assigned new nonattainment designations to areas that had previously been classified as Group I, II, or III for PM_{10} based on the likelihood that they would violate national PM_{10} standards. All other areas are designated "unclassified."

The state and national attainment status designations pertaining to the SSAB are summarized in **Table 4.2-3**. The SSAB is currently designated as a nonattainment area with respect to the state PM_{10} and ozone standards. The SSAB is designated nonattainment for the national 8-hour ozone, PM_{10}, and $PM_{2.5}$ standards (CARB 2015).

Assembly Bills 1807 & 2588 - Toxic Air Contaminants

Within California, TACs are regulated primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics Hot Spots Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB designates a substance as a TAC. Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

B. LOCAL

Imperial County Air Pollution Control District (ICAPCD)

The ICAPCD is the agency primarily responsible for ensuring that NAAQS and CAAQS are not exceeded and that air quality conditions are maintained in the SSAB, within which the proposed project is located. Responsibilities of the ICAPCD include, but are not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by the FCAA and the CCAA.

City of Calexico General Plan

The Calexico General Plan has been prepared to fulfill the requirement of California law that each city adopt a comprehensive General Plan to guide physical development of the incorporated area and land outside of the municipal boundaries. Calexico's current General Plan dated February 2007 was adopted by the City on May 1, 2007. The General Plan does not contain any goals, objectives or policies that directly address air quality. Therefore, a General Plan consistency analysis is not possible as it relates to air quality.

4.2.2 ENVIRONMENTAL SETTING

A. TOPOGRAPHY, CLIMATE, AND POLLUTANT DISPERSION

The dispersion of air pollution in an area is determined by such natural factors as topography, meteorology, and climate, coupled with atmospheric stability conditions and the presence of inversions. The factors affecting the dispersion of air pollution with respect to the SSAB are discussed below.

Topography

Imperial County extends over 4,482 square miles in the southeastern corner of California. It is bordered on the south by Mexico, on the east by Arizona, on the west by the Coyote and Fish Creek Mountains

(which are in San Diego County), and on the north by Riverside County. The Salton Trough generally aligns northwest-southeast through the center of the county and extends into Mexico. The elevation in Imperial County ranges from about 230 feet below sea level in the Salton Sea to the north to more than 2,800 feet on the mountain summits to the east (ICAPCD 2010).

Climate

Winters are mild and dry with daily average temperature ranges between 65 and 75ºF (18-24ºC). During winter months it is not uncommon to record maximum temperatures of up to 80ºF. Summers are extremely hot with daily average temperature ranges between 104 and 115ºF (40-46ºC). It is not uncommon, during summer months, to record maximum temperatures of 120ºF. The annual rainfall is just over 3 inches (7.5 cm) with most of it coming in late summer or midwinter (ICAPCD 2010).

Climatic conditions in the Imperial County are governed by the large-scale sinking and warming of air in the semi-permanent tropical high-pressure center of the Pacific Ocean. The high-pressure ridge blocks out most mid-latitude storms except in the winter months when the high is weakest and farthest south. The coastal mountains prevent the intrusion of any cool, damp air found in California coastal environs. Because of the weakened storms and barrier, the Imperial County experiences clear skies, extremely hot summers, mild winters, and little rainfall. The flat terrain of the valley and the strong temperature differentials created by intense solar heating, produce moderate winds and deep thermal convection (ICAPCD 2010). The combination of subsiding air, protective mountains, and distance from the ocean all combine to severely limit precipitation. Rainfall is highly variable with precipitation from a single heavy storm exceeding the entire annual total during a later drought condition. The Imperial County enjoys a year-round climate characterized by a temperate fall, winter and spring and a harsh summer. Humidity often combines with the valley's normal high temperatures to produce a moist, tropical atmosphere that frequently seems hotter than the thermometer suggests. The sun shines, on the average, more in the Imperial County that anywhere else in the United States (ICAPCD 2010).

Humidity

Humidity is low throughout the year, ranging from 28 percent in summer to 52 percent in winter. The large daily oscillation of temperature produces a corresponding large variation in the relative humidity. Nocturnal humidity rises to 50 to 60 percent but drops to about 10 percent during the day. Summer weather patterns are dominated by intense heat induced low-pressure areas that form over the interior desert (ICAPCD 2010).

Typical Weather Patterns

The wind direction follows two general patterns. The prevailing winds are from the west and northwest seasonally from fall through spring. These originating prevailing winds are known to be from the Los Angeles area (ICAPCD 2010).

Occasionally Imperial County experiences periods of extremely high wind speeds. Wind speeds can exceed 31 mph occurring most frequently during the months of April and May. However, speeds of less than 6.8 mph account for more than one-half of the observed wind measurements. Wind statistics indicate prevailing winds are from the west-northwest through southwest; a secondary flow maximum from the southeast is also evident (ICAPCD 2010).

Pollutant Dispersion

Air pollutant concentrations are primarily determined by the amount of pollutant emissions in an area and the degree to which these pollutants are dispersed in the atmosphere. The stability of the atmosphere is one of the key factors affecting pollutant dispersion. Atmospheric stability regulates the amount of vertical and horizontal air exchange, or mixing, that can occur within a given air basin. Restricted mixing

and low wind speeds are generally associated with a high degree of stability in the atmosphere. These conditions are characteristic of temperature inversions (ICAPCD 2010).

In the atmosphere, air temperatures normally decrease as altitude increases. At varying distances above the earth's surface, however, a reversal of this gradient can occur. This condition, termed an inversion, is simply a warm layer of air above a layer of cooler air, and it has the effect of limiting the vertical dispersion of pollutants. The height of the inversion determines the size of the mixing volume trapped below. Inversion strength or intensity is measured by the thickness of the layer and the difference in temperature between the base and the top of the inversion. The strength of the inversion determines how easily it can be broken by winds or solar heating (ICAPCD 2010).

Imperial County experiences surface inversions almost every day of the year. Due to strong surface heating, these inversions are usually broken allowing pollutants to be more easily dispersed. Weak, surface inversions are caused by radiational cooling of air in contact with the cold surface of the earth at night. In valleys and low-lying areas this condition is intensified by the addition of cold air flowing down slope from the hills and pooling on the valley floor (ICAPCD 2010).

The presence of the Pacific high-pressure cell can cause the air to warm to a temperature higher than the air below. This highly stable atmospheric condition, termed a subsidence inversion can act as a nearly impenetrable lid to the vertical mixing of pollutants. The strength of these inversions makes them difficult to disrupt. Consequently, they can persist for one or more days, causing air stagnation and the buildup of pollutants. Highest or worst-case ozone levels are often associated with the presence of this type of inversion (ICAPCD 2010).

A. AMBIENT AIR QUALITY

Air pollutant concentrations are measured at several monitoring stations in Imperial County. The Calexico-Ethel Street Monitoring Station is the closest representative monitoring site to the proposed project site with sufficient data to meet U.S. EPA and/or ARB criteria for quality assurance. Ambient monitoring data were obtained for the last three years of available measurement data (i.e., 2014 through 2016) and are summarized in **Table 4.2-2**. As depicted, the state ozone, $PM_{2.5}$, and PM_{10}; as well as, federal ozone and $PM_{2.5}$ standards were exceeded on numerous occasions during the past 3 years.

B. SENSITIVE RECEPTORS

One of the most important reasons for air quality standards is the protection of those members of the population who are most sensitive to the adverse health effects of air pollution, termed "sensitive receptors." The term sensitive receptors refer to specific population groups, as well as the land uses where individuals would reside for long periods. Commonly identified sensitive population groups are children, the elderly, the acutely ill, and the chronically ill. Commonly identified sensitive land uses would include facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Residential dwellings, schools, parks, playgrounds, childcare centers, convalescent homes, and hospitals are examples of sensitive land uses.

Land uses in the vicinity of the project site consist predominantly of industrial land uses and vacant land. The nearest sensitive land use is the Small World Montessori School, which is located approximately 850 feet northeast of the Project site, along Portico Boulevard. In addition, residential land uses are located approximately 1,325 feet to the south, along Weakley Street, and approximately 2,700 feet to the west, along Kloke Road.

4.2.3 IMPACTS AND MITIGATION MEASURES

A. STANDARDS OF SIGNIFICANCE

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

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

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

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

d) Expose sensitive receptors to substantial pollutant concentrations.

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

To assist local jurisdictions in the evaluation of air quality impacts, the ICAPCD has published the *Air Quality Handbook* (ICAPCD 2017). This guidance document includes recommended thresholds of significance to be used for the evaluation of short-term construction, long-term operational, odor, toxic air contaminant, and cumulative air quality impacts. Accordingly, the ICAPCD-recommended thresholds of significance are used to determine whether implementation of the proposed project would result in a significant air quality impact. Projects that exceed these recommended thresholds would be considered to have a potentially significant impact to human health and welfare. The thresholds of significance are summarized, as follows:

Short-term Construction

Construction-generated emissions exceeding the levels identified in **Table 4.2-4** would be considered to have a potentially significant air quality impact that could conflict with or obstruct the implementation of the applicable air quality plan (ICAPCD 2017).

TABLE 4.2-4
ICAPCD THRESHOLDS OF SIGNIFICANCE FOR CONSTRUCTION ACTIVITIES

Pollutant	Emissions (lbs/day)
PM_{10}	150
ROG	75
NO_X	100
CO	550

Source: ICAPCD 2017.

Long-term Operation

Operational emissions exceeding the levels identified in **Table 4.2-5** would be considered to have a potentially significant air quality impact that could conflict with or obstruct the implementation of the applicable air quality plan (ICAPCD 2017).

TABLE 4.2-5
ICAPCD THRESHOLDS OF SIGNIFICANCE FOR PROJECT OPERATIONS

Pollutant	Emissions (lbs/day)	
	Tier I Threshold	Tier II Threshold
NO_X & ROG	<137	≥137
PM_{10} & SO_X	<150	≥150
CO & $PM_{2.5}$	<550	≥550

Source: ICAPCD 2017.
Excludes emissions from stationary sources applicable to ICAPCD permitting requirements. Stationary source emissions are subject to mitigation per ICAPCD Rule 207, New and Modified Stationary Source Review and Rule 201. In accordance with ICAPCD recommendations, emissions associated with stationary sources are quantified in this analysis but are excluded from comparison to these thresholds. Tier I requires implementation of applicable ICAPCD standard mitigation measures, with the exception of "no impact" determinations. Tier II requires implementation of applicable ICAPCD standard mitigation measures, as well as, applicable discretionary mitigation measures.

Local Mobile-Source CO Concentrations

Local mobile source impacts associated with the proposed Project would be considered significant if the project contributes to CO concentrations at receptor locations in excess of the CAAQS (i.e., 9.0 ppm for 8 hours or 20 ppm for 1 hour).

Odor Impacts

Odor impacts associated with the proposed Project would be considered significant if the project has the potential to frequently expose members of the public to objectionable odors.

Localized Pollutant Concentrations

Exposure to localized pollutant concentrations would be considered potentially significant if the project would result in exposure of sensitive receptors to concentrations that would exceed applicable thresholds. Exposure to TACs would be considered significant if the probability of contracting cancer for the Maximally Exposed Individual (i.e., maximum individual risk) would exceed 10 in 1 million or would result in a Hazard Index greater than 1.

B. ISSUES SCOPED OUT AS PART OF THE INITIAL STUDY

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

C. METHODOLOGY

Short-Term Construction

The proposed project will be developed in phases. The initial phase, which would begin in 2018, would include the renovation of Building A and construction of the transportation office, administration office, and guard shack. Construction of Building B and Building C would begin in 2019. Building D would be constructed in 2020.Construction activities associated with each of the major construction phases would occur over an approximate 6-month period.

Construction emissions were quantified using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. Emissions were quantified based on construction schedules identified by the project applicant and default parameters contained in the model for Imperial County. Mobile-source emissions were quantified assuming an average of 95% paved surface travel, per ICAPCD recommendations (Salas, pers. comm., 2018). The project site is located in an urbanized area that has already been graded. As a result, construction activities are anticipated to require minimal ground disturbance. The import and export of soil is not anticipated to be required. Localized air quality impacts associated with project construction would be

minor and were qualitatively assessed. Modeling assumptions and output files are included in Appendix A of the Air Quality & Greenhouse Gas Impact Analysis included as **Appendix B** of this EIR.

Long-term Operation

Long-term operational emissions associated with the proposed project were calculated using the CalEEMod, version 2016.3.2. Emissions modeling included mobile sources, area sources, energy use, landscape maintenance, and stationary-source operations. Vehicle trip generation rates were derived from the traffic analysis prepared for this project (LOS 2018). Stationary sources assumed the installation of four diesel-fueled emergency generators. Mobile-source emissions were quantified assuming an average of 95% paved surface travel, per ICAPCD recommendations (Salas, pers. comm., 2018). Modeling assumptions and output files are included in Appendix A of the Air Quality & Greenhouse Gas Impact Analysis included as **Appendix B** of this EIR.

D. Project Impacts and Mitigation Measures

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

Impact 4.2.1 Implementation of the proposed Project would increase air pollutant emissions during Project construction and operation. No criteria pollutant thresholds were calculated to be exceeded during either Project construction or operations. However, both construction and operational emissions could contribute to localized pollutant concentrations that could conflict with or obstruct the implementation of applicable air quality plans and exceed applicable air quality standards. This is considered a **potentially significant impact**.

Short-Term Construction

Construction-generated emissions occur for a temporary duration, lasting only as long as construction activities are underway. However, construction-generated emissions have the potential to represent a significant air quality impact. The construction of the proposed Project would result in the temporary generation of emissions associated with site grading and excavation, motor vehicle exhaust associated with construction equipment and worker trips, as well as the movement of construction equipment on unpaved surfaces. **Table 4.2-6** provides a summary of the maximum unmitigated daily emissions generated during construction.

Table 4.2-6
Short-Term Construction-Generated Emissions of Criteria Air Pollutants

Project Phase	Year	Maximum Daily Emissions (lbs/day)[1]				
		ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Building A Renovation, Guard Shack, Administration & Transportation Buildings	2018	6.2	11.6	8.4	10.3	1.6
Buildings B & C	2019	69.0	45.7	22.8	48.6	13.1
Building D	2020	62.1	18.4	14.7	23.8	4.1
Maximum Daily Emissions:		69.0	45.7	22.8	48.6	13.1
ICAPCD Tier 1 Significance Thresholds:		75	100	550	150	None
Exceeds Threshold?		No	No	No	No	--

Source: AMBIENT 2018.

1 Emissions were quantified using CalEEMod, version 2016.3.2. To be conservative, assumes buildings B and C could potentially be under construction simultaneously. Does not include implementation of dust control measures. Totals may not sum due to rounding.
Refer to Appendix A of the Air Quality & Greenhouse Gas Impact Analysis (**Appendix B** of this EIR) for modeling results and assumptions.

As noted in **Table 4.2-6**, the highest unmitigated daily emissions would total approximately 69 lbs/day of ROG, 46 lbs/day of NO_X, 23 lbs/day of CO, 49 lbs/day of PM_{10}, and 13 lbs/day of $PM_{2.5}$. As shown in the last row of **Table 4.2-6**, uncontrolled emissions would not exceed the ICAPCD's significance thresholds. However, construction emissions could contribute to localized pollutant concentrations that could exceed applicable air quality standards and, therefore, could conflict with or obstruct the implementation of applicable air quality plans. This is considered a **potentially significant impact**.

Long-term Operation

Long-term operation of the proposed Project would result in emissions generated by motor vehicle trips, energy use, routine landscape maintenance activities, and use of consumer products containing volatile organic compounds. The Project would also include the installation of four emergency diesel-fueled generators. These generators would be subject to ICAPCD permitting requirements and would only be operated in the event of a power outage. Per ICAPCD recommendations, permitted stationary sources are not included in the operational emissions assessment for comparison to ICAPCD-recommended thresholds of significance.

Estimated operational emissions are summarized in **Table 4.2-7**. As indicated, operation of the proposed Project would generate maximum daily emissions of approximately 5 lbs/day of ROG, 7 lbs/day of NO_X, 10 lbs/day of CO, 65 lbs/day of PM_{10} and 7 lbs/day of $PM_{2.5}$. Emissions of SO_X would be negligible. As noted, operational emissions would not exceed the ICAPCD's significance thresholds of 150 lbs/day of PM_{10}. Emissions would be predominantly associated with off-site vehicle travel.

TABLE 4.2-7
LONG-TERM OPERATIONAL EMISSIONS OF CRITERIA AIR POLLUTANTS

Source	Emissions (lbs/day)[1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	3.6	0.0	0.0	0.0	0.0	0.0
Energy Use	0.0	0.2	0.1	0.0	0.0	0.0
Transportation	0.9	7.1	10.0	0.0	65.3	6.7
Stationary	23.9	66.9	61.1	0.1	3.5	3.5
Total (Excluding Stationary):	4.5	7.3	10.1	0.0	65.3	6.7
ICAPCD Tier 1 Significance Thresholds	137	137	550	150	150	550
Exceed ICAPCD Thresholds?	No	No	No	No	No	No

Source: AMBIENT 2018.

1 Emissions were quantified using CalEEMod, version 2016.3.2. Emissions may not sum due to rounding.
Stationary sources are subject to permitting requirements and are not included for comparison to ICAPCD-recommended significance thresholds.
Assumes and average of 8 hours of operation daily for maintenance/testing purposes.
Refer to Appendix A of the Air Quality & Greenhouse Gas Impact Analysis (**Appendix B** of this EIR) for modeling results and assumptions.

For informational purposes, emissions from on-site emergency generators were calculated and are also identified in **Table 4.2-7**. Assuming an average-daily operational period of 8 hours for testing and maintenance purposes, the emergency generators would generate a total of approximately 24 lbs/day of ROG, 67 lbs/day of NO_X, 61 lbs/day of CO, 4 lbs/day of PM_{10} and 4 lbs/day of $PM_{2.5}$. Emissions of SO_X would be negligible.

Implementation of the proposed Project would not result in long-term increases in emissions that would exceed applicable ICAPCD-recommended thresholds of significance for regional air quality impacts. However, operational emissions could contribute to localized pollutant concentrations that could exceed applicable air quality standards and, therefore, could conflict with or obstruct the implementation of applicable air quality plans. This is considered a **potentially significant impact**.

Mitigation Measures

MM 4.2.1a The following mitigation measures shall be implemented to reduce short-term construction emissions:

a. All disturbed areas, including bulk material storage which is not being actively utilized, shall be effectively stabilized and visible emissions shall be limited to no greater than 20% opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps or other suitable material such as vegetative ground cover.

b. All on site and off site unpaved roads will be effectively stabilized and visible emissions shall be limited to no greater than 20% opacity for dust emissions by paving, chemical stabilizers, dust suppressants and/or watering.

c. All unpaved traffic areas one (1) acre or more with 75 or more average vehicle trips per day will be effectively stabilized and visible emission shall be limited to no greater than 20% opacity for dust emissions by paving, chemical stabilizers, dust suppressants and/or watering.

d. The transport of bulk materials shall be completely covered unless six inches of freeboard space from the top of the container is maintained with no spillage and loss of Bulk Material. In addition, the cargo compartment of all Haul Trucks is to be cleaned and/or washed at delivery site after removal of Bulk Material.

e. All Track-Out or Carry-Out will be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road within an Urban area.

f. Movement of Bulk Material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water, chemical stabilizers or by sheltering or enclosing the operation and transfer line.

g. The construction of any new Unpaved Road is prohibited within any area with a population of 500 or more unless the road meets the definition of a Temporary Unpaved Road. Any temporary unpaved road shall be effectively stabilized and visible emissions shall be limited to no greater than 20% opacity for dust emission by paving, chemical stabilizers, dust suppressants and/or watering.

h. Water exposed soil with adequate frequency for continued moist soil.

i. Replace ground cover in disturbed areas as quickly as possible

j. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.

j. Use of alternative fueled or catalyst equipped diesel construction equipment, including all off-road and portable diesel-powered equipment, to the extent available locally.

k. Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes as a maximum.

l. Limit, to the extent feasible, the hours of operation of heavy-duty equipment and/or the amount of equipment in use

m. To the extent locally available, use newer heavy-duty construction equipment meeting, at a minimum, U.S. EPA Tier 3 emission standards.

n. Replace fossil fueled equipment with electrically driven equivalents to the extent available locally (provided they are not run via a portable generator set)

Timing/Implementation: During Construction/Project contractor.
Enforcement/Monitoring: ICAPCD & City of Calexico Development Services Department.

MM 4.2.1b The following mitigation measures shall be implemented to reduce long-term operational emissions:

a. Provide on-site bicycle lockers and/or racks;

b. Provide on-site heating, refrigeration and food vending facilities to reduce lunchtime trips;

c. Provide shower and locker facilities to encourage employees to bike and/or walk to work;

d. Provide for paving a minimum of 100 feet from the property line for commercial driveways that access County paved roads as per County Standard Commercial Driveway Detail 410B (formerly SW-131A).

e. Incorporate measures which meet mandatory, prescriptive and/or performance measures as required by Title 24.

f. The use of volatile solvents for the manufacturing of cannabis shall be prohibited.

Timing/Implementation: During Operation/Applicant, Project Owner.
Enforcement/Monitoring: ICAPCD & City of Calexico Development Services Department.

Significance After Mitigation

Implementation of mitigation measures MM 4.2.1a (which includes ICAPCD-recommended standard mitigation measures for construction emissions) and MM 4.2.1b (which are applicable to operations) all applicable to all development projects. With, implementation of ICAPCD's standard mitigation measures, maximum daily emissions would be reduced to approximately 69 lbs/day of ROG, 19 lbs/day of NO_X, 24 lbs/day of CO, 25 lbs/day of PM_{10} and 5 lbs/day of $PM_{2.5}$. Following mitigation, short-term construction emission impacts and long-term operational emissions would be reduced to a level that would not contribute to localized pollutant concentrations that could conflict with or obstruct the implementation of applicable air quality plans and exceed applicable air quality standards. Therefore, this impact would be reduced to **less than significant**.

Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant

Impact 4.2.2 Implementation of the proposed Project would generate operational emissions that could contribute, on a cumulative basis, to localized and/or regional air quality impacts. This is considered a **potentially significant impact**.

Implementation of the proposed Project would generate both short-term construction emissions and long-term operational emissions. Uncontrolled, emissions of NO_X and fugitive PM could contribute to localized pollutant concentrations that could exceed applicable ambient air quality standards. As shown in **Table 4.2-8** and **Table 4.2-9**, no criteria thresholds would be exceeded during either construction or operation. However, when considered on a cumulative basis, construction and operational emissions

could contribute to localized and/or regional air quality impacts. This is considered a **potentially significant impact.**

Mitigation Measures

Implement mitigation measures MM 4.2.1a and MM 4.2.1b.

Significance After Mitigation

Implementation of mitigation measures MM 4.2.1a and MM 4.2.1b include ICAPCD-recommended standard mitigation measures applicable to all development projects. Implementation of these measures would reduce maximum daily emissions of criteria pollutants as follows: 69 lbs/day of ROG; 19 lbs/day of NO_X; 24 lbs/day of CO; 25 lbs/day of PM_{10}; and 5 lbs/day of $PM_{2.5}$. Following mitigation, short-term construction emission impacts and long-term operational emissions would be reduced to a level that would not result in a cumulatively considerable net increase of any criteria pollutant. Therefore, this impact would be reduced to **less than significant**.

Expose Sensitive Receptors to Substantial Pollutant Concentrations

Impact 4.2.3 Implementation of the proposed Project could expose construction workers and nearby land uses to emissions and dust. Exposure to sensitive receptors to substantial pollutant concentrations is considered a **potentially significant impact.**

Toxic Air Contaminants

Construction of the proposed Project may result in temporary increases in emissions of DPM associated with the use of off-road diesel equipment. Health-related risks associated with diesel-exhaust emissions are primarily associated with long-term exposure and associated risk of contracting cancer. As such, the calculation of cancer risk associated with exposure of to TACs are typically calculated based on a long-term (e.g., 30-40 year) period of exposure. The use of diesel-powered construction equipment, however, would be temporary and episodic and would occur over a relatively large area. Construction activities would constitute less than approximately 8 percent of the typical 40-year exposure period. In addition, no sensitive land uses have been identified within 500 feet of the Project site. The nearest sensitive land use is the Small World Montessori School, which is located approximately 850 feet northeast of the Project site along Portico Boulevard. In addition, residential land uses are located approximately 1,325 feet to the south, along Weakley Street, and approximately 2,700 feet to the west, along Kloke Road. Mitigation measures have also been included which would reduce onsite DPM emissions, including idling limitations and the use of newer and alternatively fueled equipment, which would further reduce short-term emissions of DPM. For these reasons and given the highly dispersive characteristics of DPM, exposure to construction-generated DPM would not be anticipated to exceed applicable thresholds (i.e., incremental increase in cancer risk of 10 in one million).

The proposed Project included the installation of four emergency diesel-fueled generators. The generators would be subject to ICAPCD permitting requirements for stationary sources. In accordance with ICAPCD permitting requirements, any potential health-related impacts associated with proposed generators would be mitigated prior to issuance of an operational permit by the ICAPCD. Compliance with ICAPCD permitting requirements would deem potential health-related impacts associated with the proposed generators **less than significant**.

Valley Fever

As noted earlier in this report, Valley Fever is an infection caused by the fungus Coccidioides. Coccidioides spores can become airborne after contaminated soil and dust are disturbed. Construction activities would include ground-disturbing activities, which could result in an increased potential for exposure of nearby

residents and on-site construction workers to airborne spores. As a result, the potential for increased exposure and contraction of Valley Fever would be considered to have a **potentially significant impact**.

Fugitive Dust

Construction of the proposed Project would include ground-disturbing activities which would be anticipated to result in increased emissions of airborne particulate matter. In addition, the long-term operation of the Project may also result in emissions of fugitive dust associated with vehicle travel on unpaved surfaces. Increases of uncontrolled fugitive dust may result in increased localized concentrations of PM that could adversely impact occupants of nearby land uses. As a result, localized emissions of airborne particulate matter emitted during construction would be considered a **potentially significant impact.**

Mitigation Measures

Implementation of mitigation measure MM 4.2.1a would require implementation of measures for the control of construction-generated emissions. These measures would result in a substantial reduction of construction-generated emissions from off-road equipment, including DPM, as well as, reduction in fugitive dust emitted by ground-disturbing activities. The control of emissions from ground-disturbing activities would also reduce potential for exposure to Valley Fever spores. With mitigation, this impact would be considered **less than significant.**

Significance After Mitigation

Mitigation measure 4.2.1a includes ICAPCD-recommended standard mitigation measures which are applicable to all development projects. With, implementation of ICAPCD's standard mitigation measures, maximum daily emissions would be reduced to approximately 69 lbs/day of ROG, 19 lbs/day of NO_X, 24 lbs/day of CO, 25 lbs/day of PM_{10} and 5 lbs/day of $PM_{2.5}$. Following mitigation, short-term construction emission impacts would be considered **less than significant.**

Create Objectionable Odors Affecting a Substantial Number of People

Impact 4.2.4 Construction of the proposed Project would generate short-term odors in association with diesel exhaust and long-term odors from cultivation and manufacturing operations. Construction odors would dissipate rapidly and an exhaust system would dilute and disburse operational odors. Therefore, impacts resulting from objectional odors affecting a substantial number of people are considered **less than significant**.

Construction of the proposed Project would involve the use of a variety of gasoline or diesel-powered equipment that would emit exhaust fumes. Diesel-exhaust in particular may be considered objectionable by some people. However, construction-generated emissions would occur intermittently throughout the workday and would dissipate rapidly within increasing distance from the source.

Cannabis cultivation and manufacturing facilities can be major sources of odors even though the operations are completely indoors. Depending on the ventilation and filtration system employed, indoor cultivation facilities can be major sources of odors. Cannabis odors are largely associated with a class of chemicals referred to as terpenes, which are produced by flowering plants. The cannabis plant can produce more than one hundred different terpenes, which differs among the various plant varieties.

The proposed Project has developed an Odor Control Plan. The Plan aims to have zero odorous emissions at the exterior of the facility through the implementation of a two-factor engineering control system. Factor one includes the use of multiple activated carbon filters to continuously dilute and absorb odors at areas where odors would be highest, including flower rooms, vegetative state rooms, curing and drying rooms, trimming and packaging rooms. Factor two includes incorporation of a "SKYPLUME" exhaust

system. The "SKYPLUME" exhaust system is a high velocity air disbursement fan system which manages and reduces odors through increased dilution. The odor control plan also incorporates an administrative, monitoring and maintenance procedures to ensure that the Odor Control Plan is effectively implemented. It is also important to note that the proposed facility would be subject to ICAPCD Rule 407 for the control of nuisance emissions. With implementation of the proposed Odor Control Plan and compliance with ICAPCD Rule 407, this impact would be considered **less than significant**.

Mitigation Measures

None.

Significance After Mitigation

Not applicable.

4.2.4 CUMULATIVE SETTING, IMPACTS AND MITIGATION MEASURES

A. CUMULATIVE SETTING

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

Air pollutants transported into the SSAB from the adjacent South Coast Air Basin (Los Angeles, San Bernardino County, Orange County, and Riverside County and from Mexicali, Mexico) substantially contribute to the non-attainment conditions in the SSAB. Cumulative projects within the SSAB include any existing, recently approved, proposed, and reasonably foreseeable development envisioned by the Imperial County General Plan as well as the proposed, approved and reasonably foreseeable projects in the City of Calexico described in Chapter 3.0, Introduction to the Environmental Analysis and Assumptions Used, of this EIR.

B. CUMULATIVE IMPACTS AND MITIGATION MEASURES

Violate Air Quality Standard/Cause Air Quality Violation

Impact 4.2.5 The proposed Project would generate criteria pollutant emissions during construction. However, the short-term construction emissions exceedances of ICAPCD thresholds would be mitigated with implementation of mitigation measures. Project generated operational emissions could contribute, on a cumulative basis, to localized and/or regional air quality impacts. Therefore, the proposed Project's contribution to violating an air quality standard is considered **cumulatively considerable**.

Construction

The projects listed in Table 3.0-1 are include industrial, commercial and residential projects as well as the Calexico West Land Port of Entry. Short-term construction air emissions from these projects would be end once construction is complete. However, given the nature of each project, long-term emissions would be generated from vehicle and truck traffic once construction is completed.

The construction phase of the proposed Project may contribute to a net increase in criteria pollutants PM_{10}. As noted above, the Imperial Valley is classified as non-attainment for federal and state PM_{10} standards. Thus, the Project's contribution to existing criteria pollutants could be cumulatively considerable without mitigation. However, as described under Impact 4.2.1 above, implementation of mitigation measures MM 4.2.1a would reduce construction-phase NOx and PM_{10} emissions to less than significant levels, resulting in a **less than cumulatively considerable contribution** to existing criteria

pollutants. In addition, all other cumulative projects are required to comply with Regulation VIII and would also be assumed to implement mitigation measures to reduce their individual construction air quality emissions. In this way, each individual cumulative project would reduce construction emissions on a project-by-project basis resulting in a less than cumulatively considerable contribution to existing criteria pollutants. Because the proposed Project would mitigate air quality emissions associated with construction, and other cumulative projects would also mitigate construction emissions on a project-by-project basis, emissions resulting in a violation of an air quality standard would be reduced to **less than cumulatively considerable**.

Operation

Emissions resulting from operations of the Project for all criteria pollutants would not exceed ICPACD Tier 1 Significance Thresholds (refer to **Table 4.2-9**). However, Project-generated operational emissions could result in a **cumulatively considerable contribution** to localized and/or regional air quality impacts. Mitigation measure MM 4.2.1b would reduce long-term operational emissions by providing on-site amenities for employees to reduce off-site trips, ensuring surrounding roadways are paved and complying with Title 24. With implementation of these measures the proposed Project would result in a **less than cumulatively considerable contribution** to air quality standard violations during operations.

Mitigation Measures

Implementation of mitigation measure MM 4.2.1a would reduce construction NOx and PM_{10} emissions to less than significant levels on a project-specific basis. Likewise, although ICAPCD thresholds would not be exceeded on an operational basis, mitigation measure MM 4.2.1b is identified to further reduce long-term operational emissions which could contribute to cumulative localized and/or regional air quality impacts.

Significance After Mitigation

Following implementation of MM 4.2.1a and MM 4.2.1b, the Project would have a **less than cumulatively considerable contribution** to construction and operational emission. Likewise, the proposed Project would result in a less than cumulatively considerable impact to violating an air quality standard or causing an air quality violation.