

Air Quality

Chapter 3.3

SUMMARY OF FINDINGS

Based on the impact analysis below, the proposed Project will result is *Significant and Unavoidable Impacts* to Air Quality.. The impact determinations in this chapter are based upon information obtained from the References listed at the end of this chapter, as well as information contained in the “*Air Quality and Greenhouse Gas Assessments for the Dunn Asphalt and Concrete Batch Plant (SCH# 2019011039)*” Technical Memorandum (AQ-GHG Memo) prepared by RMA Staff and in the detailed Health Risk Assessment and Ambient Air Quality Analysis determination prepared by consultant Alta Environmental for this Project, provided in Appendix “A” of this document. A detailed review of potential impacts is provided in the analysis below.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Air Quality. As required in CEQA Guidelines Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in CEQA Guidelines Section 15126.2(a), “[a]n EIR shall identify and focus on the significant effects of the proposed project on the environment. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause or risk exacerbating by bringing development and people into the area affected. For example, the EIR should evaluate any potentially significant direct, indirect, or cumulative environmental impacts of locating development in areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas), including both short-term and long-term conditions, as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

¹ CEQA Guidelines, Section 15126.2(a).

The “Environmental Setting” provides a description of the Air Quality in the County. The “Regulatory Setting” provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County General Plan 2030 Update (General Plan), Tulare County General Plan 2030 Update Background Report (Background Report), and/or Tulare County General Plan 2030 Update Recirculated Draft Environmental Impact Report (RDEIR) incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item questions and by the San Joaquin Valley Unified Air Pollution Control District (Air District or SJVAPCD) significance thresholds identified in their guidance document *Guidance for Assessing and Mitigating Air Quality Impacts* (GAMAQI).² The following are potential thresholds for significance.

- Result in an exceedance of San Joaquin Valley Unified Air Pollution Control District criteria pollutant threshold.
- Result in an exceedance of criteria pollutants as established in the 1990 Clean Air Act amendments.
- 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 exposure of sensitive receptors to emissions of toxic air contaminants (TAC).
- Result in other emissions (such as those leading to nuisance odors) adversely affecting a substantial number of people.

ENVIRONMENTAL SETTING

San Joaquin Valley Air Basin (SJVAB)

“Tulare County falls within the southern portion of the San Joaquin Valley Air Basin (SJVAB), which is bordered on the east by the Sierra Nevada range, on the west by the Coast Ranges, and on the south by the Tehachapi Mountains. These features restrict air movement through and out of the SJVAB.

The topography of Tulare County significantly varies in elevation from its eastern to western borders, which results in large climatic variations that ultimately affect air quality. The western

² San Joaquin Valley Unified Air Pollution Control District. *Guidance for Assessing and Mitigating Air Quality Impacts*. http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf. Accessed November 2019.

portion of the County is within the low-lying areas of the SJVAB. This portion of the County is much dryer in comparison to the eastern portion that is located on the slopes of the Sierra Nevada Mountains. The higher elevation contributes to both increased precipitation and a cooler climate.

Wind direction and velocity in the eastern section varies significantly from the western portion of the County. The western side receives northwesterly winds. The eastern side of the County exhibits more variable wind patterns, but the wind direction is typically up-slope during the day and down-slope in the evening. Generally, the wind direction in the eastern portion of the County is westerly; however terrain differences can create moderate directional changes.”³

Generally, the temperature of air decreases with height, creating a gradient from warmer air near the ground to cooler air at elevation. This gradient of cooler air over warm air is known as the environmental lapse rate. Inversions occur when warm air sits over cooler air, trapping the cooler air near the ground. These inversions trap pollutants from dispersing vertically and the mountains surrounding the San Joaquin Valley trap the pollutants from dispersing horizontally. Strong temperature inversions occur throughout the San Joaquin Valley Air Basin in the summer, fall, and winter. Daytime temperature inversions occur at elevations of 2,000 to 2,500 feet above the San Joaquin Valley floor during the summer and at 500 to 1,500 feet during the winter. The result is a relatively high concentration of air pollution in the valley during inversion episodes. These inversions cause haziness, which in addition to moisture may include suspended dust, a variety of chemical aerosols emitted from vehicles, particulates from wood stoves, and other pollutants. In the winter, these conditions can lead to carbon monoxide “hotspots” along heavily traveled roads and at busy intersections. During summer’s longer daylight hours, stagnant air, high temperatures, and plentiful sunshine provide the conditions and energy for the photochemical reaction between reactive organic gases (ROG) and oxides of nitrogen (NOx), which results in the formation of ozone.⁴

“The SJVAB is highly susceptible to pollutant accumulation over time due to the transport of pollutants into the SJVAB from upwind sources. Stationary emission sources in the County include the use of cleaning and surface coatings and industrial processes, road dust, local burning, construction/demolition activities, and fuel combustion. Mobile emissions are primarily generated from the operation of vehicles. According to air quality monitoring data, the SJVAB has been in violation for exceeding ozone and PM10 emission standards for many years.”⁵ As of November 2019 the SJVAB is in nonattainment for federal and state ozone and PM_{2.5} standards, attainment for federal PM₁₀ standards, and nonattainment for state PM₁₀ standards.⁶

Existing Conditions Overview

“Unlike other air basins in California, the pollution in the San Joaquin Valley Air Basin (SJVAB) is not produced by large urban areas. Instead, emissions are generated by many moderate sized

³ Tulare County General Plan 2030 Update RDEIR. Page 3.3-9.

⁴ San Joaquin Valley Unified Air Pollution Control District. Guidance for Assessing and Mitigating Air Quality Impacts, Chapter 2; and Air Quality Guidelines for General Plan, Chapter 2, <http://www.valleyair.org/transportation/Entire-AOQGP.pdf>. Accessed November 2019.

⁵ Tulare County General Plan 2030 Update RDEIR. Page 3.3-9

⁶ San Joaquin Valley Unified Air Pollution Control District. <http://www.valleyair.org/aqinfo/attainment.htm>. Accessed November 2019.

communities and rural uses. Emission levels in the Central Valley have been decreasing overall since 1990. This can be primarily attributed to motor vehicle emission controls that reduce the amount of vehicle emissions and controls on industrial/stationary sources. In spite of these improvements, the San Joaquin Valley is still identified as having some of the worst air quality in the nation.

The main source of CO and NO_x emissions is motor vehicles. The major contributors to ROG emissions are mobile sources and agriculture. ROG emissions from motor vehicles have been decreasing since 1985 due to stricter standards, even though the vehicle miles have been increasing. Stationary source regulations implemented by the SJVAPCD have also substantially reduced ROG emissions. ROG from natural sources (mainly from trees and plants) is the largest source of this pollutant in Tulare County. Atmospheric modeling accomplished for recent ozone planning efforts has found that controlling NO_x is more effective at reducing ozone concentrations than controlling ROG. However, controls meeting RACT and BACT are still required for SJVAPCD plans.

The SJVAB has been ranked the 2nd worst in the United States for O₃ levels, even though data shows that overall O₃ has decreased between 1982 and 2001.

Direct PM₁₀ emissions have decreased between the years 1975 and 1995 and have remained relatively constant since 2000. The main sources of PM₁₀ in the SJVAB are from vehicles traveling on unpaved roads and agricultural activities. Regional Transportation Planning Agencies must implement BACM for sources of fine particulate matter (PM₁₀) to comply with federal attainment planning requirements for PM₁₀.⁷

SJVAB Attainment Status

The United States Environmental Protection Agency (EPA) and the California Air Resources Board (ARB or CARB) designate air basins where ambient air quality standards are exceeded as “nonattainment” areas. If standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered “unclassified.” The federal non-attainment designation is subdivided into five categories (listed in order of increasing severity): marginal, moderate, serious, severe, and extreme. The degree of an area’s non-attainment status reflects the extent of the pollution and the expected time period required in order to achieve attainment.

Designated non-attainment areas are generally subject to more stringent review by ARB and EPA. In the endeavor to improve air quality to achieve the standards, projects are subject to more stringent pollution control strategies and requirements for mitigation measures (such as mobile source reduction measures). If the National Ambient Air Quality Standards (NAAQS) are not achieved within the specified timeframe, federal highway funding penalties (and a federally administered implementation plan incorporating potentially harsh measures to achieve the NAAQS) will result.

⁷ Tulare County 2030 General Plan 2030 Update, Part 1 Goals and Policies Report. Pages 9-4 to 9-5.

Each standard has a different definition, or “form” of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual PM_{2.5} standard is met if the three-year average of the annual average PM_{2.5} concentration is less than or equal to the standard.

Table 3.3-1 identifies the current federal and state attainment designations for the SJVAB while **Table 3.3-2** summarizes the ambient air quality standards from which the federal and state attainment status are derived. **Table 3.3-3** summarizes the common sources, health effects, and methods for prevention and control of criteria pollutant emissions.

Table 3.3-1 SJVAB Attainment Status		
	Designation Classification	
Pollutant	Federal Standards	State Standards
Ozone – one hour	No Federal Standard ¹	Nonattainment/Severe
Ozone – eight hour	Nonattainment/Extreme ²	Nonattainment
PM ₁₀	Attainment ³	Nonattainment
PM _{2.5}	Nonattainment ⁴	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead (Particulate)	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Vinyl Chloride	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified
<p>1 Effective June 15, 2005, the U.S. Environmental Protection Agency (EPA) revoked the federal 1-hour ozone standard, including associated designations and classifications. However, EPA had previously classified the SJVAB as extreme nonattainment for this standard. Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.</p> <p>2 Though the 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)</p> <p>3 On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM₁₀ National Ambient Air Quality Standard (NAAQS) and approved the PM₁₀ Maintenance Plan.</p> <p>4 The Valley is designated nonattainment for the 1997 PM_{2.5} NAAQS. EPA designated the Valley as nonattainment for the 2006 PM_{2.5} NAAQS on November 13, 2009 (effective December 14, 2009).</p> <p>Source: San Joaquin Valley Unified Air Pollution Control District. <i>Ambient Air Quality Standards & Valley Attainment Status.</i> http://www.valleyair.org/aqinfo/attainment.htm.</p>		

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Table 3.3-2 State and Federal Ambient Air Quality Standards						
Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O₃)⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.075 ppm (147 µg/m ³)		
Respirable Particulate Matter (PM₁₀)⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		-		
Fine Particulate Matter (PM_{2.5})⁹	24 Hour	---	---	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12 µg/m ³	15.0 µg/m ³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	---	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m ³)		9 µg/m ³ (10 mg/m ³)	---	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		---	---	
Nitrogen Dioxide (NO₂)¹⁰	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemilumi- nescence	100 ppb (188 µg/m ³)	Same as Primary Standard	Gas Phase Chemilumi- nescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)		
Sulfur Dioxide (SO₂)¹¹	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	---	Ultraviolet Flourescence; Spectrophoto- metry (Pararo- saniline Method)
	3 Hour	---		---	0.5 ppm (1300 µg/m ³)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas)	---	
	Annual Arithmetic Mean	---		0.030 ppm (for certain areas)	---	
Lead^{12, 13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	---	---	High Volume Sampler and Atomic Absorption
	Calendar Quarter	---		1.5 µg/m ³ (for certain areas)	Same as Primary Standard	
	Rolling 3- Month Average	---		0.15 µg/m ³		
Visibility Reducing Particles¹⁴	8 Hour	ARB converted visibility standards to instrumental equivalents in 1989	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide (H₂S)	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

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**Table 3.3-2
State and Federal Ambient Air Quality Standards**

Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
<p>1 California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.</p> <p>2 National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.</p> <p>3 Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.</p> <p>4 Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.</p> <p>5 National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health</p> <p>6 National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.</p> <p>7 Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.</p> <p>8 On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm</p> <p>9 On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m3 to 12.0 µg/m3. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 µg/m3, as was the annual secondary standard of 15 µg/m3. The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.</p> <p>10 To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.</p> <p>11 On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.</p> <p>Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.</p> <p>12 The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.</p> <p>13 The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.</p> <p>14 In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.</p> <p>Source: California Air Resources Board. Ambient Air Quality Standards. https://ww3.arb.ca.gov/research/aaqs/aaqs2.pdf?_ga=2.37139495.687085110.1562705746-1292949104.1524090547..Accessed November 2019.</p>						

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**Table 3.3-3
Air Pollutant Sources, Effects and Control**

Pollutant	Sources	Effects	Prevention and Control
Ozone (O₃)	Formed when reactive organic gases (ROG) and nitrogen oxides react in the presence of sunlight. ROG sources include any source that burns fuels, (e.g., gasoline, natural gas, wood, oil) solvents, petroleum processing and storage and pesticides.	Breathing Difficulties, Lung Tissue Damage, Damage to Rubber and Some Plastics	Reduce motor vehicle reactive organic gas (ROG) and nitrogen oxide emissions through emissions standards, reformulated fuels, inspections programs, and reduced vehicle use. Limit ROG emissions from commercial operations and consumer products. Limit ROG and NOx emissions from industrial sources such as power plants and refineries. Conserve energy.
Respirable Particulate Matter (PM₁₀)	Road Dust, Windblown Dust (Agriculture) and Construction (Fireplaces) Also formed from other pollutants (acid rain, NOx, SOx, organics). Incomplete combustion of any fuel.	Increased Respiratory Disease, Lung Damage, Cancer, Premature Death, Reduced Visibility, Surface Soiling	Control Dust Sources, Industrial Particulate Emissions, Wood Burning Stoves and Fireplaces Reduce secondary pollutants which react to form PM ₁₀ . Conserve energy.
Fine Particulate Matter (PM_{2.5})	Fuel Combustion in Motor Vehicles, Equipment and Industrial Sources, Residential and Agricultural Burning. Also formed from reaction of other pollutants (acid rain, NOx, SOx, organics).	Increases Respiratory Disease, Lung Damage, Cancer, Premature Death, Reduced Visibility, Surface Soiling	Reduces Combustion Emissions from Motor Vehicles, Equipment, Industries and Agriculture and Residential Burning. Precursor controls, like those for ozone, reduce fine particle formation in the atmosphere.
Carbon Monoxide (CO)	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Chest Pain in Heart Patients, Headaches, Reduced Mental Alertness	Control motor vehicle and industrial emissions. Use oxygenated gasoline during winter months. Conserve energy.
Nitrogen Dioxide (NO₂)	See Carbon Monoxide	Lung Irritation and Damage. Reacts in the atmosphere to form ozone and acid rain	Controls motor vehicle and industrial combustion emissions. Conserve energy.
Lead	Metal Smelters, Resource Recovery, Leaded Gasoline, Deterioration of Lead Paint	Learning Disabilities, Brain and Kidney Damage	Control metal smelters, no lead in gasoline. Replace leaded paint with non-lead substitutes.
Sulfur Dioxide (SO₂)	Coal or Oil Burning Power Plants and Industries, Refineries, Diesel Engines	Increases lung disease and breathing problems for asthmatics. Reacts in the atmosphere to form acid rain.	Reduces the use of high sulfur fuels (e.g., use low sulfur reformulated diesel or natural gas). Conserve energy.
Visibility Reducing Particles	See PM _{2.5}	Reduces visibility (e.g., obscures mountains and other scenery), reduced airport safety, lower real estate value, discourages tourism.	See PM _{2.5}
Sulfates	Produced by the reaction in the air of SO ₂ (see SO ₂ sources), a component of acid rain.	Breathing Difficulties, Aggravates Asthma, Reduced Visibility	See SO ₂
Hydrogen Sulfide	Geothermal Power Plants, Petroleum Production and Refining, Sewer Gas	Nuisance Odor (Rotten Egg Smell), Headache and Breathing Difficulties (Higher Concentrations)	Control emissions from geothermal power plants, petroleum production and refining, sewers, sewage treatment plants.

California Air Resources Board. ARB Fact Sheet: Air Pollution Sources, Effects and Control. <https://www.arb.ca.gov/research/health/fs/fs2/fs2.htm>. Accessed November 2019.

Toxic Air Contaminants

“A Toxic Air Contaminant (TAC) is defined as “an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health.”⁸ TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. The *California Almanac of Emissions and Air Quality – 2009 Edition* presents the relevant concentration and cancer risk data for the ten (10) TACs that pose the most substantial health risk in California based on available data: acetaldehyde, benzene, 1,3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (DPM).⁹

Some studies indicate that DPM poses the greatest health risk among the TACs listed above. A 10-year research program demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. In addition to increased risk of lung cancer, exposure to diesel exhaust can have other non-cancer health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause a cough, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems.^{10,11,12,13}

DPM differs from other TACs in that it is not a single substance, but a complex mixture of hundreds of substances. Although DPM is emitted by diesel-fueled, internal combustion engines, the composition of the emissions varies, depending on: engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present. Unlike other TACs, however, no ambient monitoring data are available for DPM because no routine measurement method currently exists. The ARB has made preliminary concentration estimates based on a DPM exposure method. This method uses the ARB emissions inventory’s PM10 database, ambient PM10 monitoring data, and the results from several studies to estimate concentrations of DPM.

Health risks attributable to the top ten (10) TACs listed above are available from the ARB as part of its *California Almanac of Emissions and Air Quality—2009 Edition*. As shown therein for data

⁸ Health and Safety Code. Section 39655(a)

⁹ California Air Resources Board. The California Almanac of Emissions and Air Quality – 2009 Edition. Chapter 5. <https://ww3.arb.ca.gov/aqd/almanac/almanac09/almanac09.htm>. Accessed November 2019.

¹⁰ California Air Resources Board. Fact Sheet – The Toxic Air Contaminant Identification Process: Toxic Air Contaminant Emissions from Diesel-fueled Engines. October 1998. <https://ww3.arb.ca.gov/toxics/dieseltac/factsht1.pdf>. Accessed November 2019.

¹¹ California Air Resources Board. Summary: Diesel Particulate Matter Health Impacts. <https://ww2.arb.ca.gov/resources/summary-diesel-particulate-matter-health-impacts>. Accessed November 2019.

¹² California Air Resources Board. Overview: Diesel Exhaust & Health. <https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health>. Accessed November 2019.

¹³ California Air Resources Board. The Report on Diesel Exhaust. <https://ww3.arb.ca.gov/toxics/dieseltac/de-fnds.htm>. Accessed November 2019.

collected at the First Street air monitoring station in Fresno, cancer risks attributable to all of the listed TACs above with the exception of DPM have declined about 70 percent from the mid-1990s to 2007.¹⁴ Risks associated with DPM emissions are provided only for the year 2000 and have not been updated in the Almanac. Although more recent editions of the Almanac do not provide estimated risk, they do provide emission inventories for DPM for later years. The 2013 edition of the Almanac provides emission inventory trends for DPM from 2000 through 2035.¹⁵ The Almanac reports that DPM emissions were reduced in the SJVAB from 16 tons per day in 2000 to 11 tons per day in 2010, a 31 percent decrease. DPM emissions in the San Joaquin Valley are projected to decrease to six tons per day by 2015, a 62 percent reduction from year 2000 levels. ARB predicts a reduction to three tons per day by 2035, which would be an 81 percent reduction from year 2000 levels.¹⁶ Continued implementation of the ARB's Diesel Risk Reduction Plan is expected to provide continued reductions in DPM through 2020 and beyond through regulations on this source.¹⁷

Asbestos^{18,19,20,21,22,23}

Asbestos is the name given to a number of naturally occurring fibrous silicate minerals that have been mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The six types of asbestos are chrysotile, crocidolite, amosite, anthophyllite asbestos, tremolite asbestos, and actinolite asbestos. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings and makes up approximately 95 percent of commercial and home use in the United States. Exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a non-cancerous lung disease that causes scarring of the lungs). Exposure to asbestos can occur during demolition or remodeling of buildings that were constructed using asbestos-containing materials (such as insulation prior to 1950 and textured paints and patching compounds prior to 1977). Exposure to naturally occurring asbestos can occur during soil-disturbing activities in areas with deposits present.

¹⁴ California Air Resources Board. The California Almanac of Emissions and Air Quality – 2009 Edition. Chapter 5. San Joaquin Valley Air Basin Annual Average Concentration and Health Risks. Pages 5-62 to 5-69. <https://ww3.arb.ca.gov/aqd/almanac/almanac09/almanac09.htm>. Accessed November 2019.

¹⁵ California Air Resources Board. The California Almanac of Emissions and Air Quality – 2013 Edition. <https://ww3.arb.ca.gov/aqd/almanac/almanac13/almanac13.htm>. Accessed November 2019.

¹⁶ Ibid. Chapter 4. San Joaquin Valley Air Basin. 4-28.

¹⁷ California Air Resources Board. Final Diesel Risk Reduction Plan with Appendices. <https://ww3.arb.ca.gov/diesel/documents/rrpapp.htm>. Accessed November 2019.

¹⁸ 29 CFR 1910.1001. <https://www.govinfo.gov/content/pkg/CFR-2007-title29-vol6/pdf/CFR-2007-title29-vol6-sec1910-1001.pdf>. Accessed November 2019.

¹⁹ California Air Resources Board. Naturally Occurring Asbestos. <https://ww3.arb.ca.gov/toxics/asbestos/asbestos.htm>. Accessed November 2019.

²⁰ California Air Resources Board. Naturally-Occurring Asbestos General Information. <https://ww3.arb.ca.gov/toxics/asbestos/general.pdf>. Accessed November 2019.

²¹ United States Environmental Protection Agency. Learn About Asbestos – Health Effects From Exposure to Asbestos. <https://www.epa.gov/asbestos/learn-about-asbestos>. Accessed November 2019.

²² United States Geological Survey. Fact Sheet FS-012-01. Some Facts About Asbestos. March 2001. <http://www.capcoa.org/Docs/noa/%5B12%5D%20USGS%20Facts%20on%20Asbestos.pdf>. Accessed November 2019.

²³ Environment, Health and Safety Online. Where Is Asbestos Commonly Found In The Home, When and How Should It be Removed? <http://www.ehso.com/cssasbestos/asbestosfoundwhere.htm>. Accessed November 2019.

Air Quality Conditions in Tulare County

Tulare County lies within the southern portion of the SJVAB. Topography and climate are unusually favorable for the development of air pollution, especially in the southern portion of the air basin where pollutants build up against the Tehachapi Mountains. Due to the SJVAB's light wind patterns, long periods of warm and sunny days, and surrounding mountains, air quality problems can occur at any time of the year.

Existing local air quality conditions can be characterized by reviewing air pollution concentration data near the Project area for comparison with the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). Air samples are collected continuously for some pollutants and periodically for other pollutants depending on the type of monitoring equipment installed. Monitoring sites are usually chosen to be representative of the emissions in a community. There are currently 39 air monitoring stations in the SJVAB, which include 24 stations operated by the Air District, one (1) station operated jointly by the Air District and the ARB, nine (9) stations operated by the ARB, two (2) stations operated by the National Park Service, and three (3) stations operated on Native American tribal lands.²⁴ Of these, there are currently five (5) stations in Tulare County: Visalia–Airport; Visalia–Church; Porterville; Sequoia National Park–Lower Kaweah; and Sequoia National Park–Ash Mountain. However, CO and SO₂ are not collected in these five stations, so the next closest monitor with those emissions must be identified.

Local air quality can be evaluated by reviewing relevant air pollution concentrations near the Project area. For the purposes of background data and this air quality assessment, this analysis relied on data collected in the last three years for the monitoring station that is located in the closest proximity to the Project site. **Table 3.3-4** provides the background concentrations for 2016 through 2018, which is the most recent three-year period available, for ozone, particulate matter of 10 microns (PM₁₀), particulate matter of less than 2.5 microns (PM_{2.5}), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and lead (Pb). The table displays monitoring data from the, Visalia – N Church Street monitoring station located approximately 8.5 miles northeast of the Project site. The data in the table reflects the concentration of the pollutants in the air, measured using air monitoring equipment. This differs from emissions, which are calculations of a pollutant being emitted over a certain period. No recent monitoring data for Tulare County or the SJVAB is available for CO or SO₂ as monitoring is generally not conducted for pollutants that are no longer likely to exceed ambient air quality standards. No monitoring data is available for hydrogen sulfide, vinyl chloride or other toxic air contaminants in Tulare County or any nearby counties.

Based on the air monitoring data the Project area has generally exceeded air quality standards for ozone (state and national), PM₁₀ (state), and PM_{2.5} (national). The amount over the standards and

²⁴ San Joaquin Valley Unified Air Pollution Control District. 2019 Air Monitoring Network Plan. Pages 1-2. <https://valleyair.org/aqinfo/Docs/2019-Air-Monitoring-Network-Plan.pdf>. Accessed November 2019.

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the number of days each year that the standards were exceeded provide an indicator of the severity of the air quality problems in the local area.

Table 3.3-4 Air Quality Monitoring Summary²⁵					
Air Pollutant	Averaging Time	Item	2016	2017	2018
Ozone (O ₃) ¹	1-hour	Max 1-hour (ppm)	0.098	0.109	0.112
		Days > State Standard (0.09 ppm)	1	9	8
	8-hour	State Max 8-hour (ppm)	0.083	0.092	0.095
		Days > State Standard (0.07 ppm)	19	65	58
		National Max 8-hour (ppm)	0.083	0.091	0.094
		Days > National Standard (0.07 ppm)	18	61	53
Inhalable coarse particles (PM ₁₀) ¹	Annual	Annual Average (µg/m ³)	43.3	47.4	52.5
	24 hour	State 24-hour (µg/m ³)	132.5	145.7	159.6
		Days > State Standard (50 µg/m ³)	ID	135.9	164.4
		National 24-hour (µg/m ³)	137.1	144.8	153.4
		Days > National Standard (150 µg/m ³)	0	0	0
Fine particulate matter (PM _{2.5}) ¹	Annual	Annual Average (µg/m ³)	14.6	16.2	17.3
	24-hour	24-hour (µg/m ³)	48.0	86.1	86.8
		Days > National Standard (35 µg/m ³)	21.3	26.7	42.3
Carbon monoxide (CO) ²	8-hour	Max 8-hour (ppm)	ND	ND	ND
		Days > State and National Standards (9 ppm)	ND	ND	ND
Nitrogen dioxide (NO ₂) ¹	Annual 1-hour	Annual Average (ppm)	ID	0.010	0.010
		Max 1-hour (ppm)	0.0575	0.0581	0.0692
		Days > State Standard (0.18 ppm)	0	0	0
		Days > National Standard (100 ppb)	0	0	0
Sulfur dioxide (SO ₂) ²	Annual	Annual Average (ppm)	ND	ND	ND
	24-hour	Max 24-hour (ppm)	ND	ND	ND
Abbreviations: ppm = parts per million; > = exceeded; µg/m ³ = micrograms per cubic meter; ID = insufficient data; ND = no data available; max = maximum					
State Standard = CAAQS; National Standard = NAAQS					
¹ data from Visalia-Church station					
² no recent data is available for Tulare County or the San Joaquin Valley as they are no longer likely to exceed AAQS					

²⁵ California Air Resources Board. Top 4 Summary. <http://www.arb.ca.gov/adam/topfour/topfour1.php>. Accessed November 2019.

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**Table 3.3-5
Air Quality Index and Health Effects of Ozone²⁶**

Air Quality Index/ Ozone Concentration	Health Effects Description
AQI 0-50 – Good Concentration 0-59 ppb	Sensitive Groups: Children and people with asthma are the groups most at risk.
	Health Effects Statements: None
	Cautionary Statements: None
AQI 51-100 – Moderate Concentration 60-75 ppb	Sensitive Groups: Children and people with asthma are the groups most at risk.
	Health Effects Statements: Unusually sensitive individuals may experience respiratory symptoms.
	Cautionary Statements: Unusually sensitive people should consider limiting prolonged outdoor exertion.
AQI 101-150 – Unhealthy for Sensitive Groups Concentration 76-95 ppb	Sensitive Groups: Children and people with asthma are the groups most at risk.
	Health Effects Statements: Increasing likelihood of respiratory symptoms and breathing discomfort in active children and adults and people with respiratory disease, such as asthma.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.
AQI 151-200 – Unhealthy Concentration 96-115 ppb	Sensitive Groups: Children and people with asthma are the groups most at risk.
	Health Effects Statements: Greater likelihood of respiratory symptoms and breathing difficulty in active children and adults and people with respiratory disease, such as asthma; possible respiratory effects in general population.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.
AQI 201-300 – Very Unhealthy Concentration 116-374 ppb	Sensitive Groups: Children and people with asthma are the groups most at risk.
	Health Effects Statements: Increasingly severe symptoms and impaired breathing likely in active children and adults and people with respiratory disease, such as asthma; increasing likelihood of respiratory effects in general population.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion; everyone else, especially children, should limit outdoor exertion.
AQI 301-500 – Hazardous* Concentration \geq 405 ppb	Sensitive Groups: Children and people with asthma are the groups most at risk.
	Health Effects Statements: Severe respiratory effects and impaired breathing likely in active children and adults and people with respiratory disease, such as asthma; increasingly severe respiratory effects likely in general population.
	Cautionary Statements: Everyone should avoid all outdoor exertion.
* AQI 300-500 are calculated using 1-hr ozone data (under 1-hr ozone concentrations 375-404 ppb are identified as Very Unhealthy)	

²⁶ U.S. Environmental Protection Agency. AirNow. Air Quality Index Basics. <https://www.airnow.gov/index.cfm?action=aqibasics.aqi>. AirNow. AQI Calculator. <https://airnow.gov/index.cfm?action=airnow.calculator>. Accessed November 2019.

**Table 3.3-6
Air Quality Index and Health Effects of PM_{2.5}²⁷**

Air Quality Index/ PM _{2.5} Concentration	Health Effects Description
AQI 0-50 – Good Concentration 0-12.0 µg/m ³	Sensitive Groups: People with respiratory or heart disease, the elderly and children are the groups most at risk.
	Health Effects Statements: None
	Cautionary Statements: None
AQI 51-100 – Moderate Concentration 12.1-35.4 µg/m ³	Sensitive Groups: People with respiratory or heart disease, the elderly and children are the groups most at risk.
	Health Effects Statements: Unusually sensitive people should consider reducing prolonged or heavy exertion.
	Cautionary Statements: Unusually sensitive people should consider reducing prolonged or heavy exertion.
AQI 101-150 – Unhealthy for Sensitive Groups Concentration 35.5-55.4 µg/m ³	Sensitive Groups: People with respiratory or heart disease, the elderly and children are the groups most at risk.
	Health Effects Statements: Increasing likelihood of respiratory symptoms in sensitive individuals, aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly.
	Cautionary Statements: People with respiratory or heart disease, the elderly and children should limit prolonged exertion.
AQI 151-200 – Unhealthy Concentration 55.5-150.4 µg/m ³	Sensitive Groups: People with respiratory or heart disease, the elderly and children are the groups most at risk.
	Health Effects Statements: Increased aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly; increased respiratory effects in general population.
	Cautionary Statements: People with respiratory or heart disease, the elderly and children should avoid prolonged exertion; everyone else should limit prolonged exertion.
AQI 201-300 – Very Unhealthy Concentration 150.5-250.4 µg/m ³	Sensitive Groups: People with respiratory or heart disease, the elderly and children are the groups most at risk.
	Health Effects Statements: Significant aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly; significant increase in respiratory effects in general population.
	Cautionary Statements: People with respiratory or heart disease, the elderly and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.
AQI 301-500 – Hazardous* Concentration ≥250.5 µg/m ³	Sensitive Groups: People with respiratory or heart disease, the elderly and children are the groups most at risk.
	Health Effects Statements: Serious aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly; serious risk of respiratory effects in general population.
	Cautionary Statements: Everyone should avoid any outdoor exertion; people with respiratory or heart disease, the elderly and children should remain indoors.

²⁷ Ibid.

The health impacts of the various air pollutants of concern can be presented in a number of ways. The clearest in comparison is to the state and federal ozone standards. If concentrations are below the standard, it is safe to say that no health impact would occur to anyone. When concentrations exceed the standard, impacts will vary based on the amount the standard is exceeded. The EPA developed the Air Quality Index (AQI) as an easy to understand measure of health impact compared to concentrations in the air. As the SJVAB is in nonattainment at the federal level for ozone and PM_{2.5}, the discussion below includes only those emissions with respect to the AQI. **Table 3.3-5** and **Table 3.3-6** provide a description of the health impacts of ozone and PM_{2.5}, respectively, at different concentrations.

Based on the AQI scale for the 8-hour ozone standard, the nearest monitoring station in Visalia experienced at least three days in the last three years that would be categorized as unhealthy (AQI 151-200), and as many as 80 days that were categorized as unhealthy for sensitive groups (AQI 101-150) or moderate (AQI 50-100). The highest reading for the 8-hour standard was 104 ppb in 2013 and the highest reading for the 1-hour ozone standard was 112 ppb in 2013. These values are higher than the 95-ppb cut off point for unhealthy for sensitive groups (AQI 101-150), but lower than the 115-ppb cut off point for unhealthy (AQI 151-200). Active children and adults, and people with respiratory disease should avoid prolonged outdoor exertion when the AQI is at this level.

An AQI of 51-100 for PM_{2.5} is considered moderate and would be triggered by a 24-hour average concentration of 35.4 µg/m³, which is considered an exceedance of the federal PM_{2.5} standard. The monitoring station in Visalia exceeded the standard up to 14 days in one year over the last three years. People with respiratory or heart disease, the elderly and children are the groups most at risk. An unhealthy AQI (AQI 151-200) was also exceeded on at least three days in the last three years. The highest concentration recorded was 124.2 µg/m³ in 2013. At this concentration, increased aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly and increased respiratory effects in general population would occur. People with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion when the AQI exceeds this level.

REGULATORY SETTING

Federal Agencies & Regulations

Federal Clean Air Act

“The Federal Clean Air Act (CAA), adopted in 1970 and amended twice thereafter (including the 1990 amendments), establishes the framework for modern air pollution control. The act directs the Environmental Protection Agency (EPA) to establish ambient air standards, the National Ambient Air Quality Standards (NAAQS)... for six pollutants: ozone, carbon monoxide, lead, nitrogen dioxide, particulate matter (less than 10 microns in diameter [PM₁₀] and less than 2.5 microns in diameter [PM_{2.5}]), and sulfur dioxide. The standards are divided into primary and secondary standards; the former are set to protect human health with an adequate margin of safety and the latter to protect environmental values, such as plant and animal life.

Areas that do not meet the ambient air quality standards are called “non-attainment areas”. The Federal CAA requires each state to submit a State Implementation Plan (SIP) for non-attainment areas. The SIP, which is reviewed and approved by the EPA, must demonstrate how the federal standards will be achieved. Failing to submit a plan or secure approval could lead to the denial of federal funding and permits for such improvements as highway construction and sewage treatment plants. For cases in which the SIP is submitted by the State but fails to demonstrate achievement of the standards, the EPA is directed to prepare a federal implementation plan or EPA can “bump up” the air basin in question to a classification with a later attainment date that allows time for additional reductions needed to demonstrate attainment, as is the case for the San Joaquin Valley.

SIPs are not single documents. They are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations and federal controls. The California SIP relies on the same core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations and limits on emissions from consumer products. California State law makes the California Air Resources Board (CARB) the lead agency for all purposes related to the SIP. Local Air Districts and other agencies, such as the Bureau of Automotive Repair and the Department of Pesticide Regulation, prepare SIP elements and submit them to CARB for review and approval. The CARB forwards SIP revisions to the EPA for approval and publication in the Federal Register.”²⁸

State Agencies & Regulations

California Clean Air Act

“The California CAA of 1988 establishes an air quality management process that generally parallels the federal process. The California CAA, however, focuses on attainment of the State ambient air quality standards (see Table 3.3-1 [of the General Plan RDEIR]), which, for certain pollutants and averaging periods, are more stringent than the comparable federal standards. Responsibility for meeting California’s standards is addressed by the CARB and local air pollution control districts (such as the eight county AIR DISTRICT, which administers air quality regulations for Tulare County). Compliance strategies are presented in district-level air quality attainment plans.

The California CAA requires that Air Districts prepare an air quality attainment plan if the district violates State air quality standards for criteria pollutants including carbon monoxide, sulfur dioxide, nitrogen dioxide, PM_{2.5}, or ozone. Locally prepared attainment plans are not required for areas that violate the State PM₁₀ standards. The California CAA requires that the State air quality standards be met as expeditiously as practicable but does not set precise attainment deadlines. Instead, the act established increasingly stringent requirements for areas that will require more time to achieve the standards.”²⁹

²⁸ Tulare County General Plan 2030 Update REIR. Pages 3.3-1 to 3.3-2.

²⁹ Ibid. 3.3-2 to 3.3-3.

“The air quality attainment plan requirements established by the California CAA are based on the severity of air pollution caused by locally generated emissions. Upwind air pollution control districts are required to establish and implement emission control programs commensurate with the extent of pollutant transport to downwind districts.”³⁰

California Air Resources Board

“The CARB is responsible for establishing and reviewing the State ambient air quality standards, compiling the California State Implementation Plan (SIP) and securing approval of that plan from the U.S. EPA. As noted previously, federal clean air laws require areas with unhealthy levels of ozone, inhalable particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop SIPs. SIPs are comprehensive plans that describe how an area will attain NAAQS. The 1990 amendments to the Federal CAA set deadlines for attainment based on the severity of an area’s air pollution problem. State law makes CARB the lead agency for all purposes related to the SIP. The California SIP is periodically modified by the CARB to reflect the latest emission inventories, planning documents, and rules and regulations of various air basins. The CARB produces a major part of the SIP for pollution sources that are statewide in scope; however, it relies on the local Air Districts to provide emissions inventory data and additional strategies for sources under their jurisdiction. The SIP consists of the emission standards for vehicular sources and consumer products set by the CARB, and attainment plans adopted by the local air agencies as approved by CARB. The EPA reviews the air quality SIPs to verify conformity with CAA mandates and to ensure that they will achieve air quality goals when implemented. If EPA determines that a SIP is inadequate, it may prepare a Federal Implementation Plan for the nonattainment area, and may impose additional control measures.

In addition to preparation of the SIP, the CARB also regulates mobile emission sources in California, such as construction equipment, trucks, automobiles, and oversees the activities of air quality management districts and air pollution control districts, which are organized at the county or regional level. The local or regional Air Districts are primarily responsible for regulating stationary emission sources at industrial and commercial facilities within their jurisdiction and for preparing the air quality plans that are required under the Federal CAA and California CAA.”³¹

California Air Resources Board Airborne Toxic Control Measures

“Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are known as particulate matter or PM, which includes carbon particles or “soot.” In 1998, following a 10-year scientific assessment process, ARB identified diesel PM as a toxic air contaminant based on its potential to cause cancer and other health problems, including respiratory illnesses, and increased risk of heart disease. Subsequent to this action, research has shown that diesel PM also contributes to premature deaths. Health risks from diesel PM are highest in areas of concentrated emissions, such as near ports, railyards, freeways, or warehouse distribution centers. Exposure to diesel PM is a health hazard, particularly

³⁰ Op. Cit. 3.3-5.

³¹ Op. Cit. 3.3-6 to 3.3-7.

to children whose lungs are still developing and the elderly who may have other serious health problems.

Both private businesses and public agencies operating stationary prime and emergency standby diesel engines in California are subject to the ATCM. Emergency standby engines are those that are used only when normal power or natural gas service fails or when needed for fire suppression or flood control. Prime engines are those that are not used for emergency standby purposes. Examples of businesses that are affected include private schools and universities, private water treatment facilities, hospitals, power generation, communications, broadcasting, building owners, agricultural production, banks, hotels, refiners, resorts, recycling centers, quarries, wineries, dairies, food processing, and manufacturing entities. A variety of public agencies are also affected including military installations, prisons and jails, public schools and universities, and public water and wastewater treatment facilities.”³²

“The ATCM for stationary diesel engines was originally adopted by the Air Resources Board (ARB or Board) at the February 26, 2004, Board Hearing. On November 8, 2004, the Final Regulation Order for the ATCM was approved by the Office of Administrative Law (OAL) and filed with the Secretary of State. The rulemaking became effective December 8, 2004. Among other provisions, the ATCM established emission standards and fuel use requirements for new and in-use stationary engines used in prime and emergency back-up applications (non-agricultural) and for new stationary engines used in agricultural applications.

A modification of the 2004 action was necessary to address the required PM emission standard for new agricultural engines. Therefore, an Emergency Regulatory Amendment was heard at the March 17, 2005 Board Hearing. On April 4, 2005, the Office of Administrative Law approved the amendments to the ATCM which removed the requirement that new stationary agriculture pump engines meet the 0.15g/bhp-hr PM standard. Instead, such engines must meet the appropriate Tier 2 emissions standard. The Board approved a temporary emergency action (Resolution 05-29) to replace the 0.15 g/bhp-hr PM standard for these engines with the appropriate ARB and federal new off-road/nonroad engine certification standards. Following this emergency rulemaking proceeding, ARB conducted another rulemaking in accordance with all procedural requirements of the California Administrative Procedure Act to make a modified version of the emergency amendments permanent at the May 26, 2005 Board Hearing. The final rulemaking package was approved by OAL and filed with the Secretary of the State on September 9, 2005. The regulation became effective that same day.

In November 2006, the Board approved amendments to the ATCM to include requirements for stationary in-use agricultural engines. Additional amendments addressed implementation and compliance issues primarily involving non-agricultural emergency standby and prime engines. These issues included streamlining certain fuel reporting requirements, updating electricity tariff schedules, modifying the definitions of California (CARB) diesel fuel and alternative diesel fuel, an alternative compliance demonstration option to the 0.01 g/bhp-hr diesel PM standard, and a

³² Frequently Asked Questions. Airborne Toxic Control Measure For Stationary Compression Ignition Engines, Requirements for Stationary Engines Use in Non-Agricultural Applications. California Air Resources Board, Stationary Source Division, Emissions Assessment Branch, May 2011. Page 2. Which can be accessed at: <http://www.arb.ca.gov/diesel/documents/atcmfaq.pdf>.

“sell-through” provision to allow stationary diesel-fueled engine wholesalers and retailers to sell (and owners or operators to use) stock engines that do not meet new, more stringent emissions standards when they become effective. The amendments also authorized the Executive Officer or local air district to allow the sale, purchase, or installation of a new stock engine from the previous model year to meet new stationary diesel-fueled engine emission standards, if verifiable information is provided documenting that current model year engines meeting the new emission standards are not available in sufficient numbers or in a sufficient range of makes, models, and horsepower ratings. The OAL approved the amendments on September 18, 2007, which became effective October 18, 2007.

In October 2010, the Board approved amendments to the ATCM to more closely align with the emission standards for new stationary diesel-fueled emergency standby engines, including direct-drive fire pump engines, and new prime engines with the federal Standards of Performance for Stationary Compression- Ignition Internal Combustion Engines (NSPS) promulgated July 11, 2006. Amendments to help clarify provisions in the ATCM and address new information, and to remove provisions no longer needed were also approved.”³³

Regional Agencies & Regulations

San Joaquin Valley Air Pollution Control District

The San Joaquin Valley Air Pollution Control District (Air District) is made up of eight counties in California’s Central Valley: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, and Tulare Counties, and the San Joaquin Valley portion of Kern County.

“The Air District is a public health agency whose mission is to improve the health and quality of life for all San Joaquin Valley residents through efficient, effective and entrepreneurial air quality-management strategies.”³⁴ The Air District’s 10 core values include: protection of public health; active and effective air pollution control efforts with minimal disruption to the San Joaquin Valley’s economic prosperity; outstanding customer service; ingenuity and innovation; accountability to the public; open and transparent public process; recognition of the uniqueness of the San Joaquin Valley; continuous improvement; effective and efficient use of public funds; and respect for the opinions and interests of all San Joaquin Valley residents. To achieve these core values the Air District has adopted air quality plans pursuant to the California CAA and a comprehensive list of rules to limit air quality impacts. The air plans currently in effect in the SJVAB and specific rules that apply to the Project are listed and described further below.

Ozone Plans³⁵

“The SJVAB has severe ozone problems. The EPA has required the Air District to demonstrate in a plan, substantiated with modeling, that the ozone NAAQS could be met by the November 15, 2005 deadline. However, the district could not provide this demonstration for several reasons, including

³³ Ibid. 1 and 2.

³⁴ Air District website accessed at: http://www.valleyair.org/General_info/aboutdist.htm#Mission.

³⁵ The various ozone plans can be found on the Air District’s website at: http://www.valleyair.org/Air_Quality_Plans/Ozone_Plans.htm.

that its achievement would require regulation of certain source categories not currently under the jurisdiction of the district. According to the district, in order to meet the standard the SJVAB must reduce the total emissions inventory by an additional 30 percent (300 tons per day). Because attainment by the deadline could not be demonstrated by the mandated deadlines, the federal sanction clock was started. The clock was to be stopped if the Air District SIP could demonstrate compliance with specified federal requirements by November 15, 2005. However, the district recognized that it could not achieve demonstration in time. Therefore, the district, through petition by the State on behalf of SJVAPCD, sought a change in the federal nonattainment classification from “severe” to “extreme” nonattainment with the ozone standard. An extreme nonattainment designation would effectively move the compliance deadline to year 2010 before federal sanctions would begin.

On February 23, 2004, EPA publicly announced its intention to grant the request by the State of California to voluntarily reclassify the SJVAB from a “severe” to an “extreme” 1-hour ozone nonattainment area. The EPA stated that, except for a demonstration of attainment of the ozone standard by 2005, the Air District has submitted all of the required severe area plan requirements and they were deemed complete. The CARB submitted the 2004 Extreme Ozone Attainment Demonstration Plan to EPA on November 15, 2004. On August 21, 2008, the District adopted Clarifications for the 2004 Extreme Ozone Attainment Demonstration Plan for 1-hour Ozone, and on October 16, 2008, EPA proposed to approve the District's 2004 Extreme Ozone Attainment Demonstration Plan for 1-hour Ozone.”³⁶

The planning requirements for the 1-hour plan remain in effect until replaced by a federal 8-hour ozone attainment plan. The Air District adopted the *2004 Extreme Ozone Attainment Demonstration Plan* in October 2004. However, since EPA revoked the federal 1-hour standard effective June 15, 2005. EPA did not act on this plan until 2010, when a court decision required EPA action. The EPA approved the plan, including revisions to the plan, on March 8, 2010. EPA’s action approved the plan, but subsequent litigation led to a court finding that EPA had not properly considered new information available since the District adopted the plan in 2004. EPA thus withdrew its plan approval in November 2012, and the Air District and ARB withdrew this plan from consideration. The Air District developed a new plan for the revoked standard and adopted the *2013 Plan for the Revoked 1-Hour Ozone Standard* in September 2013. While this plan does not establish new emissions reductions strategies, it builds upon the District’s 8-hour ozone and particulate matter strategies. Under these combined efforts, the SJVAB 1-hour ozone concentrations have been and will continue to improve. The modeling contained in the plan confirms that the SJVAB will attain the revoked 1-hour ozone standard by 2017.

EPA originally classified the Air Basin as serious nonattainment for the 1997 federal 8-hour ozone standard with an attainment date of 2013. On April 30, 2007, the District’s Governing Board adopted the *2007 Ozone Plan*, which contained analysis showing a 2013 attainment target to be infeasible. This plan details the Air District’s plan for achieving attainment on schedule with an “extreme nonattainment” deadline of 2024. At its adoption of the plan, the District also requested a reclassification to extreme nonattainment. ARB approved the plan in June 2007, and EPA approved the request for reclassification to extreme nonattainment on April 15, 2010. The plan

³⁶ Tulare County General Plan 2030 Update RDEIR. Pages 3.3-12 to 3.3-13.

contains measures to reduce ozone and particulate matter precursor emissions to bring the SJVAB into attainment with the federal 8-hour ozone standard. The plan calls for a 75-percent reduction of NO_x and a 25-percent reduction of ROG. The plan, with innovative measures and a “dual path” strategy, assures expeditious attainment of the federal 8-hour ozone standard for all Basin residents. The Air District adopted the plan on April 30, 2007 and the ARB approved the plan on June 14, 2007. The *2007 Ozone Plan* requires yet to be determined “Advanced Technology” to achieve additional reductions after 2021 to attain the standard at all monitoring stations in the Basin by 2024 as allowed for areas designated extreme nonattainment by the federal CAA.

The EPA revised the federal 8-hour ozone standard in 2008. To address this standard on June 16, 2016, the Air District adopted the *2016 Ozone Plan for 2008 8-hour Ozone Standard*, which the SJVAB must attain by 2031. This plan demonstrates that the Air District’s attainment strategy satisfies all federal CAA requirements and ensures expeditious attainment of the 75 parts per billion 8-hour ozone standard. The plan includes a “black box” provision to satisfy the contingency requirements under the federal CAA. The “black box” represents reductions that would be needed to attain the standard for which specific measures or technologies are not currently available. The strategy in this plan will reduce NO_x emissions by over 60% between 2012 and 2031.

In October 2015, the EPA again revised and lowered the federal 8-hour ozone standard to 70 parts per billion effective December 28, 2018. Addressing the 2015 8-hour ozone standard will pose a tremendous challenge for the San Joaquin Valley, given the naturally high background ozone levels and ozone transport into the San Joaquin Valley. The Air District will be required to prepare a new plan to address the 2015 standard.

“The County continues to evaluate and consider a variety of Federal, State, and Air District programs in order to respond to the non-attainment designation for Ozone that the SJVAB has received, and will continue to adopt resolutions to implement these programs. The Tulare County Board of Supervisor resolutions are described below. These resolutions were adopted in 2002 and 2004, respectively.

Resolution 2002-0157. Resolution 2002-0157, as adopted on March 5, 2002, requires the County to commit to implementing the Reasonably Available Control Measures included in the Resolution. The following Reasonably Available Control Measures were included in the resolution:

1. Increasing transit service to the unincorporated communities of Woodville, Poplar and Cotton Center;
2. Purchase of three new buses and installation of additional bicycle racks on buses;
3. Public outreach to encourage the use of alternative modes of transportation;
4. Providing preferential parking for carpools and vanpools;
5. Removing on-street parking and providing bus pullouts in curbs to improve traffic flow;
6. Supporting the purchase of hybrid vehicles for the County fleet;
7. Mandating that the General Plan 2030 Update implement land use policies supporting public transit and vehicle trip reduction; and

8. Programming \$13,264,000 of highway widening projects.

Resolution 2004-0067. As part of a follow up effort to Resolution 2002-0157 and to address the federal reclassification to Extreme non-attainment for ozone, the County Board of Supervisors adopted Resolution 2004-067. The resolution contains additional Reasonably Available Control Measures as summarized below:

- Encouraging land use patterns which support public transit and alternative modes of transportation;
- Exploring concepts of Livable Communities as they address housing incentives and transportation;
- Consideration of incentives to encourage developments in unincorporated communities that are sensitive to air quality concerns; and
- Exploring ways to enhance van/carpool incentives, alternative work schedules, and other Transportation Demand Management strategies.³⁷

Particulate Matter Plans³⁸

The SJVAB was designated nonattainment of state and federal health-based air quality standards for PM₁₀. However, as discussed below, the SJVAB has demonstrated attainment of the federal PM₁₀ standards and currently remains in nonattainment only for the state standards. The SJVAB is also designated nonattainment of state and federal standards for PM_{2.5}.

To meet CAA requirements for the PM₁₀ standard, the Air District adopted a PM₁₀ Attainment Demonstration Plan (Amended 2003 PM₁₀ Plan and 2006 PM₁₀ Plan), which had an attainment date of 2010. The Air District adopted the *2007 PM₁₀ Maintenance Plan* in September 2007 to assure the San Joaquin Valley's continued attainment of the EPA's PM₁₀ standard. The EPA designated the San Joaquin Valley as an attainment/maintenance area for PM₁₀ on September 25, 2008. Although the San Joaquin Valley has exceeded the standard since then, those days were considered exceptional events that are not considered a violation of the standard for attainment purposes.

On April 30, 2008, the Air District adopted the *2008 PM_{2.5} Plan* satisfying federal implementation requirements for the 1997 federal PM_{2.5} standard. However, on the verge of the demonstration of attainment with the standard the SJVAB was plagued with extreme drought, stagnation, strong inversions, and historically dry conditions and could not achieve attainment by the 2015 deadlines. The *2015 Plan for the 1997 PM_{2.5} Standard* (2015 PM_{2.5} Plan) was adopted by the Air District on April 16, 2015, and is a continuation of the Air District's strategy to improve the air quality in the SJVAB. The 2015 PM_{2.5} Plan contains stringent measures, best available control measures, additional enforceable commitments for further reductions in emissions, and ensures attainment of the 1997 federal 24-hour standard (65 µg/m³) by 2018 and the annual standard (15 µg/m³) by 2020.

³⁷ Ibid. 3.3-13.

³⁸ The various particulate matter plans can be found on the Air District's website at: http://www.valleyair.org/Air_Quality_Plans/PM_Plans.htm.

In December 2012, the Air District adopted the *2012 PM_{2.5} Plan* to bring the San Joaquin Valley into attainment of the EPA's 2006 24-hour PM_{2.5} standard of 35 µg/m³. The ARB approved the Air District's 2012 PM_{2.5} Plan for the 2006 standard at a public hearing on January 24, 2013. This plan seeks to bring the San Joaquin Valley into attainment with the standard by 2019, with the expectation that most areas will achieve attainment before that time.

EPA lowered the annual PM_{2.5} standard in 2012 to 12 µg/m³. The Air District adopted the *2016 Moderate Area Plan for the 2012 PM_{2.5} Standard* on September 15, 2016. This plan addresses the federal annual PM_{2.5} standard established in 2012 and includes an attainment impracticability demonstration and request for reclassification of the Valley from Moderate nonattainment to Serious nonattainment.

The Air District adopted the *2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards* on November 15, 2018. This plan addresses the EPA federal 1997 annual PM_{2.5} standard of 15 µg/m³ and 24-hour PM_{2.5} standard of 65 µg/m³; the 2006 24-hour PM_{2.5} standard of 35 µg/m³; and the 2012 annual PM_{2.5} standard of 12 µg/m³. This plan demonstrates attainment of the federal PM_{2.5} standards as expeditiously as practicable. The Air District continues to work with EPA on issues surrounding these plans, including EPA implementation updates.

The County continues to evaluate and consider Federal, State, and Air District programs in order to respond to the non-attainment designation for state PM₁₀ standards that the SJVAB has received. "On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM₁₀ NAAQS and approved the PM₁₀ Maintenance Plan. However, prior to this redesignation, Tulare County Board of Supervisors adopted the following resolution (Resolution 2002-0812) on October 29, 2002. Although now designated in attainment of the federal PM₁₀ standard, all requirements included in the AIR DISTRICT PM₁₀ Plan are still in effect. The resolution contains the following Best Available Control Measures (BACMs) to be implemented in order to reduce PM₁₀ emissions in the County:

1. Paving or stabilizing of unpaved roads and alleys;
2. Paving, vegetating, chemically stabilizing unpaved access points onto paved roads;
3. Curbing, paving, or stabilizing shoulders on paved roads;
4. Frequent routine sweeping or cleaning of paved roads;
5. Intensive street cleaning requirements for industrial paved roads and streets providing access to industrial/ construction sites; and
6. Debris removal after wind and rain runoff when blocking roadways."³⁹

Criteria Pollutant Emissions

To assess air quality impacts, the Air District has established significance thresholds to assist Lead Agencies in determining whether a project may have a significant air quality impact⁴⁰. The Air

³⁹ Tulare County General Plan 2030 Update RDEIR. Page 3.3-14.

⁴⁰ Air District, Guidance for Assessing and Mitigating Air Quality Impacts. Page 74.

District’s thresholds of significance for criteria pollutants, which are based on Air District Rule 2201 (New and Modified Stationary Source Review) offset thresholds, are provided in **Table 3.3-7**. As shown in the Table, the Air District has three sets of significance thresholds for each pollutant based on the source of the emissions. According to the Air District’s Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI), “The District identifies thresholds that separate a project’s short-term emissions from its long-term emissions. The short-term emissions are mainly related to the construction phase of a project and are recognized to be short in duration. The long-term emissions are mainly related to the activities that will occur indefinitely as a result of project operations.”⁴¹

Table 3.3-7			
Air Quality Thresholds of Significance – Criteria Pollutants			
Pollutant/ Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non- Permitted Equipment and Activities
	Emissions (tpy)	Emissions (tpy)	Emissions (tpy)
CO	100	100	100
NO_x	10	10	10
ROG	10	10	10
SO_x	27	27	27
PM₁₀	15	15	15
PM_{2.5}	15	15	15

Source: Air District, GAMAQI, Table 2, page 80

Operational emissions are further separated into permitted and non-permitted equipment and activities. Stationary (permitted) sources that comply or will comply with Air District rules and regulations are generally not considered to have a significant air quality impact. Specifically, the GAMAQI states, “District Regulation II ensures that stationary source emissions will be reduced or mitigated to below the District’s significance thresholds. However, the Lead Agency can, and should, make an exception to this determination if special circumstances suggest that the emissions from any permitted or exempt source may cause a significant air quality impact. For example, if a source may emit objectionable odors, then odor impacts on nearby receptors should be considered a potentially significant air quality impact. District implementation of New Source Review (NSR) ensures that there is no net increase in emissions above specified thresholds from New and Modified Stationary Sources for all nonattainment pollutants and their precursors. Furthermore, in general, permitted sources emitting more than the NSR Offset Thresholds for any criteria pollutant must offset all emission increases in excess of the thresholds. However, under certain

⁴¹ Ibid. 75.

circumstances, the District may be precluded by state law or other District rule requirements from requiring a stationary source to offset emissions increases.”⁴²

Air District Rules and Regulations⁴³

The Air District is primarily responsible for regulating stationary source emissions within the SJVAB and preparing the air quality plans (or portions thereof) for its jurisdiction. The Air District’s primary approach of implementing local air quality plans occurs through the adoption of specific rules and regulations. Stationary sources within the jurisdiction are regulated by the Air District’s permit authority over such sources and through its review and planning activities. The following Air District rules and regulations that may apply to this Project include, but are not limited to, the following:

Regulation VIII – Fugitive PM₁₀ Prohibitions. The Air District adopted its Regulation VIII on October 21, 1993 and amended on August 8, 2004 to implement Best Available Control Measures (BACM). This Regulation consists of a series of emission reduction rules consistent with the PM₁₀ Maintenance Plan. These rules are designed to reduce PM₁₀ emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track-out, etc. All development projects that involve soil disturbance are subject to at least one provision of the Regulation VIII series of rules. Regulation VIII specifically addresses the following activities:

- Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities (Rule 8021);
- Bulk Materials (including Handling and Storage) (Rule 8031);
- Carryout and Track-Out (Rule 8041);
- Open Areas (Rule 8051);
- Paved and Unpaved Roads (Rule 8061); and
- Unpaved Vehicle/Equipment Parking (including Shipping and Receiving, Transfer, Fueling, and Service Areas) (Rule 8071).

Rule 2201 – New and Modified Stationary Source Review. This rule applies to all new stationary sources and all modifications to stationary sources which are subject to Air District Permit Requirements. Rule 2201 requires stationary source projects that exceed certain thresholds to install best available control technology (BACT) and to obtain emission offsets to ensure that growth in stationary sources on a cumulative basis will not result in an increase in emissions. This Project is subject to BACT requirements.

Rule 4001 (New Source Performance Standards). This rule requires all new sources of air pollution and modification of existing sources of air pollution to comply with the standards,

⁴² Op. Cit. 76.

⁴³ For a full list of Air District rules and regulations, see their website at: <http://www.valleyair.org/rules/1ruleslist.htm>.

criteria, and requirements of Part 60, Chapter 1, Title 40, Code of Federal Regulation (CFR). This Project is subject to Subpart OOO, Nonmetallic Mineral Processing Plants.

Rule 4002 – National Emissions Standards for Hazardous Air Pollutants. The purpose of the rule is to incorporate the National Emission Standards for Hazardous Air Pollutants from Part 61, Chapter I, Subchapter C, Title 40, Code of Federal Regulations and the National Emission Standards for Hazardous Air Pollutants for Source Categories from Part 63, Chapter I, Subchapter C, Title 40, Code of Federal Regulations to protect the health and safety of the public from HAPs, such as asbestos. This rule will apply in the event that the existing on-site residential unit (which will be used as an office) or other structures undergo renovation or remodeling activities.

Rule 4101 – Visible Emissions. The purpose of this rule is to prohibit the emissions of visible air contaminants to the atmosphere. The provisions of this rule shall apply to any source operation which emits or may emit air contaminants.

Rule 4102 – Nuisance. The purpose of this rule is to protect the health and safety of the public, and applies to any source operation that emits or may emit air contaminants or other materials.

Rule 4309 (Dryers, Dehydrators, and Ovens). This purpose of this rule is to limit emissions of oxides of nitrogen (NO_x) and carbon monoxide (CO) from dryers, dehydrators, and ovens and applies to any dryer, dehydrator, or oven that is fired on gaseous fuel, liquid fuel, or is fired on gaseous and liquid fuel sequentially, and the total rated heat input for the unit is 5.0 million British thermal units per hour (5.0 MMBtu/hr) or greater.

Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). This purpose of this rule is to limit VOC emissions by restricting the application and manufacturing of certain types of asphalt for paving and maintenance operations. To comply with this rule the asphalt oil manufacturers produce materials that are in compliance with the rule.

The Air District has limited authority to regulate transportation sources and indirect sources that attract motor vehicle trips.

Rule 9510 – Indirect Source Review. This rule reduces the impact of NO_x and PM₁₀ emissions from growth on the Air Basin. The rule places application and emission reduction requirements on development projects meeting applicability criteria in order to reduce emissions through on-site mitigation, off-site Air District-administered projects, or a combination of the two. The rule defines a development project as a project, or portion thereof, that results in the construction of a building or facility for the purpose of increasing capacity or activity.⁴⁴ The rule also exempts any development project on a facility whose primary functions are subject to Air District permitting requirements.⁴⁵ The Project includes the development of an asphalt concrete batch plant which is subject to Air District permitting requirements; therefore, the Project is not subject to Rule 9510.

⁴⁴ Air District Rule 9510. Section 3.13 which can be accessed at: <http://www.valleyair.org/rules/1/ruleslist.htm>.

⁴⁵ Ibid. Section 4.4.3.

Air District's CEQA Role

As a public agency, the District takes an active part in the intergovernmental review process under CEQA. In carrying out its duties under CEQA, the District may act as a Lead Agency, a Responsible Agency, or a Trustee/Commenting Agency depending on the approvals required by the District and other land use agencies.

“The District is always the Lead Agency for projects such as the development of District rules and regulations. The District may be Lead Agency for projects subject to District permit requirements. As discussed above, for projects triggering BACT, the District has discretionary approval in deciding how to permit the project. For projects subject to BACT, the District serves as Lead Agency when no other agency has principal responsibility for approving the project.”⁴⁶

“As a Responsible Agency, the District assists Lead Agencies by providing technical expertise in characterizing project-related impacts on air quality and is available to provide technical assistance in addressing air quality issues in environmental documents. When commenting on a Lead Agency's environmental analysis, the District reviews the air quality section of the analysis and other sections relevant to assessing potential impacts on air quality, i.e. sections assessing public health impacts. At the conclusion of its review the District may submit to the Lead Agency comments regarding the project air quality analysis. Where appropriate, the District will recommend feasible mitigation measures.”⁴⁷

“As a Trustee Agency, the District assists Lead Agencies by providing technical expertise or tools in characterizing project-related impacts on air quality and identifying potential mitigation measures, and is available to provide technical assistance in addressing air quality issues in environmental documents. At the conclusion of its review the District may submit to the Lead Agency comments regarding the project air quality analysis. Where appropriate, the District will recommend feasible mitigation measures. The process is subject to change due to the District's continuous improvements efforts.”⁴⁸

Local Policy & Regulations

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the Project are listed below:

AQ-1.1 Cooperation with Other Agencies - The County shall cooperate with other local, regional, Federal, and State agencies in developing and implementing air quality plans to achieve State and federal Ambient Air Quality Standards. The County shall partner with the Air District, Tulare County Association of Governments (TCAG), and the California Air Resource Board to achieve better air quality conditions locally and regionally.

⁴⁶ Air District, GAMAQI. Page 50.

⁴⁷ Ibid. 51.

⁴⁸ Op. Cit. 52.

AQ-1.2 Cooperation with Local Jurisdictions - The County shall participate with cities, surrounding counties, and regional agencies to address cross-jurisdictional transportation and air quality issues.

AQ-1.3 Cumulative Air Quality Impacts - The County shall require development to be located, designed, and constructed in a manner that would minimize cumulative air quality impacts. Applicants shall be required to propose alternatives as part of the State CEQA process that reduce air emissions and enhance, rather than harm, the environment.

AQ-1.4 Air Quality Land Use Compatibility - The County shall evaluate the compatibility of industrial or other developments which are likely to cause undesirable air pollution with regard to proximity to sensitive land uses, and wind direction and circulation in an effort to alleviate effects upon sensitive receptors.

AQ-1.5 California Environmental Quality Act (CEQA) Compliance - The County shall ensure that air quality impacts identified during the CEQA review process are consistently and reasonably mitigated when feasible.

AQ-1.7 Support Statewide Climate Change Solutions - The County shall monitor and support the efforts of Cal/EPA, CARB, and the AIR DISTRICT, under AB 32 (Health and Safety Code Section 38501 et seq.), to develop a recommended list of emission reduction strategies. As appropriate, the County will evaluate each new project under the updated General Plan to determine its consistency with the emission reduction strategies.

IMPACT ANALYSIS

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:

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

Project Impact Analysis:

Less Than Significant Impact

The CEQA Guidelines indicate that a significant impact would occur if the project would conflict with or obstruct implementation of the applicable Air Quality Plan (AQP). The Air District has determined that projects with emissions below the thresholds of significance for criteria pollutants would “Not conflict or obstruct implementation of the District’s air quality plan.” These thresholds are presented in **Table 3.3-7** [Table 3 of the AQ-GHG memo]. The Air District has also determined that a project would be considered to have a significant impact if the emissions are predicted to cause or contribute to a violation of ambient air quality standards. An Ambient Air Quality Analysis (AAQA) would be required if the project size exceeds the screening limits presented in Table 5 [of the AQ-GHG memo] and project emissions are predicted to exceed the AAQA screening threshold of 100 pounds per day.

An additional criterion regarding a project's implementation of AQP control measures was assessed to show specifically how the project helps to implement the AQP. Therefore, this document proposes the following criteria for determining project consistency with the current AQPs:

1. Will the project result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQPs? This measure is determined by comparison to the regional and localized thresholds identified by the District for Regional and Local Air Pollutants.
2. Will the project comply with applicable control measures in the AQPs? The primary control measures applicable to development projects are Regulation VIII—Fugitive PM₁₀ Prohibitions and District Rule 2201 (New and Modified Stationary Source Review)."

Consultant Alta Environmental prepared emissions calculations for the Project's construction-related activities and on-site operation-related stationary and mobile source emissions (included in Appendix "A" of the DEIR). The Authority to Construct applications provide quantification of emissions from the Project's stationary sources, including the equipment and stockpiles associated with the HMA plant, RAP plant, and concrete batch plant. The Health Risk Assessment also includes quantification of the stationary source emissions, but also includes quantification of construction-related emissions. The Ambient Air Quality Analysis Determination provides quantification of the average daily emissions for both construction- and operation-related activities. Project emissions were estimated assuming construction would take one year and the facility would operate 312 days per year (6 days a week for 52 weeks a year) at the maximum annual permitted capacity, except for stockpiles which were estimated using operation of 365 days per year.

RMA Staff prepared emissions calculations for the operation-related off-site mobile source emissions (see Attachment "A" of this memo). The emissions calculations were based on the proposed maximum annual permitted capacity and the projected annual Project trip generation (see Table 3 of the Traffic Impact Study, included in Appendix "F" of the DEIR). Consistent with the proposed development schedule with operations beginning in 2021, EMFAC emissions factors for 2021 were used to quantify emissions. Given the nature of the Project (manufacturing of construction-related materials) and that it is impossible to identify specific destinations of final product sales, Vehicle Miles Traveled (VMT) has been generalized for likely market areas (expressed as round-trip distances) as follows: 30 miles for local area; 68 miles for the Porterville area; 36 miles to the Fresno County line; and 74 miles to the Kern County Line. Approximately 85.8% of the Project's vehicle trips are attributable to heavy-duty (MHD and HHD) trucks used in the transport of raw material and final product. Approximately 1.4% of trips are attributable to outside service vehicles (LDT1, LDT2) and other materials and services (MDV). The remaining approximate 12.8% of the trips are attributable to employee vehicles (LDA, LDT1, LDT2, MDV).

Table 3.3-8 provides the Project’s construction-related emissions. **Table 3.3-9** provides the Project’s operation-related emissions from permitted sources. **Table 3.3-10** provides the Project’s on- and off-site operation-related emissions from non-permitted sources.

Table 3.3-8 Project Construction Emissions (tons/year)						
Activity/Source	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Site Preparation	0.0209	0.2125	0.1114	0.0002	0.1024	0.0601
Grading	0.0686	0.7543	0.4921	0.0010	0.1363	0.0817
Building Construction	0.3857	3.0340	2.8602	0.0085	0.5109	0.2089
Paving	0.0355	0.1413	0.1528	0.0003	0.0094	0.0074
Architectural Coating	0.4998	0.0194	0.0449	0.0001	0.0090	0.0032
Construction Total	1.0104	4.1615	3.6614	0.0100	0.7680	0.3613
Significance Threshold	10	10	100	27	15	15
Exceeds Threshold?	No	No	No	No	No	No
<small>Note: Construction Year is 2020. Emissions include mobile source emissions. Source: Alta Environmental, Health Risk Assessment, Attachment 2, CalEEMod Emission Estimates.</small>						

Table 3.3-9 Project Permitted Operational Emissions (tons/year)						
Source	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
HMA Plant						
RAP Cold Feed	---	---	---	---	0.0693	0.0693
Asphalt Dryer	0.8155	1.5369	9.1589	14.4283	1.7250	1.7250
Oil Heater	0.0121	0.0228	0.1357	0.2138	0.0130	0.0130
Oil Storage Tanks	0.511	---	---	---	---	---
Silo Filling / Loadout	1.2263	---	0.1898	---	0.0412	0.0412
Stockpiles	---	---	---	---	1.2375	1.2375
Concrete Batch Plant						
Concrete Batching	---	---	---	---	1.4418	1.4418
Stockpiles	---	---	---	---	1.6521	1.6521
RAP Plant						
RAP Processing	---	---	---	---	0.0231	0.0231
Stockpiles	---	---	---	---	0.3218	0.3218
Permitted Total	2.5649	1.5597	9.4844	14.6421	6.5248	6.5248
Significance Threshold	10	10	100	27	15	15
Exceeds Threshold?	No	No	No	No	No	No
<small>Operation Year is 2021. Source: Alta Environmental, Authority to Construct Application – Hot Mix Asphalt Plant, Pages 7-12. Alta Environmental, Authority to Construct Application – Concrete Batch Plant, Pages 8-10. Alta Environmental, Authority to Construct Application – Concrete and Asphalt Recycling Plant, Pages 8-10. Alta Environmental, Ambient Air Quality Analysis Determination Alta Environmental, Health Risk Assessment</small>						

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Dunn Asphalt and Concrete Batch Plant
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Table 3.3-10 Project Non-Permitted Operational Emissions (tons/year)						
Source	ROG	NOx	CO	SO ₂	PM ₁₀	PM _{2.5}
<i>On-Site Non-Permitted Sources¹</i>						
On-Site Truck Exhaust	0.096	1.177	0.979	0.003	0.008	0.008
On-Site Truck Fugitive Dust	---	---	---	---	0.207	0.207
Off-Road Equipment	0.113	0.243	2.23	0.000	0.008	0.007
<i>Off-Site Non-Permitted Sources²</i>						
Aggregate Material Delivery Trucks	0.1256	4.1652	0.5087	0.0159	0.0690	0.0660
Oil Delivery Trucks	0.0025	0.0826	0.0101	0.0003	0.0014	0.0013
Propane Delivery Trucks	0.0005	0.0152	0.0019	0.0001	0.0003	0.0002
HMA Trucks	0.0673	2.2313	0.2725	0.0085	0.0370	0.0354
Cement & Fly Ash Delivery Trucks	0.0126	0.4165	0.0509	0.0016	0.0069	0.0066
Ready Mix Concrete Trucks	0.1121	3.7189	0.4542	0.0142	0.0616	0.0590
Recycled Material End Dumps	0.0115	0.3804	0.0465	0.0015	0.0063	0.0060
Recycled Material Delivery Trucks	0.0154	0.2225	0.0410	0.0007	0.0060	0.0057
Recycled Base Trucks	0.0135	0.4463	0.0545	0.0017	0.0074	0.0071
Fuel Trucks (for on-site equipment)	0.0003	0.0097	0.0012	0.0000	0.0002	0.0002
Outside Services	0.0008	0.0035	0.0355	0.0001	0.0001	0.0000
Other Materials/Services	0.0006	0.0028	0.0252	0.0001	0.0000	0.0000
Employee Trips	0.0093	0.0419	0.4321	0.0013	0.0006	0.0006
<i>Non-Permitted Total</i>	<i>0.5807</i>	<i>13.1568</i>	<i>5.1433</i>	<i>0.0489</i>	<i>0.4197</i>	<i>0.4102</i>
Significance Threshold	10	10	100	27	15	15
<i>Exceeds Threshold?</i>	<i>No</i>	<i>Yes</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
Operation Year is 2021.						
1 Source: Alta Environmental. Ambient Air Quality Analysis Determination and Health Risk Analysis.						
2 Source: Attachment A of this memo, Annual Off-Site Emissions Table.						

As presented in **Table 3.3-8**, emissions of ROG, NOx, CO, SO₂, PM₁₀, and PM_{2.5} associated with the construction of the Project would not exceed the Air District's significance thresholds; as such, the Project would not conflict with or obstruct implementation of the applicable AQP. Therefore, construction-related activities will have a ***Less Than Significant Impact*** related to this Checklist Item.

As presented in **Table 3.3-9**, emissions of ROG, NOx, CO, SO₂, PM₁₀, and PM_{2.5} associated with the permitted equipment and on-site activities (stationary sources) of the Project would not exceed the Air District's significance thresholds; as such, the Project would not conflict with or obstruct implementation of the applicable AQP. Therefore, permitted operation-related activities will have a ***Less Than Significant Impact*** related to this Checklist Item.

As presented in **Table 3.3-10**, emissions of ROG, NOx, CO, SO₂, PM₁₀, and PM_{2.5} associated with the on-site non-permitted equipment and activities (mobile sources) of the Project would not exceed the Air District's significance thresholds. As presented in **Table 3.3-10**, NOx

emissions associated with the off-site non-permitted equipment and activities (mobile source emissions from transport of raw and final product, services and deliveries, and employee trips) will exceed the Air District's significance thresholds; emissions of ROG, CO, SO₂, PM₁₀, and PM_{2.5} from these sources will not exceed the thresholds.

The Project is subject to Air District rules and regulations including, Regulation VIII (Fugitive PM₁₀ Prohibition), Rules 2201 (New and Modified Stationary Source Review), Rule 2520 (Federally Mandated Operating Permits, Rule 4001 (New Source Performance Standards), Rule 4101 (Visible Emissions), Rule 4102 (Public Nuisance), Rule 4309 (Dryers, Dehydrators, and Ovens), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). According to the Air District's GAMAQI, "Project subject to District rules and regulation would reduce its impacts on air quality through compliance with regulatory requirements."⁴⁹ Regarding Rule 2201, the GAMAQI states, "NSR is a major component of the District's attainment strategy as it relates to growth. It applies to new and modified stationary sources of air pollution. NSR provides mechanisms, including emission trade-offs, by which Authorities to Construct such sources may be granted, without interfering with the attainment or maintenance of Ambient Air Quality Standards. District implementation of NSR ensures that there is no net increase in emissions above specified thresholds from new and modified Stationary Sources for all nonattainment pollutants and their precursors."⁵⁰

Mobile source emissions are under the jurisdiction of the ARB. The Applicant's on-site equipment and heavy-duty truck fleet (used to transport aggregate to the site from the Porterville plant) are currently ARB-compliant and will continue to comply with all applicable ARB rules and regulations. The Applicant does not own the heavy-duty trucks that will be used to transport finished product for sale. As truck registration is dependent upon compliance with ARB's truck regulations, it is reasonable to assume that all heavy-duty trucks accessing the Project site comply, and will continue to comply, with ARB regulations. As truck emissions are expected to become cleaner in the future and all heavy-duty truck fleets must have Year 2010 engine models by 2023, the Project-related NO_x emissions are also expected to decrease with time.

The emissions inventories included in the Tulare County General Plan are consistent with and included in the AQP. The Project is consistent with the growth projections in the General Plan and will implement all applicable General Plan policies, including those that require compliance with Air District regulation and encourage emission reducing project design features.

As previously discussed, the Project will comply with all federal, state, and Air District rules and regulation, and is consistent with the Tulare County General Plan and the State SIP. However, the Air District's GAMAQI states, "the District recommends that mobile source (both exhaust emissions and fugitive dust emissions) be quantified separate from other non-permitted sources or activities. However, emissions from all non-permitted equipment and

⁴⁹ Air District. GAMAQI, Section 8.2, Page 75.

⁵⁰ Air District. GAMAQI, Section 8.3.1, Page 81.

activities are summed by criteria pollutant when determining significance. A project would be determined to have a significant, long-term impact on air quality if any criteria pollutant resulting from non-permitted equipment and activities exceeds its respective threshold of significance.”⁵¹ As such, Project-related off-site mobile source NOx emissions would result in a ***Significant and Unavoidable Project-specific Impact*** to Air Quality.

Ambient Air Quality Analysis

Pursuant to Air District recommendations and following Air District procedures, consultant Alta Environmental evaluated the Project’s daily emissions to determine whether an AAQA would be warranted for the Project. Project daily emissions were estimated assuming construction would take one year and the facility would operate 312 days per year (6 days a week for 52 weeks a year) at maximum annual permitted capacity, except for stockpiles which were estimated using operation of 365 days per year.

Table 3.3-11 provides the Project’s daily construction-related emissions. **Table 3.3-12** provides the Project’s daily operation-related emissions from permitted source. **Table 3.3-13** provides the Project’s daily operation-related emissions from non-permitted sources.

Table 3.3-11						
Daily Construction Emissions (pounds/day)						
Construction Phase	ROG	NOx	CO	SO₂	PM₁₀	PM_{2.5}
Site Preparation	4.19	42.50	22.28	0.04	20.49	12.02
Grading	4.57	50.29	32.81	0.06	9.08	5.45
Building Construction	4.43	34.87	32.88	0.10	5.87	2.40
Paving	3.55	14.13	15.28	0.03	0.94	0.74
Architectural Coating	49.98	1.94	4.49	0.01	0.90	0.32
Max Daily Construction	49.98	50.29	32.88	0.10	20.49	12.02
Exceeds 100 lb/day?	No	No	No	No	No	No

Source: Alta Environmental. Ambient Air Quality Analysis Determination

Table 3.3-12						
Daily Permitted Operational Emissions (pounds/day)						
Source	ROG	NOx	CO	SO₂	PM₁₀	PM_{2.5}
Concrete Batch Plant	---	---	---	---	9.23	9.23
RAP Processing Plant	---	---	---	---	0.15	0.15
HMA Dryer	5.26	9.87	58.72	92.50	11.09	11.09
HMA Oil Heater	0.08	3.81	0.96	1.37	0.08	0.08
HMA Cold Feed RAP	---	---	---	---	0.36	0.36
HMA Silo Filling	5.86	---	0.57	---	0.01	0.01
HMA Silo Loadout	2.00	---	0.65	---	0.25	0.25
HMA Oil Tanks	2.80	---	---	---	---	---
Total Daily Operations	15.99	13.69	60.89	93.87	21.17	21.17
Exceeds 100 lb/day?	No	No	No	No	No	No

Source: Alta Environmental. Ambient Air Quality Analysis Determination

⁵¹ Air District. GAMAQI, Section 8.3.7, Page 89.

Table 3.3-13						
Daily Non-Permitted Operational Emissions (pounds/day)¹						
Source	ROG	NOx	CO	SO ₂	PM ₁₀	PM _{2.5}
HMA Storage Pile	---	---	---	---	6.79	6.79
Concrete Storage Pile	---	---	---	---	9.04	9.04
RAP Storage Pile	---	---	---	---	1.75	1.75
Truck Exhaust (on-site)	0.62	7.55	6.28	0.02	0.05	0.05
Truck Fugitive Dust (on-site)	---	---	---	---	1.33	1.33
Off Road Equipment	0.73	1.56	14.29	---	0.05	0.05
Vehicle Exhaust (off-site trucks and employee trips) ²	2.38	75.24	12.40	0.29	1.26	1.21
Total Daily Operations	3.72	84.34	32.97	0.31	20.28	20.28
Exceeds 100 lb/day?	No	No	No	No	No	No
<small>1 Source: Alta Environmental. Ambient Air Quality Analysis Determination 2 Source: Attachment "A" of this memo, Table 3</small>						

As presented in **Tables 3.3-11-3.3-13**, daily emissions of ROG, NOx, CO, SO₂, PM₁₀, and PM_{2.5} associated with the construction and operation of the Project would not exceed the Air District’s AAQA screening thresholds of 100 pound per day. Total combined daily operation-related emissions (permitted and non-permitted) are 19.71 lb/day ROG, 98.03 lb/day NOx, 93.86 lb/day CO, 94.18 lb/day SO₂, 41.45 lb/day PM₁₀, and 41.45 lb/day PM_{2.5} which are also below the Air District’s thresholds. As such, the Project will not conflict with or obstruct implementation of the applicable AQP. Therefore, the Project will have a **Less Than Significant Project-specific Impact** related to this Checklist Item.

Compliance with Applicable Air Quality Plan Control Measures

The AQP contains a number of control measures, which are enforceable requirements through the adoption of rules and regulations. As previously noted, the Project is subject to Air District rules and regulations including, Regulation VIII (Fugitive PM10 Prohibition), Rules 2201 (New and Modified Stationary Source Review), Rule 2520 (Federally Mandated Operating Permits, Rule 4001 (New Source Performance Standards), Rule 4101 (Visible Emissions), Rule 4102 (Public Nuisance), Rule 4309 (Dryers, Dehydrators, and Ovens), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations).

Regulation VIII—Fugitive PM₁₀ Prohibitions is a control measure that is one of the main strategies from the 2006 PM₁₀ Plan for reducing the PM₁₀ emissions that are part of fugitive dust. The Air District adopted its Regulation VIII on October 21, 1993 and amended on August 8, 2004 to implement Best Available Control Measures (BACM). This Regulation consists of a series of emission reduction rules consistent with the PM₁₀ Maintenance Plan. These rules are designed to reduce PM₁₀ emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track-out, etc.

Rules 2201 (New and Modified Stationary Source Review) applies to all new stationary sources which are subject to Air District Permit Requirements. Rule 2201 requires stationary source projects that exceed certain thresholds to install Best Available Control Technology

(BACT) and to obtain emission offsets to ensure that growth in stationary sources on a cumulative basis will not result in an increase in emissions. The Project will comply with Air District permitting requirements under Rule 2201.

The Project will comply with all applicable Air District rules and regulations. Therefore, the Project complies with this criterion and would not conflict with or obstruct implementation of the applicable AQP.

The 2016 Plan for the 2008 8-Hour Ozone Standard was adopted in June 2016. The 2015 Plan for the 1997 PM_{2.5} Standard was adopted in April 2015 and the 2016 Moderate Area Plan for the 2012 PM_{2.5} Standard was adopted in September 2016. The plans assume growth would occur at rates projected by the State and regional population forecasts and would result in the continued need for rock and aggregate for construction projects. Therefore, the Project complies with this criterion and would not conflict with or obstruct implementation of the applicable air quality attainment plan.

The Project will comply with all applicable Air District rules and regulations including BACT requirements. The Project will provide necessary construction materials for future growth as projected by the State. As such, the Project is in compliance with AQP control measures and would not conflict with or obstruct implementation of the applicable AQP. The Project will have a ***Less Than Significant Project-specific Impact*** related to this Checklist Item.

Cumulative Impact Analysis: ***Significant and Unavoidable Cumulative Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. The Project would be considered to have a significant cumulative impact on air quality if Project-specific impacts are determined to be significant. As previously discussed, Project construction-related criteria pollutant emissions would not exceed Air District significance thresholds. Project operation-related ROG, CO, SO₂, PM₁₀ and PM_{2.5} emissions also would not exceed Air District significant thresholds. While permitted operation-related NO_x emissions do not exceed the significance threshold, NO_x emissions from off-site mobile sources do exceed the threshold. The Project will comply with all applicable federal, State and Air District rules and regulations and will not result in daily emissions that would exceed 100 pound per day; as such, the Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. However, because mobile source NO_x emissions are considered to have a Significant and Unavoidable Project-specific Impact, the Project's impacts are also considered cumulatively significant. Therefore, the Project will result in a ***Significant and Unavoidable Cumulative Impact*** related this Checklist Item.

Mitigation Measure(s): ***No Additional Measures beyond Compliance with Existing Regulation Required.***

Conclusion: ***Less Than Significant Impacts***

The Project is subject to Air District permitting requirements and various Air District rules and regulations including: Regulation VIII (Fugitive PM10 Prohibition), Rules 2201 (New and Modified Stationary Source Review), Rule 2520 (Federally Mandated Operating Permits, Rule 4001 (New Source Performance Standards), Rule 4101 (Visible Emissions), Rule 4102 (Public Nuisance), Rule 4309 (Dryers, Dehydrators, and Ovens), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). As demonstrated in **Table 3.3-9**, the Project's permitted sources will not exceed the Air District's thresholds of significance for any criteria pollutant. As such, mitigation is not required to reduce permitted emissions to a level of less than significant.

As demonstrated in **Table 3.3-10**, the Project's non-permitted sources, specifically the heavy-duty truck trips, will exceed the Air District's thresholds of significance for NOx. Mobile source emissions are under the jurisdiction of the ARB. The Applicant's on-site equipment and heavy-duty truck fleet are currently ARB-compliant and will continue to comply with all applicable ARB rules and regulations. The Applicant does not own the heavy-duty trucks that will be used to transport finished product for sale. As truck registration is dependent upon compliance with ARB's truck regulations, it is reasonable to assume that all heavy-duty trucks accessing the Project site comply, and will continue to comply, with ARB regulations. As truck emissions are expected to become cleaner in the future and all heavy-duty truck fleets must have Year 2010 engine models by 2023, the Project-related emissions are also expected to decrease with time.

The emissions inventories included in the Tulare County General Plan are consistent with and included in the AQP. The Project is consistent with the growth projections in the General Plan and will implement all applicable General Plan policies, including those that require compliance with Air District regulation and encourage emission reducing project design features.

As previously discussed, the Project will comply with all federal, state, and Air District rules and regulation, and is consistent with and will implement all applicable policies of Tulare County General Plan. The Applicant does not have control over the heavy-duty vehicles used in transport of final product from the site. Furthermore, as this is a new facility and actual production and sales are speculative at this time, it is unknown if the maximum production capacity will be achieved. As such, feasible mitigation consists of existing rules, regulations, and requirements.

b) 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?

Project Impact Analysis: *Significant and Unavoidable Impact*

See Item a), earlier, and Cumulative Impact Analysis, below.

Cumulative Impact Analysis: *Significant and Unavoidable Impact*

To result in a less than significant cumulative impact, the following three (3) criteria must be true:

1. Regional analysis: emissions of nonattainment pollutants must be below the Air District's regional significance thresholds. This is an approach recommended by the Air District in its GAMAQI.
2. Summary of projections: the project must be consistent with current air quality attainment plans including control measures and regulations. This is an approach consistent with Section 15130(b) of the CEQA Guidelines.
3. Cumulative health impacts: the project must result in less than significant cumulative health effects from the nonattainment pollutants. This approach correlates the significance of the regional analysis with health effects, consistent with the court decision, *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1219-20.

The first criteria used to evaluate potential Project impacts is to determine if the Project's emissions are below the Air District's significance thresholds. As previously discussed in Checklist Item a) "*Contribution to Air Quality Violations*" and demonstrated in **Tables 10 and 11**, the Project's construction-related and permitted operation-related criteria pollutant emissions would not exceed Air District significance thresholds for any criteria pollutant. The Project's non-permitted (mobile source) operation-related ROG, CO, SO₂, PM₁₀ and PM_{2.5} emissions also would not exceed Air District significant thresholds; however, NO_x emissions from the mobile sources do exceed the threshold. Mobile source emissions are under the jurisdiction of the ARB. The Applicant's on-site equipment and heavy-duty truck fleet are currently ARB-compliant and will continue to comply with all applicable ARB rules and regulations. The Applicant does not own the heavy-duty trucks that will be used to transport finished product for sale. As truck registration is dependent upon compliance with ARB's truck regulations, it is reasonable to assume that all heavy-duty trucks accessing the Project site comply, and will continue to comply, with ARB regulations. As truck emissions are expected to become cleaner in the future and all heavy-duty truck fleets must have Year 2010 engine models by 2023, the Project-related NO_x emissions are also expected to decrease with time. The Project will comply with all applicable federal, State and Air District rules and regulations and will not result in daily emissions, from construction activities, permitted equipment/activities, or non-permitted equipment/activities, that would exceed the AAQA screening threshold of 100 pound per day. As such, the Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. However, because mobile source NO_x emissions exceed the Air District's significance thresholds they are considered to result in Significant Project-specific Impact. As such, the Project's impacts are also considered cumulatively significant. Therefore, the Project will result in a ***Significant and Unavoidable Cumulative Impact*** related this Checklist Item.

The second criteria used to evaluate potential Project impacts is to determine if the Project is consistent with current AQPs including control measures and regulations. In accordance with CEQA Guidelines 15130(b), this part of the analysis of cumulative impacts is based on a summary of projections analysis. This analysis considers the current CEQA Guidelines, which includes the amendments approved by the Natural Resources Agency, effective on December 28, 2018. Under the amended CEQA Guidelines, cumulative impacts may be analyzed using other plans that evaluate relevant cumulative effects. The AQPs describe and evaluate the future projected emissions sources in the San Joaquin Valley Air Basin and set forth a strategy to meet both state and federal Clean Air Act planning requirements and federal ambient air quality standards. The Air District AQP are based on a summary of projections that accounts for projected growth throughout the Air Basin, and the controls needed to achieve ambient air quality standards. In accordance with CEQA Guidelines Section 15064(h)(3), a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously approved plan or mitigation program. Therefore, the plans are relevant plans for a CEQA cumulative impacts analysis. As discussed in Checklist Item a) "*Compliance with Applicable Air Quality Plan Control Measures*" the Project is consistent with all applicable control measures in the air quality attainment plans. The Project would comply with any District rules and regulations that may pertain to implementation of the AQPs. Therefore, impacts would be less than significant with regard to compliance with applicable rules and regulations. Therefore, according to this criterion, this impact is ***Less Than Significant***.

The third criteria used to evaluate potential Project impacts is to determine if the Project would result in less than significant cumulative health effects from the nonattainment pollutants. In the 5th District Court of Appeal case *Sierra Club v. County of Fresno (Friant Ranch, L.P.)*, the Court found the project EIR deficient because it did not identify specific health related effects resulting from the estimated amount of pollutants generated by the project. The ruling stated that the EIR should give a "sense of the nature and magnitude of the 'health and safety problems' caused by a project's air pollution. The EIR should translate the emission numbers into adverse impacts or to understand why such translation is not possible at this time (and what limited translation is, in fact, possible)."

The standard measure of the severity of impact is the concentration of pollutant in the atmosphere compared to the ambient air quality standard for the pollutant for a specified period of time. The severity of the impact increases with the concentration and the amount of time that people are exposed to the pollutant. The change in health impacts with concentration are described in the Air Quality Index (AQI) tables found on the Environmental Protection Agency's (EPA) AirNow website, and presented in **Table 3.3-5** and **Table 3.3-6**. The pollutants of concern in the Friant Ranch ruling were regional criteria pollutants ozone, and PM10. It is important to note that the potential for localized impacts can be addressed through dispersion modeling. The Air District includes screening criteria that if exceeded would require dispersion modeling to determine if project emissions would result in a significant health impact. For this Project, no significant localized health impacts would occur (see the Health Risk Assessment included in Appendix "A" of the EIR). Regional pollutants require more complex modeling as described below.

Ozone concentrations are estimated using regional photochemical models because ozone formation is subject to temperature, inversion strength, sunlight, emissions transport over long distances, dispersion, and the regional nature of the precursor emissions. The emissions from individual projects are too small to produce a measurable change in ozone concentrations—it is the cumulative contribution of emissions from existing and new development that is accounted for in the photochemical model. Ozone concentrations vary widely throughout the day and year even with the same amount of daily emissions. The Air District indicated in an Amicus Brief on Friant Ranch that running the photochemical model with just Friant Ranch emissions (109.5 tons/year NO_x) is not likely to yield valid information given the relative scale involved. A copy of the Air District’s brief is included in Attachment “B” in this memo. The NO_x inventory for the San Joaquin Valley is 224 tons per day in 2019 or 81,760 tons per year. Friant Ranch would result in 0.13 percent increase in NO_x emissions. A project emitting at the Air District CEQA threshold of 10 tons per year would result in a 0.01 percent increase in NO_x emissions. Most project emissions are generated by motor vehicle travel distributed on regional roadways miles from the project site, and these emissions are not conducive to project-level modeling.

Emissions throughout the San Joaquin Valley are projected to markedly decline in the coming decade. The Air District’s 2016 Ozone Plan predicts NO_x emissions will decline to 103 tons per day by 2029 or 54 percent from 2019 levels through implementation of control measures included in the plan. This means that ozone health impacts to residents of the San Joaquin Valley will be lower than currently experienced and most areas of the San Joaquin Valley will have attained ozone air quality standards. The plan accounts for growth in population at rates projected by the State of California for the San Joaquin Valley, so only cumulative projects that would exceed regional growth projections would potentially delay attainment and prolong the time and the number of people would experience health impacts. It is unlikely that anyone would experience greater impacts from regional emissions than currently occur. The federal transportation conformity regulation provides a means of ensuring growth in emissions does not exceed emission budgets for each County. Regional Transportation Plans and Regional Transportation Improvement Plans must provide a conformity analysis based on the latest planning assumptions that demonstrates that budgets will be not be exceeded. If budgets are exceeded, the San Joaquin Valley may be subject to Clean Air Act sanctions until the deficiency is addressed.

Particulate emission impacts can be localized and regional. Particulates can be directly emitted and can be formed in the atmosphere with chemical reactions. Small directly emitted particles such as diesel emissions and other combustion emissions can remain in the atmosphere for a long time and can be transported over long distances. Large particles such as fugitive dust tend to be deposited a short distance from where emitted but can also travel long distances during periods of high winds. Particulates can be washed out of the atmosphere by rain and deposited on surfaces. Secondary particulates formed in the atmosphere such as ammonium nitrate require NO_x and ammonia and require low inversion levels, and certain ranges of temperature and humidity to result in substantial concentrations. These complications make modeling project particulate emissions to determine concentration feasible only for directly emitted

particles at receptor locations close to the project site. Regional particulate concentrations are modeled using a gridded inventory (emissions in tons/day are placed within a 4-kilometer, three-dimensional grid to spatially allocate the emissions geographically) and an atmospheric chemistry component is used to simulate the chemical reactions. The model uses relative reduction factors to determine the amount of reductions of each PM component will be needed to attain the air quality standards on the days with the conditions most favorable to high particulate concentrations. Only very large projects with emissions well in excess of Air District thresholds of significance would produce sufficient emissions to determine a project's individual contribution to the particulate concentration and health impact.

The Air Basin is in nonattainment for ozone, PM₁₀ (State only), and PM_{2.5}, which means that the background levels of those pollutants are at times higher than the ambient air quality standards. The air quality standards were set to protect public health, including the health of sensitive individuals (such as children, the elderly, and the infirm). Therefore, when the concentration of those pollutants exceeds the standard, it is likely that some sensitive individuals in the population would experience health effects that are described in the EPA's AQI Calculator tables. However, the health effects are a factor of the dose-response curve. Concentration of the pollutant in the air (dose), the length of time exposed, and the response of the individual are factors involved in the severity and nature of health impacts. If a significant health impact results from project emissions, it does not mean that 100 percent of the population would experience health effects. The "*Air Quality Monitoring Summary*" table provided in the "*Air Quality Conditions in Tulare County*" discussion of the DEIR relates the pollutant concentration experienced by residents using air quality data for the nearest air monitoring station to the health impacts ascribed to those concentrations by the EPA AQI. This provides a more detailed look at the actual impacts currently experienced by residents near the project site.

Since the Air Basin is nonattainment for ozone, PM₁₀, and PM_{2.5}, it is considered to have an existing significant cumulative health impact without the Project. When this occurs, the analysis considers whether the Project's contribution to the existing violation of air quality standards is cumulatively considerable. The Air District's regional thresholds for NO_x, VOC, PM₁₀, or PM_{2.5} are applied as cumulative contribution thresholds. Projects that exceed the regional thresholds would have a cumulatively considerable health impact. As shown in **Table 3.3-10**, the regional analysis of operational emissions indicates that the Project's NO_x emissions from heavy-duty truck emissions would exceed the District's significance thresholds if the facility operates at maximum permitted capacity in its opening year (2021). However, maximum permitted capacity presents the worst-case emissions scenario. As truck emissions are expected to become cleaner in the future and all heavy-duty truck fleets must have Year 2010 engine models by 2023, the Project-related NO_x emissions are also expected to decrease with time. Furthermore, the Air District's AQPs predict that nonattainment pollutant emissions will continue to decline each year as regulations adopted to reduce these emissions are implemented, accounting for growth projected for the region. Therefore, the cumulative health impact will also decline even with the Project's emission contribution. Therefore, according to this criterion, this impact is *Less Than Significant*

Mitigation Measure(s): ***No Additional Measures beyond Compliance with Existing Regulation Required.***

As discussed in Checklist Item a), the Project will comply with all federal, state, and Air District rules and regulation, and is consistent with and will implement all applicable policies of Tulare County General Plan. Mobile source emissions are under the jurisdiction of the ARB. The Applicant's fleet is compliant with current ARB truck regulations and will continue to comply with all applicable ARB rules and regulations. The Applicant does not have control over the heavy-duty vehicles used in transport of final product from the site. As truck registration is dependent upon compliance with ARB's truck regulations, it is reasonable to assume that all heavy-duty trucks accessing the Project site comply, and will continue to comply, with ARB regulations. As truck emissions are expected to become cleaner in the future and all heavy-duty truck fleets must have Year 2010 engine models by 2023, the Project-related NOx emissions are also expected to decrease with time. Furthermore, as this is a new facility and actual production and sales are speculative at this time, it is unknown if the maximum production capacity will be achieved. As such, feasible mitigation consists of existing rules, regulations, and requirements

Conclusion: ***Significant and Unavoidable Impacts***

As previously noted, Project non-permitted operation-related (mobile source) NOx emissions exceed the Air District's significance thresholds. The Project will be required to implement all applicable General Plan policies and to comply with all applicable Air District rules and regulations. However, the Applicant does not own all the trucks that will transport final product from the Project site. Therefore, the Project will have a ***Significant and Unavoidable Cumulative Impact*** related to this Checklist Item.

c) Expose sensitive receptors to substantial pollutant concentrations?

Project Impact Analysis: ***Less Than Significant Impact***

Sensitive receptors are those individuals who are sensitive to air pollution and include children, the elderly, and persons with pre-existing respiratory or cardiovascular illness. The Air District considers a sensitive receptor to be a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include schools, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential dwelling units. Consultant Alta Environmental prepared a Health Risk Assessment (HRA) consistent with San Joaquin Valley Air District protocols which concluded that the Project would not exceed any Air District thresholds for toxic air contaminants (TACs). The HRA is included in appendix "A" of this Draft EIR.

As noted in the in the HRA, at Emissions Estimates, "Operation of a concrete and HMA plant results in the generation of emissions. Specific sources of TACs at the proposed Dunn Facility include: the HMA dryer, asphalt oil storage tanks, cement silos, material transfer points, trucks used to transport material to and from the site, and off-road equipment to move material within

the site. In certain cases, sources of TACs will be equipment with pollution control devices, such as baghouses and bin vents.”⁵² The HRA is included in Appendix “A” of this DEIR.

In addition to estimating emissions from the sources noted above, the Air Dispersion Modeling discussion in the HRA notes, “Air dispersion modeling was performed to estimate ground level concentrations (GLCs) at and beyond the property boundary of the Facility. USEPA’s AERMOD executable version 19191 via the BREEZE AERMOD software. Source release parameters were obtained from equipment specifications, published guidance documents, and facility personnel’s knowledge of the expected equipment. Source parameters, such as name, location, release height, etc. are provided in Table 1 and Table 2 [of the HRA included in Appendix “A” of this DEIR].

Truck and off-road equipment emissions were modeled as a series of volume sources located along the expected path of travel. Emissions for these sources were divided evenly between the series of volume sources. For construction emissions, the lot was modeled as an area source.”⁵³

The HRA includes various input factors such as meteorological data, terrain data, model options and receptors as part of its analysis.⁵⁴ Using this information Alta Environmental is able to conduct a TAC exposure assessment estimate on receptors. As noted in the HRA, “Air dispersion modeling results (plot [.plt] files) were imported into CARB’s HARP software. HARP2 ADMRT software version 19121 was utilized to perform the dose-response assessment and calculate the potential cancer risk and non-cancer health impacts for the various receptors surrounding the proposed Dunn facility. The dose-response assessment and risk calculations were performed in accordance with OEHHA’s Risk Assessment Guidelines (OEHHA, 2015) and San Joaquin Valley Air Pollution Control District’s (SJVAPCD’s) Guidance for Air Dispersion Modeling (SJVAPCD, 2007).”⁵⁵ In summary, the exposure assessment includes identification of potential exposed populations, exposure pathways (for residents and off-site workers), and HARP exposure analysis methods and assumptions (for residents and off-site workers).⁵⁶

As noted in the HRA, a dose response assessment was also conducted as, “According to OEHHA, dose-response assessment describes the quantitative relationship between the amount of exposure to a substance (the dose) and the incidence or occurrence of an adverse health impact (the response). Dose-response information for noncancer health effects is used to determine Reference Exposure Levels (RELs). Dose-response information for cancer risks are based on cancer potency factors (OEHHA, 2015). Chronic RELs, 8-hour Chronic RELs, Acute RELs, and cancer potency factors for each pollutant are listed in the OEHHA Guidelines and

⁵² “Health Risk Assessment Dunn’s Inc. 7763 Avenue 280 Visalia, CA 93277” (HRA) Page 3. Prepared by Alta Environmental and included in Appendix “A” of this DEIR.

⁵³ Ibid.

⁵⁴ Op. Cit. 3.

⁵⁵ Op. Cit. 5.

⁵⁶ Op. Cit.

built into HARP2. These values are periodically updated, and new versions of HARP2 incorporate the changes.”⁵⁷

The HRA includes a risk characterization methodology by noting that “Risks are characterized using calculations and methodology contained in the OEHHA Guidelines and built into HARP2. Risk is calculated based on dose, dose-response values (RELs or cancer potency factors), and exposure duration and frequency. For this HRA, all risks were calculated using a Tier 1 approach using OEHHA default values.”⁵⁸ Carcinogenic Risks, Chronic Non-cancer Hazards, and Acute Non-cancer Hazards were then calculated resulting in the following results noted in the Risk Characterization Results in the HRA:

“Risk results are presented at three locations: The Point of Maximum Impact (PMI), the Maximum Exposed Individual Resident (MEIR), and the Maximum Exposed Individual Worker (MEIW). The PMI is located on the property boundary, and no receptors are expected to reside there for significant periods of time. Therefore, CEQA significance thresholds of 20 in one million for cancer and 1 for non-cancer HI are assessed at the MEIR and MEIW. The locations of the PMI, MEIR, and MEIW are provided in the following table and shown in Figure 3 [in the HRA].”⁵⁹

Tables 3.3-14 through 3.3-16 summarize the potential cancer risk at the PMI, MEIR, and MEIW:

Table 3.3-14			
Construction Cancer Risk Results⁶⁰			
Receptor	UTM X (m)	UTM Y (m)	Cancer Risk
PMI	284,731.4	4,019,450.1	1.0 in one million ¹
MEIR	284,928.6	4,019,640.9	5.0 in one million
MEIW	285,001.6	4,019,627.6	0.6 in one million
<i>1 The cancer risk at the PMI presented above assumes the worker receptor exposure scenario because the PMI is located on the facility fenceline where residential receptors do not exist.</i>			

Table 3.3-15			
Operational Cancer Risk Results⁶¹			
Receptor	UTM X (m)	UTM Y (m)	Cancer Risk
PMI	284,731.4	4,019,450.1	3.7 in one million ¹
MEIR	284,928.6	4,019,640.9	8.7 in one million
MEIW	285,001.6	4,019,627.6	0.6 in one million
<i>1 The cancer risk at the PMI presented above assumes the worker receptor exposure scenario because the PMI is located on the facility fenceline where residential receptors do not exist.</i>			

⁵⁷ Op. Cit. 6.
⁵⁸ Op. Cit. 7.
⁵⁹ Op. Cit. 8.
⁶⁰ Op. Cit. 9.
⁶¹ Op. Cit.

Table 3.3-16 Total Cancer Risk Results⁶²			
Receptor	UTM X (m)	UTM Y (m)	Cancer Risk
PMI	284,731.4	4,019,450.1	9.4 in one million ¹
MEIR	284,928.6	4,019,640.9	13.7 in one million
MEIW	285,001.6	4,019,627.6	1.3 in one million ¹
<i>¹ Total cancer risk at the PMI and MEIW include the WAF of 2.0.</i>			

As noted in the HRA, these result conclude that, “Diesel particulate matter (DPM) is the primary cancer risk driver.”⁶³

Tables 3.3-17 and 3.3-18 summarize the potential non-cancer chronic HI at the PMI, MEIR, and MEIW:

Table 3.3-17 Construction Non-cancer Chronic Health Index⁶⁴				
Receptor	UTM X (m)	UTM Y (m)	Non-Cancer Chronic HI	Target Organ
PMI	284,731.4	4,019,450.1	7.6E-02 ¹	RESP
MEIR	284,928.6	4,019,640.9	5.6E-03	RESP
MEIW	285,001.6	4,019,627.6	4.3E-03	RESP
<i>¹ The cancer risk at the PMI presented above assumes the worker receptor exposure scenario because the PMI is located on the facility fenceline where residential receptors do not exist.</i>				

Table 3.7-10 Non-cancer Acute Chronic Index⁶⁵				
Receptor	UTM X (m)	UTM Y (m)	Non-Cancer Chronic HI	Target Organ
PMI	284,731.4	4,019,450.1	0.2 ¹	RESP
MEIR	284,928.6	4,019,640.9	0.06	RESP
MEIW	285,001.6	4,019,627.6	0.02	RESP
<i>¹ The cancer risk at the PMI presented above assumes the worker receptor exposure scenario because the PMI is located on the facility fenceline where residential receptors do not exist.</i>				

As noted in the HRA, “Arsenic is the primary non-cancer chronic HI driver. The primary target organ for the non-cancer chronic HI is the respiratory system.”⁶⁶

Tables 3.3-19 and 3.3-20 summarize the potential non-cancer chronic HI at the PMI, MEIR, and MEIW:

⁶² Op. Cit.

⁶⁴ Op. Cit.

⁶⁵ Op. Cit.

⁶⁶ Op. Cit.

Table 3.3-19				
Construction Non-cancer Acute Health Index⁶⁷				
Receptor	UTM X (m)	UTM Y (m)	Non-Cancer Acute HI	Target Organ
PMI	284,731.4	4,019,450.1	0	IMMUN
MEIR	284,928.6	4,019,640.9	0	IMMUN
MEIW	285,001.6	4,019,627.6	0	IMMUN

Table 3.3-20				
Operation Non-cancer Acute Health Index⁶⁸				
Receptor	UTM X (m)	UTM Y (m)	Non-Cancer Acute HI	Target Organ
PMI	284,731.4	4,019,450.1	0.3	IMMUN
MEIR	284,928.6	4,019,640.9	0.07	IMMUN
MEIW	285,001.6	4,019,627.6	0.07	IMMUN

As noted in the HRA, “Nickel is the primary non-cancer acute HI driver. The primary target organ system is the immune system.”⁶⁹

Therefore, based on the summary analysis above, and in detail in the HRA, the Project does not pose a risk to nearby receptors, by concluding “The total cancer risk is 13.6 in one million which is below the significance threshold of 20 in one million, the total non-cancer chronic HI is below 1, and the total non-cancer acute is below 1 at both the MEIR and MEIW. Therefore, the potential risks from TACs are below SJVAPCD CEQA significance thresholds.”⁷⁰ As such, *Less Than Significant Project-specific Impacts* related to this Checklist Item will occur.

Although not specifically required by CEQA, the following discussions related to cleanup sites, valley fever and asbestos are included to satisfy requirements for full disclosure of potential Project-related impacts and are for information purposes only.

Hazardous Waste Cleanup Sites: The Project has the potential to temporarily expose nearby receptors to fugitive particulate (dust) emissions during the short-term construction phase and from ongoing operational activities such as unloading raw materials from trucks to stockpiles, transferring material from stockpiles to processing areas, windblown dust from on-site haul roads and the stockpiles themselves. As of November, 2019, there were no listings within the Project vicinity in the California Department of Toxic Substances Control (DTSC) Hazardous Waste and Substances Site List.⁷¹ A query performed on the DTSC *Envirostor* indicated that

⁶⁷ Op. Cit.

⁶⁸ Op. Cit.

⁶⁹ Op. Cit.

⁷⁰ Op. Cit. 11

⁷¹ DTSC. Hazardous Waste and Substance Site List. Accessed November 2019 at:

https://www.envirostor.dtsc.ca.gov/public/search.asp?page=8&cmd=search&business_name=&main_street_name=&city=&zip=&county=&status=ACT%2CBKLG%2CCOM&branch=&site_type=CSITES%2COPEN%2CFUDS%2CCLOSE&npl=&funding=&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST&reporttype=CORTESE&federal_superfund=&state_response=&voluntary_cleanup=&school_cleanup=&operating=&post_closure=&non_operating=&corrective_action=&tiered_permit=&evaluation=&spec_prog=&national_priority_list=&senate=&congress=&assembly=&critical_pol=&business_type=&case_type=&searchtype=&hwmp_site_type=&cleanup_type=&ocie

the nearest superfund, state response, voluntary cleanup, school cleanup or corrective actions are more than three (3) miles from the Project site.⁷² A query of the State Water Resources Control Board (WRCB) *GeoTracker* Sites and Facilities mapping programs revealed two (2) permitted underground storage tank (UST) sites and one (1) cleanup program site with closed cases, and one (1) military cleanup site within three (3) miles of the Project site; however, none of these sites are within the immediate vicinity of the site.⁷³ A query performed on the U.S. Environmental Protection Agency (EPA) *Superfund Enterprise Management System* (SEMS) website found that there are no listed polluted sites within the Project vicinity.⁷⁴ Therefore, fugitive dust emissions resulting from earthmoving activities would not expose nearby receptors to substantial pollutant concentrations. ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Valley Fever: Valley fever, or coccidioidomycosis, is an infection caused by inhalation of the spores of the fungus, *Coccidioides immitis* (*C. immitis*). According to the Centers for Disease Control (CDC), the San Joaquin Valley is considered an endemic area for valley fever.⁷⁵ “People can get Valley fever by breathing in the microscopic fungal spores from the air, although most people who breathe in the spores don’t get sick. Usually, people who get sick with Valley fever will get better on their own within weeks to months, but some people will need antifungal medication.”⁷⁶ Construction-related activities generate fugitive dust that could potentially contain *C. immitis* spores. The Project will be required to implement General Plan Policy AQ-4.2 (Dust Suppression Measures), which was specifically designed to address impacts from the generation of dust emitted into the air. The Project will be required to comply with Air District Regulation VIII (Fugitive PM10 Prohibitions) requirements, including submittal of construction notification and/or dust control plan(s), which minimize the generation of fugitive dust during construction- and operations-related activities. Therefore, implementation of General Plan policies and compliance with Air District rules and regulations would reduce the chance of exposure of nearby receptors to valley fever during construction- and operation-related activities. ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Naturally Occurring Asbestos: In areas containing naturally occurring asbestos, earthmoving construction-related activities, such as grading and trenching, could expose receptors to windblown asbestos. According to a United States Geological Soil Survey map of areas where naturally occurring asbestos in California are likely to occur, the Project is not located in an area known to contain naturally occurring asbestos.⁷⁷ The Project site and the immediate vicinity has been previously disturbed by agricultural operations and by residential

[erp=&hwmp=False&permitted=&pc_permitted=&inspections=&complaints=&censustract=&cesdecile=&school_district=&orderby=county.](#)
Accessed November 2019.

⁷² DTSC. Envirostor. Sites and Facilities mapping website. Accessed November 2019 at: <https://www.envirostor.dtsc.ca.gov/public/map/>.

⁷³ WRCB. GeoTracker. Sites and Facilities mapping website. Accessed November 2019 at: <https://geotracker.waterboards.ca.gov/>. Accessed November 2019.

⁷⁴ EPA. SEMS Search. Accessed November 2019 at: <https://www.epa.gov/enviro/sems-search>.

⁷⁵ CDC. Accessed November 2019 at: <https://www.cdc.gov/fungal/diseases/coccidioidomycosis/maps.html>.

⁷⁶ CDC. Accessed November 2019 at: <https://www.cdc.gov/fungal/diseases/coccidioidomycosis/index.html>.

⁷⁷ USGS. *Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California*. Accessed May 2019 at: <http://pubs.usgs.gov/of/2011/1188/>.

development. The Project will be required to implement General Plan Policy AQ-4.2 (Dust Suppression Measures) to comply with Air District Regulation VIII (Fugitive PM10 Prohibitions) requirements, thereby reducing the chance of exposure to asbestos during construction-related activities. Therefore, *Less Than Significant Project-specific Impacts* related to this Checklist Item will occur.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. As previously discussed, the HRA included in Appendix “A” demonstrates that the Project will not result in significant health risks to nearby receptors. The Tulare County General Plan includes policies, which were specifically designed to engage responsible agencies in the CEQA process, to reduce air pollutant emissions through project design, require compliance with emission-reducing regulations, and to address potential impacts from siting incompatible uses in close proximity to each other. Applicable General Plan policies will be implemented for the Project. Compliance with applicable Air District rules and regulations would further reduce potential impacts from exposure to TAC and HAP emissions, as well as valley fever and asbestos. As such, the development of the proposed Project would not expose the public to substantial pollutant concentrations. Therefore, a *Less Than Significant Cumulative Impact* related to this Checklist Item will occur.

Mitigation: *None Required.*

Conclusion: *Less Than Significant Impact*

As noted earlier, the HRA included in “Appendix A” demonstrates that the proposed Project does not pose a risk to receptors. As such, the proposed Project would not expose the public to substantial pollutant concentrations. Therefore, *Less Than Significant Project-specific and Cumulative Impacts* related to this Checklist Item will occur.

d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?)

Project Impact Analysis: *Less Than Significant Impact*

Potential odor sources associated with construction-related activities could originate from diesel exhaust from construction (set-up) of equipment, incoming and out-going diesel-fueled heavy-duty vehicles, and fumes from architectural coating (repainting of the existing residential-turned office building) and paving operations. However, construction-related odors and emissions from diesel-fueled heavy-duty vehicles, if perceptible, would dissipate as they mix with the surrounding air and would be of very limited duration. As such, objectionable odors during construction-related activities and emissions from diesel-fueled heavy-duty vehicles would not affect a substantial number of people.

The Project includes a HMA batch plant, RAP plant, and concrete batch plant. Potential odor sources associated with operation-related activities could originate from fumes from the asphalt batch plant, diesel exhaust from off-road haul equipment, and diesel exhaust from incoming and out-going diesel-fueled heavy-duty transport vehicles. As presented in **Table 8** [of the AQ-GHG memo], asphalt batch plants are considered to have potentially significant impacts on receptors located within one (1) mile. The site is located in a generally rural area surrounded by agricultural uses; the nearest residential receptors are located approximately 800 feet (0.15 mile) east of the Project site and the nearest school is located approximately three (3) miles east of the Project site. There are no other sensitive receptors such as schools, day-care centers, or hospitals nearby. During operation, the various processing plants and diesel-powered vehicles and equipment in use on-site would create localized odors. As it is expected that many of the truck delivery and shipments would take place during peak hours, these odors would be temporary and would not likely be noticeable for extended periods of time beyond the Project's site boundaries. Furthermore, the Project is subject to Air District permit requirements, including Rule 4102 (Nuisance). Because the sources of odors within the Project site will dissipate with distance and should not reach an objectionable level at the nearby residence the Project would not create or expose existing residents to objectionable odors.

As presented in Table 8 (in the AQ-GHG memo), the Air District has determined the common land use types that are known to produce odors in the San Joaquin Valley Air Basin including asphalt batch plants. The existing wastewater treatment facility (located approximately one mile north of the Project) and agricultural uses (dairies) in the vicinity of the Project could be sources of nuisance odors. All projects, with the exception of agricultural operations, are subject to Air District Rule 4102 (Nuisance). Therefore, odors from agriculture-related operations would not be subject to complaint reporting. There is potential for these agricultural operations to generate objectionable odors during certain atmospheric changes; however, these odors would be temporary and/or seasonal in nature. Furthermore, the Tulare County General Plan includes Policy AG-1.14 Right-to-Farm Noticing which requires new property owners to acknowledge and accept the inconveniences associated with normal farming activities. If future developments are proposed adjacent to active agricultural uses, future residents will be required to sign a "Right to Farm" notice. To ensure potential nuisance odor impacts are addressed, if proposed developments were to result in sensitive receptors being located closer than the recommended distances to any odor generator identified in Table 8 (in the AQ-GHG memo), a more detailed analysis, is recommended. The detailed analysis would involve contacting the Air District's Compliance Division for information regarding odor complaints. Implementation of the applicable General Plan policies and compliance with applicable Air District rules and regulations specifically designed to address air quality and odor impacts, would reduce potential odor impacts. As such, the Project would not place, create, or expose a substantial number of people to objectionable odors. Therefore, ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. As noted earlier, the Project contains an asphalt batch plant that has the potential to create objectionable odors. However, the Project will be subject to Air District Rule 4102 (Nuisance) and applicable Air District rules, regulations, and permit requirements. Also, Tulare County General Plan Policy AG-1.14 Right-to-Farm Noticing will be implemented. As such, the Project will not expose a substantial number of people to objectionable odors. Therefore, ***Less Than Significant Cumulate Impacts*** related to this Checklist Item will occur.

Mitigation: ***None Required.***

Conclusion: ***Less Than Significant Impact***

The Project's asphalt batch plant has the potential as a source of nuisance odors. Existing agricultural sources (e.g., dairies) present permanent odors in the Project vicinity that could affect nearby receptors (i.e., rural residences). Implementation of applicable Air District rules, regulations, and permit requirements and General Plan Policy (i.e., AG-1.14 Right-to-Farm) would reduce objectionable odors. As such, the Project will not expose a substantial number of people to objectionable odors. Therefore, Less Than Significant Project-specific and Cumulative Impacts related to this Checklist Item will occur.

DEFINITIONS

Ambient Air Quality Standards, These standards measure outdoor air quality. They identify the maximum acceptable average concentrations of air pollutants during a specified period of time. These standards have been adopted at a State and Federal level.

Best Available Control Measures (BACM), A set of programs that identify and implement potentially best available control measures affecting local air quality issues.

Best Available Control Technologies (BACT), The most stringent emission limitation or control technique of the following: 1.) Achieved in practice for such category and class of source 2.) Contained in any State Implementation Plan approved by the Environmental Protection Agency for such category and class of source. A specific limitation or control technique shall not apply if the owner of the proposed emissions unit demonstrates to the satisfaction of the APCO that such a limitation or control technique is not presently achievable 3.) Contained in an applicable federal New Source Performance Standard or 4.) Any other emission limitation or control technique, including process and equipment changes of basic or control equipment, found by the APCO to be cost effective and technologically feasible for such class or category of sources or for a specific source.

Carbon Monoxide (CO), Carbon monoxide is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels and is emitted directly into the air (unlike ozone).

Hydrogen Sulfide (H₂S), Hydrogen sulfide is a highly toxic flammable gas. Because it is heavier than air, it tends to accumulate at the bottom of poorly ventilated spaces.

Lead (Pb), Lead is the only substance which is currently listed as both a criteria air pollutant and a toxic air contaminant. Smelters and battery plants are the major sources of the pollutant "lead" in the air. The highest concentrations of lead are found in the vicinity of nonferrous smelters and other stationary sources of lead emissions. The EPA's health-based national air quality standard for lead is 1.5 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) [measured as a quarterly average].

Metropolitan Planning Organization (MPO), Tulare County Association of Governments (TCAG) is the MPO for Tulare County. MPO's are responsible for developing reasonably available control measures (RACM) and best available control measures (BACM) for use in air quality attainment plans and for addressing Transportation Conformity requirements of the federal Clean Air Act.

Mobile Source, A mobile emission source is a moving object, such as on-road and off-road vehicles, boats, airplanes, lawn equipment, and small utility engines.

Nitrogen Oxides (Oxides of Nitrogen, NO_x), NO_x are compounds of nitric oxide (NO) and nitrogen dioxide (NO₂). NO_x are primarily created from the combustion process and are a major contributor to ozone smog and acid rain formation. NO_x also forms ammonium nitrate particulate

in chemical reactions that occur when NO_x forms nitric acid and combines with ammonia. Ammonium nitrate particulate is an important contributor to PM₁₀ and PM_{2.5}.

Ozone (O₃), Ozone is a pungent, colorless, toxic gas created in the atmosphere rather than emitted directly into the air. O₃ is produced in complex atmospheric reactions involving oxides of nitrogen, reactive organic gases (ROG), and ultraviolet energy from the sun in a photochemical reaction. Motor vehicles are the major sources of O₃ precursors.

Ozone Precursors, Chemicals such as non-methane hydrocarbons, also referred to as ROG, and oxides of nitrogen, occurring either naturally or as a result of human activities, which contribute to the formation of ozone, which is a major component of smog.

Photochemical, Some air pollutants are direct emissions, such as the CO produced by an automobile's engine. Other pollutants, primarily O₃, are formed when two or more chemicals react (using energy from the sun) in the atmosphere to form a new chemical. This is a photochemical reaction.

Particulate Matter 2.5 Micrometers (PM_{2.5}), The federal government has recently added standards for smaller dust particulates. PM_{2.5} refers to dust/particulates/aerosols that are 2.5 microns in diameter or smaller. Particles of this size can be inhaled more deeply in the lungs and the chemical compositions of some particles are toxic and have serious health impacts.

Particulate Matter 10 Micrometers (PM₁₀), Dust and other particulates exhibit a range of particle sizes. Federal and State air quality regulations reflect the fact that smaller particles are easier to inhale and can be more damaging to health. PM₁₀ refers to dust/particulates that are 10 microns in diameter or smaller. The fraction of PM between PM_{2.5} and PM₁₀ is comprised primarily of fugitive dust. The particles between PM₁₀ and PM_{2.5} are primarily combustion products and secondary particles formed by chemical reactions in the atmosphere.

Reactive Organic Gas (ROG), A photo chemically reactive gas, composed of non-methane hydrocarbons that may contribute to the formation of smog. Also sometimes referred to as Volatile Organic Compounds (VOCs).

Reasonable Available Control Measures (RACM), A broadly defined term referring to technologies and other measures that can be used to control pollution. They include Reasonably Available Control Technology and other measures. In the case of PM₁₀, RACM refers to approaches for controlling small or dispersed source categories such as road dust, woodstoves, and open burning. Regional Transportation Planning Agencies are required to implement RACM for transportation sources as part of the federal ozone attainment plan process in partnership with the Air District.

Reasonable Available Control Technologies (RACT), Devices, systems, process modifications, or other apparatuses or techniques that are reasonably available, taking into account: the necessity of imposing such controls in order to attain and maintain a national ambient air quality standard;

the social, environmental, and economic impact of such controls; and alternative means of providing for attainment and maintenance of such a standard.

San Joaquin Valley Air Basin (SJVAB), An air basin is a geographic area that exhibits similar meteorological and geographic conditions. California is divided into 15 air basins to assist with the statewide regional management of air quality issues. The SJVAB extends in the Central Valley from San Joaquin County in the north to the valley portion of Kern County in the south.

San Joaquin Valley Air Pollution Control District (Air District), The Air District is the regulatory agency responsible for developing air quality plans, monitoring air quality, developing air quality regulations, and permitting programs on stationary/industrial sources and agriculture and reporting air quality data for the SJVAB. The Air District also regulates indirect sources and has limited authority over transportation sources through the implementation of transportation control measures (TCM).

Sensitive Receptors, Sensitive receptors are defined as land uses that typically accommodate sensitive population groups such as long-term health care facilities, rehabilitation centers, retirement homes, convalescent homes, residences, schools, childcare centers, and playgrounds.

Sensitive Population Groups, Sensitive population groups are a subset of the general population that is at a greater risk than the general population to the effects of air pollution. These groups include the elderly, infants and children, and individuals with respiratory problems, such as asthma.

Sulfur Dioxide (SO₂), Sulfur dioxide belongs to the family of SO_x. These gases are formed when fuel containing sulfur (mainly coal and oil) is burned, and during metal smelting and other industrial processes.

Stationary Source, A stationary emission source is a non-mobile source, such as a power plant, refinery, or manufacturing facility.

Sulfates, Sulfates occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. SO_x can form sulfuric acid in the atmosphere that in the presence of ammonia forms ammonium sulfate particulates, a small but important component of PM₁₀ and PM_{2.5}. Sulfates increase the acidity of the atmosphere and form acid rain.

Transportation Conformity, A federal requirement for transportation plans and projects to demonstrate that they will not result in emissions that exceed attainment plan emission budgets or exceed air quality standards.

Transportation Control Measures (TCMs), Any measure that is identified for the purposes of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions.

Transportation Management Agencies, Transportation Management Agencies are private, non-profit, member-controlled organizations that provide transportation services in a particular area, such as a commercial district, mall, medical center, or industrial park. Transportation Management Agencies are appropriate for any geographic area where there are multiple employers or businesses clustered together that can benefit from cooperative transportation management or parking brokerage services. Regional and local governments, business associations, and individual businesses can all help establish Transportation Management Agencies.

Transportation Management Associations (TMAs), Groups of employers uniting together to work collectively to manage transportation demand in a particular area.

Tulare County Association of Governments (TCAG), TCAG is the Transportation Planning Agency (TPA) for Tulare County. TCAG is also designated as a Metropolitan Planning Organization (MPO), the agency responsible for preparing long range Regional Transportation Plans and demonstrating Transportation Conformity with air quality plans.

Wood-burning Devices, Wood-burning devices are designed to burn “solid fuels” such as cordwood, pellet fuel, manufactured logs, or any other non-gaseous or non-liquid fuels.

ACRONYMS

ARB	California Air Resources Board
BACM	Best Available Control Measures
BACT	Best Available Control Technologies
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CO	Carbon Monoxide
EPA	Environmental Protection Agency
GAMAQI	Guide for Assessing and Mitigating Air Quality Impacts
HI	Hazard Index
H ₂ S	Hydrogen Sulfide
NAAQS	National Ambient Air Quality Standards
NO ₂	Nitrogen Dioxide
MPO	Metropolitan Planning Organization
O ₃	Ozone
Pb	Lead
PM _{2.5}	Particulate Matter 2.5 Micrometers
PM ₁₀	Particulate Matter 10 Micrometers
RACM	Reasonable Available Control Measures
RACT	Reasonable Available Control Technologies
ROG	Reactive Organic Gases
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide

AIR DISTRICT	San Joaquin Valley Air Pollution Control District
SJVAPCD	San Joaquin Valley Air Pollution Control District
SJVAB	San Joaquin Valley Air Basin
TAC	Toxic Air Contaminants
TCAG	Tulare County Association of Governments
TCM	Transportation Control Measures
VOC	Volatile Organic Compound
WWTP	Waste Water Treatment Plant

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