

APPENDIX 2
AIR QUALITY / GREENHOUSE GAS

AIR QUALITY and GHG IMPACT ANALYSES

**HS-132
STATE STREET WATER TREATMENT PROJECT
PROJECT**

CHINO (UNINCORPORATED SAN BERNARDINO), CALIFORNIA

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Date:

December 9, 2021

Project No.: P21-039 AQ

ATMOSPHERIC SETTING

The climate of the Chino area, as with all of Southern California, is governed largely by the strength and location of the semi-permanent high pressure center over the Pacific Ocean and the moderating effects of the nearby vast oceanic heat reservoir. Local climatic conditions are characterized by very warm summers, mild winters, infrequent rainfall, moderate daytime on-shore breezes, and comfortable humidities. Unfortunately, the same climatic conditions that create such a desirable living climate combine to severely restrict the ability of the local atmosphere to disperse the large volumes of air pollution generated by the population and industry attracted in part by the climate.

Chino is situated in an area where the pollutants generated in coastal portions of the Los Angeles basin undergo photochemical reactions and then move inland across the project site during the daily sea breeze cycle. The resulting smog at times gives western San Bernardino County some of the worst air quality in all of California. Despite dramatic improvement in air quality in the local area throughout the 1980s, the project site is, nevertheless, expected to continue to experience some unhealthful air quality for at least the next decade.

Temperatures in the project vicinity average 62 degrees Fahrenheit annually with summer afternoons in the low 90s and winter mornings in the low 40s. Temperatures much above 100 or below 30 degrees occur infrequently only under unusual weather conditions and even then these limits are not far exceeded.

In contrast to the slow annual variation of temperature, precipitation is highly variable seasonally. Rainfall in the far western portions of San Bernardino County averages 17 inches annually and falls almost exclusively from late October to early April. Summers are almost completely dry with frequent periods of 4-5 months of no precipitation. Because much of the rainfall comes from the fringes of mid-latitude storms, a shift in the storm track of a few hundred miles can mean the difference between a very wet year and a year with drought conditions.

Winds across the project area are an important meteorological parameter because they control both the initial rate of dilution of locally generated air pollutant emissions as well as their regional trajectory. Wind across Chino, as determined from long-term wind data at Ontario Airport, show a very unidirectional daytime onshore flow from the SW-NW with a very weak offshore return flow from the NE that is strongest on winter nights when the land is cooler than the ocean. The onshore winds during the day average 6-8 mph, while the offshore flow is often calm or drifts slowly westward at 1-3 mph.

During the daytime, any locally generated air emissions are thus transported eastward toward San Bernardino and Cajon Pass without generating any localized air quality impacts. The drainage winds which move slowly across the area have some potential for localized stagnation. Fortunately, these winds have their origin in the San Gabriel Mountains where background pollution levels are low such that any localized contributions do not create any unhealthful impacts. The wind distribution is such that nominal project-related air quality impacts occur more on a regional scale rather than in the immediate Chino area.

One other important wind condition may occur when a high-pressure center forms over the western United States with sinking air forced seaward through local canyons and mountain passes. The air warms by compression and relative humidities drop dramatically. The dry, gusty winds from the N-NE create dust nuisance potential around areas of soil disturbance such as construction sites and sometimes create serious visibility and safety problems for vehicles on area freeways.

In conjunction with the two dominant wind regimes that affect the rate and orientation of horizontal pollutant transport, there are two similarly distinct types of temperature inversions that control the vertical depth through which pollutants are mixed. The summer on-shore flow is capped by a massive dome of warm, sinking air which caps a shallow layer of cooler ocean air. These marine/subsidence inversions act like a giant lid over the basin. They allow for local mixing of emissions, but they confine the entire polluted air mass within the basin until it escapes into the desert or along the thermal chimneys formed along heated mountain slopes.

In winter, when the air near the ground cools while the air aloft remains warm, radiation inversions are formed that trap low-level emissions such as automobile exhaust near their source. As background levels of primary vehicular exhaust rise during the seaward return flow, the combination of rising non-local baseline levels plus the emissions trapped locally by these radiation inversions creates micro-scale air pollution "hot spots" near freeways, shopping centers and other traffic concentrations. Because the incoming air draining off the mountains during nocturnal radiation inversion conditions is relatively clean, the summer subsidence inversions are a far more critical factor in determining Chino area air quality than the winter time local trapping inversions.

AMBIENT AIR QUALITY STANDARDS (AAQS)

In order to gauge the significance of the air quality impacts of the proposed project, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, called "sensitive receptors." Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. Recent research has shown, however, that chronic exposure to ozone (the primary ingredient in photochemical smog) may lead to adverse respiratory health even at concentrations close to the ambient standard.

National AAQS were established in 1971 for six pollution species with states retaining the option to add other pollutants, require more stringent compliance, or to include different exposure periods. The initial attainment deadline of 1977 was extended several times in air quality problem areas like Southern California. In 2003, the Environmental Protection Agency (EPA) adopted a rule, which extended and established a new attainment deadline for ozone for the year 2021. Because the State of California had established AAQS several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in California are shown in Table 1. Sources and health effects of various pollutants are shown in Table 2.

The Federal Clean Air Act Amendments (CAAA) of 1990 required that the U.S. Environmental Protection Agency (EPA) review all national AAQS in light of currently known health effects. EPA was charged with modifying existing standards or promulgating new ones where appropriate. EPA subsequently developed standards for chronic ozone exposure (8+ hours per day) and for very small diameter particulate matter (called "PM-2.5"). New national AAQS were adopted in 1997 for these pollutants.

Planning and enforcement of the federal standards for PM-2.5 and for ozone (8-hour) were challenged by trucking and manufacturing organizations. In a unanimous decision, the U.S. Supreme Court ruled that EPA did not require specific congressional authorization to adopt national clean air standards. The Court also ruled that health-based standards did not require preparation of a cost-benefit analysis. The Court did find, however, that there was some inconsistency between existing and "new" standards in their required attainment schedules. Such attainment-planning schedule inconsistencies centered mainly on the 8-hour ozone standard. EPA subsequently agreed to downgrade the attainment designation for a large number of communities to "non-attainment" for the 8-hour ozone standard.

Table 1

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 (O ₃) 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)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM ₁₀) 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	12.0 µg/m ³	15 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 ppm (10 mg/m ³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—	—	
Nitrogen Dioxide (NO ₂) ¹⁰	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m ³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)	Same as Primary Standard	
Sulfur Dioxide (SO ₂) ¹¹	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline 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) ¹¹	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) ¹¹	—	
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) ¹²	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m ³		
Visibility Reducing Particles ¹⁴	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

See footnotes on next page ...

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (5/4/16)

Table 1 (continued)

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.
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 $150 \mu\text{g}/\text{m}^3$ 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.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the 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.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from $15 \mu\text{g}/\text{m}^3$ to $12.0 \mu\text{g}/\text{m}^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at $35 \mu\text{g}/\text{m}^3$, as was the annual secondary standard of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM10 standards (primary and secondary) of $150 \mu\text{g}/\text{m}^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO_2 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 SO_2 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.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard ($1.5 \mu\text{g}/\text{m}^3$ 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.
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.

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Table 2
Health Effects of Major Criteria Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	• Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter.	• Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO ₂)	• Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions.	• Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O ₃)	• Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	• Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	• Contaminated soil.	• Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.
Respirable Particulate Matter (PM-10)	• Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions.	• Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardio respiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Fine Particulate Matter (PM-2.5)	• Fuel combustion in motor vehicles, equipment, and industrial sources. • Residential and agricultural burning. • Industrial processes. • Also, formed from photochemical reactions of other pollutants, including NO_x, sulfur oxides, and organics.	• Increases respiratory disease. • Lung damage. • Cancer and premature death. • Reduces visibility and results in surface soiling.
Sulfur Dioxide (SO ₂)	• Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes.	• Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board, 2002.

Evaluation of the most current data on the health effects of inhalation of fine particulate matter prompted the California Air Resources Board (ARB) to recommend adoption of the statewide PM-2.5 standard that is more stringent than the federal standard. This standard was adopted in 2002. The State PM-2.5 standard is more of a goal in that it does not have specific attainment planning requirements like a federal clean air standard, but only requires continued progress towards attainment.

Similarly, the ARB extensively evaluated health effects of ozone exposure. A new state standard for an 8-hour ozone exposure was adopted in 2005, which aligned with the exposure period for the federal 8-hour standard. The California 8-hour ozone standard of 0.07 ppm is more stringent than the federal 8-hour standard of 0.075 ppm. The state standard, however, does not have a specific attainment deadline. California air quality jurisdictions are required to make steady progress towards attaining state standards, but there are no hard deadlines or any consequences of non-attainment. During the same re-evaluation process, the ARB adopted an annual state standard for nitrogen dioxide (NO₂) that is more stringent than the corresponding federal standard, and strengthened the state one-hour NO₂ standard.

As part of EPA's 2002 consent decree on clean air standards, a further review of airborne particulate matter (PM) and human health was initiated. A substantial modification of federal clean air standards for PM was promulgated in 2006. Standards for PM-2.5 were strengthened, a new class of PM in the 2.5 to 10 micron size was created, some PM-10 standards were revoked, and a distinction between rural and urban air quality was adopted. In December, 2012, the federal annual standard for PM-2.5 was reduced from 15 µg/m³ to 12 µg/m³ which matches the California AAQS. The severity of the basin's non-attainment status for PM-2.5 may be increased by this action and thus require accelerated planning for future PM-2.5 attainment.

In response to continuing evidence that ozone exposure at levels just meeting federal clean air standards is demonstrably unhealthful, EPA had proposed a further strengthening of the 8-hour standard. A new 8-hour ozone standard was adopted in 2015 after extensive analysis and public input. The adopted national 8-hour ozone standard is 0.07 ppm which matches the current California standard. It will require three years of ambient data collection, then 2 years of non-attainment findings and planning protocol adoption, then several years of plan development and approval. Final air quality plans for the new standard are likely to be adopted around 2022. Ultimate attainment of the new standard in ozone problem areas such as Southern California might be after 2025.

In 2010 a new federal one-hour primary standard for nitrogen dioxide (NO₂) was adopted. This standard is more stringent than the existing state standard. Based upon air quality monitoring data in the South Coast Air Basin, the California Air Resources Board has requested the EPA to designate the basin as being in attainment for this standard. The federal standard for sulfur dioxide (SO₂) was also recently revised. However, with minimal combustion of coal and mandatory use of low sulfur fuels in California, SO₂ is typically not a problem pollutant.

BASELINE AIR QUALITY

Existing and probable future levels of air quality around the proposed project area can best be best inferred from ambient air quality measurements conducted by the SCAQMD at the Upland monitoring station. This station measures both regional pollution levels such as smog, as well as primary vehicular pollution levels near busy roadways such as carbon monoxide, PM-10 and nitrogen oxides. The Ontario monitoring station near route 60 monitors PM-2.5. Table 3 provides a 4-year summary of the monitoring data for the major air pollutants compiled from these air monitoring stations. From these data the following conclusions can be drawn:

1. Photochemical smog (ozone) levels frequently exceed standards. The 1-hour state standard was violated an average of 14 percent of all days in the last four years near Upland. The federal 8-hour standard has been exceeded an average of 17 percent of all days within the same period and the state 8-hour standard has been exceeded approximately 21 percent of all days. While ozone levels are still high, they are much lower than 10 to 20 years ago. Attainment of all clean air standards in the project vicinity is not likely to occur soon, but the severity and frequency of violations is expected to continue to slowly decline during the current decade.
2. PM-10 levels have exceeded the state 24-hour standard on approximately five percent of all measurement days. The three times less stringent federal 24 hour-standard has not been exceeded once in the last four years.
3. A substantial fraction of PM-10 is comprised of ultra-small diameter particulates capable of being inhaled into deep lung tissue (PM-2.5). Both the frequency of violations of particulate standards, as well as high percentage of PM-2.5, are air quality concerns in the project area. However, PM-2.5 readings have infrequently exceeded the federal 24-hour PM-2.5 ambient standard which has occurred on less than two percent of the measured days.
4. More localized pollutants such as carbon monoxide, nitrogen oxides, etc. are very low near the project site because background levels throughout western San Bernardino County, never exceed allowable levels. There is substantial excess dispersive capacity to accommodate localized vehicular air pollutants such as NOx or CO without any threat of violating applicable AAQS.

Although complete attainment of every clean air standard is not yet imminent, extrapolation of the steady improvement trend suggests that such attainment could occur within the reasonably near future.

Table 3
Project Area Air Quality Monitoring Summary – 2017-2020
(Days Standards Were Exceeded and Maximum Observed Levels)

Pollutant/Standard	2017	2018	2019	2020
Ozone				
1-Hour > 0.09 ppm (S)	66	25	31	82
8-Hour > 0.07 ppm (S)	87	52	52	114
8- Hour > 0.075 ppm (F)	72	32	34	114
Max. 1-Hour Conc. (ppm)	0.150	0.133	0.131	0.158
Max. 8-Hour Conc. (ppm)	0.127	0.111	0.107	0.123
Carbon Monoxide				
1-Hour > 20. ppm (S)	0	0	0	0
8-Hour > 9. ppm (S, F)	0	0	0	0
Max 8-Hour Conc. (ppm)	1.4	1.2	1.1	1.1
Nitrogen Dioxide				
1-Hour > 0.18 ppm (S)	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.06	0.06	0.06	0.06
Respirable Particulates (PM-10)				
24-Hour > 50 µg/m ³ (S)	26/320	14/322	7/306	12/305
24-Hour > 150 µg/m ³ (F)	0/320	0/322	0/306	0/305
Max. 24-Hr. Conc. (µg/m ³)	106.	73.	125.	63.
Fine Particulates (PM-2.5)¹				
24-Hour > 35 µg/m ³ (F)	7/359	5/357	5/364	4/356
Max. 24-Hr. Conc. (µg/m ³)	44.800	47.9	41.3	53.1

S=State Standard

F=Federal Standard

Source: South Coast AQMD

Upland Monitoring Station (5175) ,¹ Ontario Monitoring (near CA-60) Station for PM-2.5

AIR QUALITY PLANNING

The Federal Clean Air Act (1977 Amendments) required that designated agencies in any area of the nation not meeting national clean air standards must prepare a plan demonstrating the steps that would bring the area into compliance with all national standards. The SCAB could not meet the deadlines for ozone, nitrogen dioxide, carbon monoxide, or PM-10. In the SCAB, the agencies designated by the governor to develop regional air quality plans are the SCAQMD and the Southern California Association of Governments (SCAG). The two agencies first adopted an Air Quality Management Plan (AQMP) in 1979 and revised it several times as earlier attainment forecasts were shown to be overly optimistic.

The 1990 Federal Clean Air Act Amendment (CAAA) required that all states with air-sheds with “serious” or worse ozone problems submit a revision to the State Implementation Plan (SIP). Amendments to the SIP have been proposed, revised and approved over the past decade. The most current regional attainment emissions forecast for ozone precursors (ROG and NO_x) and for carbon monoxide (CO) and for particulate matter are shown in Table 4. Substantial reductions in emissions of ROG, NO_x and CO are forecast to continue throughout the next several decades. Unless new particulate control programs are implemented, PM-10 and PM-2.5 are forecast to slightly increase.

The Air Quality Management District (AQMD) adopted an updated clean air “blueprint” in August 2003. The 2003 Air Quality Management Plan (AQMP) was approved by the EPA in 2004. The AQMP outlined the air pollution measures needed to meet federal health-based standards for ozone by 2010 and for particulates (PM-10) by 2006. The 2003 AQMP was based upon the federal one-hour ozone standard which was revoked late in 2005 and replaced by an 8-hour federal standard. Because of the revocation of the hourly standard, a new air quality planning cycle was initiated.

With re-designation of the air basin as non-attainment for the 8-hour ozone standard, a new attainment plan was developed. This plan shifted most of the one-hour ozone standard attainment strategies to the 8-hour standard. As previously noted, the attainment date was to “slip” from 2010 to 2021. The updated attainment plan also includes strategies for ultimately meeting the federal PM-2.5 standard.

Because Projected attainment by 2021 required control technologies that did not exist yet, the SCAQMD requested a voluntary “bump-up” from a “severe non-attainment” area to an “extreme non-attainment” designation for ozone. The extreme designation was to allow a longer time period for these technologies to develop. If attainment cannot be demonstrated within the specified deadline without relying on “black-box” measures, EPA would have been required to impose sanctions on the region had the bump-up request not been approved. In April 2010, the EPA approved the change in the non-attainment designation from “severe-17” to “extreme.” This reclassification set a later attainment deadline (2024), but also required the air basin to adopt even more stringent emissions controls.

Table 4
South Coast Air Basin Emissions Forecasts (Emissions in tons/day)

Pollutant	2015^a	2025^b	2030^b
NO_x	357	266	257
VOC	400	393	391
PM-10	161	170	172
PM-2.5	67	70	71

^a2015 Base Year.

^bWith current emissions reduction programs and adopted growth forecasts.

Source: California Air Resources Board, 2013 Almanac of Air Quality

In other air quality attainment plan reviews, EPA had disapproved part of the SCAB PM-2.5 attainment plan included in the AQMP. EPA stated that the current attainment plan relied on PM-2.5 control regulations that had not yet been approved or implemented. It was expected that a number of rules that were pending approval would remove the identified deficiencies. If these issues were not resolved within the next several years, federal funding sanctions for transportation Projects could result. The 2012 AQMP included in the current California State Implementation Plan (SIP) was expected to remedy identified PM-2.5 planning deficiencies.

The federal Clean Air Act requires that non-attainment air basins have EPA approved attainment plans in place. This requirement includes the federal one-hour ozone standard even though that standard was revoked almost ten years ago. There was no approved attainment plan for the one-hour federal standard at the time of revocation. Through a legal quirk, the SCAQMD is now required to develop an AQMP for the long since revoked one-hour federal ozone standard. Because the current SIP for the basin contains a number of control measures for the 8-hour ozone standard that are equally effective for one-hour levels, the 2012 AQMP was believed to satisfy hourly attainment planning requirements.

AQMPs are required to be updated every three years. The 2012 AQMP was adopted in early 2013. An updated AQMP was required for completion in 2016. The 2016 AQMP was adopted by the SCAQMD Board in March 2017 and has been submitted the California Air Resources Board for forwarding to the EPA. The 2016 AQMP acknowledges that motor vehicle emissions have been effectively controlled and that reductions in NO_x, the continuing ozone problem pollutant, may need to come from major stationary sources (power plants, refineries, landfill flares, etc.) . The current attainment deadlines for all federal non-attainment pollutants are now as follows:

8-hour ozone (70 ppb)	2032
Annual PM-2.5 (12 µg/m ³)	2025
8-hour ozone (75 ppb)	2024 (old standard)
1-hour ozone (120 ppb)	2023 (rescinded standard)
24-hour PM-2.5 (35 µg/m ³)	2019

The key challenge is that NO_x emission levels, as a critical ozone precursor pollutant, are forecast to continue to exceed the levels that would allow the above deadlines to be met. Unless additional stringent NO_x control measures are adopted and implemented, ozone attainment goals may not be met.

The proposed project does not directly relate to the AQMP in that there are no specific air quality programs or regulations governing water improvement projects. Conformity with adopted plans, forecasts and programs relative to population, housing, employment and land use is the primary yardstick by which impact significance of planned growth is determined. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less-than-significant just because the proposed recreational use is consistent with regional growth projections. Air quality impact significance for the proposed project has therefore been analyzed on a project-specific basis.

AIR QUALITY IMPACT

STANDARDS OF SIGNIFICANCE

Air quality impacts are considered “significant” if they cause clean air standards to be violated where they are currently met, or if they “substantially” contribute to an existing violation of standards. Any substantial emissions of air contaminants for which there is no safe exposure, or nuisance emissions such as dust or odors, would also be considered a significant impact.

Appendix G of the California CEQA Guidelines offers the following four tests of air quality impact significance. A Project would have a potentially significant impact if it:

- a) Conflicts with or obstructs implementation of the applicable air quality plan.
- b) Results in a cumulatively considerable net increase of any criteria pollutants for which the Project region is non-attainment under an applicable federal or state ambient air quality standard.
- c) Exposes sensitive receptors to substantial pollutant concentrations.
- d) Creates objectionable odors affecting a substantial number of people.

Primary Pollutants

Air quality impacts generally occur on two scales of motion. Near an individual source of emissions or a collection of sources such as a crowded intersection or parking lot, levels of those pollutants that are emitted in their already unhealthful form will be highest. Carbon monoxide (CO) is an example of such a pollutant. Primary pollutant impacts can generally be evaluated directly in comparison to appropriate clean air standards. Violations of these standards where they are currently met, or a measurable worsening of an existing or future violation, would be considered a significant impact. Many particulates, especially fugitive dust emissions, are also primary pollutants. Because of the non-attainment status of the South Coast Air Basin (SCAB) for PM-10, an aggressive dust control program is required to control fugitive dust during project construction.

Secondary Pollutants

Many pollutants, however, require time to transform from a more benign form to a more unhealthful contaminant. Their impact occurs regionally far from the source. Their incremental regional impact is minute on an individual basis and cannot be quantified except through complex photochemical computer models. Analysis of significance of such emissions is based upon a specified number of emissions (pounds, tons, etc.) even though there is no way to translate those emissions directly into a corresponding ambient air quality impact.

Because of the chemical complexity of primary versus secondary pollutants, the SCAQMD has designated significant emissions levels as surrogates for evaluating regional air quality impact significance independent of chemical transformation processes. Projects with daily emissions that

exceed any of the following emission thresholds are recommended by the SCAQMD to be considered significant under CEQA guidelines.

Table 5
Daily Emissions Thresholds

Pollutant	Construction	Operations
ROG	75	55
NOx	100	55
CO	550	550
PM-10	150	150
PM-2.5	55	55
SOx	150	150
Lead	3	3

Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

CONSTRUCTION ACTIVITY IMPACTS

The proposed project is located within a highly industrial corridor along State Street, which is just south of the railroad tracks. The project site is surrounding to the east, south, and west by existing industrial uses, but there is a small mobile home park to the south that takes access from Mission Boulevard.

The proposed project consists of development of a State Street Water Treatment Facility (State Street WTF), which will be a new centralized treatment project that will treat water from Wells 12 and 14. The project also includes installation of offsite water transmission and brine pipelines, improvements to the existing wells, and site improvements.

A new 1000kVA (preliminary) pad-mounted utility transformer shall be provided by Southern California Edison (SCE) to supply sufficient power to the new distribution system. The major project components are as follows:

Ion Exchange Building

The Ion Exchange Facility will be a single-story building.

GAC Treatment

The GAC treatment area will be supported on a reinforced cast-in-place concrete mat slab foundation. The approximate footprint of the new mat slab for the GAC treatment area measures 23 feet x 167 feet. The GAC backwash tank will be a metal tank on a reinforced cast-in-place concrete ring foundation or a reinforced cast-in-place concrete mat slab foundation if required.

ISEP™ Treatment

The ISEP™ treatment will be housed in a rectangular building superstructure consistent with normal pre-engineered metal building-type construction, which includes built-up structural steel column and beam framing with metal panel roof system, secondary roof and wall framing, and metal wall panel siding.

Chlorine Dosing Buildings

The chlorine dosing buildings and chemical storage buildings will be prefabricated Fiber Reinforced Polymer (FRP) buildings.

Well Enclosures

Well 12 and Well 14 enclosures will be modified. Well 12 has existing canopies and privacy fencing and Well 14 has an existing CMU building adjacent to a canopy and privacy fencing. More secure enclosures for the two wells will be provided.

Offsite

The off-site pipelines include the raw water pipeline from Well 12; the parallel brine waste and softener waste lines to the IEUA waste line; and the sewer line. Construction of the various pipelines would involve trenching using a conventional cut and cover technique. On average, 100 to 200 linear feet of pipeline may be installed per day. The pipeline includes the following components:

- Pipeline from Well 12 to the State Street Wellhead Treatment Plant – 8,250 lineal feet (LF) of 16-inch diameter pipeline.
- Brine line to Phillips Blvd from the State Street Wellhead Treatment Plant– 5,850 LF 4-inch diameter pipeline.
- Softener waste brine pipeline to Phillips Blvd from the State Street Wellhead Treatment Plant– 5,850 LF 4-inch diameter pipeline .
- Sewer waste pipeline from the State Street Wellhead Treatment Plant to Mission Boulevard and Belson Avenue – 790 LF 6-inch diameter pipeline.

CalEEMod 2020.4.0 was developed by the SCAQMD to provide a model by which to calculate construction emissions from a variety of land use projects. It calculates both the daily maximum and annual average emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions.

Construction of the project is projected to require one and a half years with the start in mid-2022. Table 6 shows the modeled equipment fleet and durations that were developed with input from the project engineers.

Table 6
CalEEMod Construction Activity Equipment Fleet and Workdays

Wellhead Site

Demolition (1 month) 300 CY demo export	1 Concrete Saw
	1 Dozer
	1 Loader/Backhoe
	2 Skid Steer Loaders
Grade (1 month)	1 Loader/Backhoe
	1 Dozer
	1 Excavator
	1 Grader
Pave/Pour Concrete Slabs (3 months)	1 Paver
	2 Rollers
	1 Loader/Backhoe
	2 Mixers
	1 Compactor
Construction and Equipment Install (10 months)	1 Crane
	3 Forklifts
	2 Loader/Backhoes
	1 Welder
	1 Generator Set
Yard Piping/Drainage (3 months)	1 Trencher
	2 Forklifts
	1 Crane
	2 Skid Steer Loaders

Off-Site Pipeline Installation

Phase Name and Duration	Equipment
Prep and Concrete Removal (1 month)	1 Concrete Saw
	2 Skid Steer Loaders
	2 Loader/Backhoes
Trenching and Pipeline Install (3 months)	2 Trenchers
	2 Forklifts
	1 Loader/Backhoes
Backfill and Paving (1 month)	4 Mixers
	1 Paver
	1 Rollers
	1 Loader/Backhoes
	2 Compactors

Utilizing the indicated equipment fleet shown in Tables 6 the following worst-case daily construction emissions are calculated by CalEEMod and are listed in Table 7.

Table 7
Construction Activity Emissions
Maximum Daily Emissions (pounds/day)

Maximal Construction Emissions per Calendar Year	ROG	NOx	CO	SO ₂	PM-10	PM-2.5
On-Site						
2022	1.7	17.5	16.0	0.0	3.4	2.1
2023	1.6	13.3	15.8	0.0	1.1	0.7
Off-Site						
2023	1.8	15.1	20.4	0.0	2.5	1.2
SCAQMD Thresholds	75	100	550	150	150	55

Source: CalEEMod.2020.4.0 output in appendix

SCAQMD Rules 402 and 403 (prohibition of nuisances, watering of inactive and perimeter areas, track out requirements, etc.), are applicable to the project and were applied in CalEEMod to minimize fugitive dust emissions. With this measure, peak daily construction activity emissions are estimated to be below SCAQMD CEQA thresholds without the need for added mitigation.

Construction equipment exhaust contains carcinogenic compounds within the diesel exhaust particulates. The toxicity of diesel exhaust is evaluated relative to a 24-hour per day, 365 days per year, 70-year lifetime exposure. The SCAQMD does not generally require the analysis of construction-related diesel emissions relative to health risk due to the short period for which the majority of diesel exhaust would occur. Health risk analyses are typically assessed over a 9-, 30-, or 70-year timeframe and not over a relatively brief construction period due to the lack of health risk associated with such a brief exposure.

LOCALIZED SIGNIFICANCE THRESHOLDS

The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs). LSTs were developed in response to Governing Board's Environmental Justice Enhancement Initiative 1-4 and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005.

Use of an LST analysis for a project is optional. For the proposed project, the primary source of possible LST impact would be during construction. LSTs are applicable for a sensitive receptor where it is possible that an individual could remain for 24 hours such as a residence, hospital or convalescent facility.

LSTs are only applicable to the following criteria pollutants: oxides of nitrogen (NO_x), carbon monoxide (CO), and particulate matter (PM-10 and PM-2.5). LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor.

LST screening tables are available for 25, 50, 100, 200- and 500-meter source-receptor distances. For this project, there are possible residential in the mobile home park south of the site such that the most conservative 25 meter distance was modeled.

The SCAQMD has issued guidance on applying CalEEMod to LSTs. LST pollutant screening level concentration data is currently published for 1, 2- and 5-acre sites for varying distances. The most stringent thresholds for a one-acre site were used for this analysis.

Only the on-site emissions resulting from construction of the treatment plant were used for this analysis since the pipeline installation is only in front of a single receptor for a very brief time.

The following thresholds and emissions in Table 8 are determined (pounds per day):

Table 8
LST and Project Emissions (pounds/day)

1 acre/25 meters Southwest San Bernardino Valley	CO	NO_x	PM-10	PM-2.5
LST Threshold	863	118	5	4
Max On-Site Emissions				
2022	16	18	3	2
2023	16	13	1	1

LSTs were compared to the maximum daily construction activities. As seen in Table 8, with active dust suppression, emissions meet the LST for construction thresholds. LST impacts are less-than-significant.

NEPA CONFORMITY

Thresholds of Significance

The U.S. Environmental Protection Agency published “Determining Conformity of General Federal Actions to State or Federal Implementation Plans; Final Rule,” in the November 30, 1995, Federal Register (40 CFR Parts 6, 51, and 93). The 40 CFR Part 1 51.850(a) states that no department, agency, or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license to permit, or approve any activity which does not conform to an applicable state implementation plan (SIP). It is the responsibility of the Federal agency to determine whether a federal action conforms to the applicable implementation plan

before the action is taken. If the proposed project includes any federal funding, or if the project requires any federal permits, federal participation is not allowed unless a conformity determination has been made.

Conformity analysis under EPA guidelines can be undertaken to demonstrate that the combined emissions from direct and indirect (transportation, etc.) project-related emissions have been accurately incorporated into the applicable SIP. A simpler test, as outlined in 40CFR Part 93.153, is to demonstrate that these emissions are less than the *de minimis* thresholds which depend upon the seriousness of the current level of non-attainment for federal clean air standards.

The SCAB is designated as a “extreme” non-attainment area for the federal 8-hour ozone standard. The basin is a “serious” non-attainment area for PM-2.5, and a maintenance area for PM-10. Sulfur Dioxide and Carbon Monoxide are maintenance areas. Based upon these designations, the following emissions levels are presumed evidence of SIP conformity:

VOC/ROG	-	10 tons/year
NOx	-	10 tons/year
PM-2.5	-	70 tons/year
PM-10	-	100 tons/year
CO	-	100 tons/year
SO ₂	-	100 tons/year
Lead	-	25 tons/year

If the project-related emissions from construction and operations are less than the specified “*de minimis*” levels, the project is considered to be in conformance with the applicable SIP.

NEPA Analysis

Annual emissions were run with the same assumptions as used for daily emissions. The calculated maximum annual emissions were then compared to the EPA *de minimis* emission thresholds that would allow for a federal conformity finding with Section 176c of the Clean Air Act.

Table 9
Total Annual Construction Emissions
(tons/year)

Construction Activity	ROG	NOx	CO	SO ₂	PM-10	PM-2.5
On-Site 2022	0.10	0.89	0.91	<0.01	0.14	0.08
On-Site 2023	0.15	1.33	1.54	<0.01	0.11	0.07
Off-Site 2023	0.03	0.21	0.29	<0.01	0.03	0.02
Total	0.28	2.43	2.74	<0.01	0.28	0.17
NEPA Threshold	10	10	100	100	100	70

As shown in Table 9, and summarized below, maximum annual emissions are much less than their associated *de minimis* thresholds. A formal SIP consistency analysis is not required.

Pollutant	Threshold	Project Emissions
VOC/ROG	10 tons/year	0.28 tons/year
NOx	10 tons/year	2.43 tons/year
PM-2.5	70 tons/year	0.17 tons/year
PM-10	100 tons/year	0.28 tons/year
CO	100 tons/year	2.74 tons/year
SO ₂	100 tons/year	<0.1 tons/year

OPERATIONAL IMPACTS

Electrical generation of power will be used for pumping and water treatment. Electrical consumption has no single uniquely related air pollution emissions source because power is supplied to and drawn from a regional grid. Electrical power is generated regionally by a combination of non-combustion (nuclear, hydroelectric, solar, wind, geothermal, etc.) and fossil fuel combustion sources. There is no direct nexus between consumption and the type of power source or the air basin where the source is located. Operational air pollution emissions from electrical generation are therefore not attributable on a project-specific basis.

CONSTRUCTION EMISSIONS MINIMIZATION

Construction activities are not anticipated to cause dust emissions to exceed SCAQMD CEQA thresholds with active dust suppression. Recommended measures include:

Fugitive Dust Control

- Apply soil stabilizers or moisten inactive areas.
- Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 2-3 times/day).
- Cover all stock piles with tarps at the end of each day or as needed.
- Provide water spray during loading and unloading of earthen materials.
- Minimize in-out traffic from construction zone
- Cover all trucks hauling dirt, sand, or loose material and require all trucks to maintain at least two feet of freeboard
- Sweep streets daily if visible soil material is carried out from the construction site

Similarly, ozone precursor emissions (ROG and NO_x) are calculated to be below SCAQMD CEQA thresholds. However, because of the regional non-attainment for photochemical smog, the use of reasonably available control measures for diesel exhaust is recommended. Combustion emissions control options include:

Exhaust Emissions Control

- Utilize well-tuned off-road construction equipment.
- Establish a preference for contractors using Tier 3 or better rated heavy equipment.
- Enforce 5-minute idling limits for both on-road trucks and off-road equipment.

GREENHOUSE GAS EMISSIONS

“Greenhouse gases” (so called because of their role in trapping heat near the surface of the earth) emitted by human activity are implicated in global climate change, commonly referred to as “global warming.” These greenhouse gases contribute to an increase in the temperature of the earth’s atmosphere by transparency to short wavelength visible sunlight, but near opacity to outgoing terrestrial long wavelength heat radiation in some parts of the infrared spectrum. The principal greenhouse gases (GHGs) are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. For purposes of planning and regulation, Section 15364.5 of the California Code of Regulations defines GHGs to include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of GHG emissions, accounting for approximately half of GHG emissions globally. Industrial and commercial sources are the second largest contributors of GHG emissions with about one-fourth of total emissions.

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases. GHG statutes and executive orders (EO) include AB 32, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07.

AB 32 is one of the most significant pieces of environmental legislation that California has adopted. Among other things, it is designed to maintain California’s reputation as a “national and international leader on energy conservation and environmental stewardship.” It will have wide-ranging effects on California businesses and lifestyles as well as far reaching effects on other states and countries. A unique aspect of AB 32, beyond its broad and wide-ranging mandatory provisions and dramatic GHG reductions are the short time frames within which it must be implemented. Major components of the AB 32 include:

- Require the monitoring and reporting of GHG emissions beginning with sources or categories of sources that contribute the most to statewide emissions.
- Requires immediate “early action” control programs on the most readily controlled GHG sources.
- Mandates that by 2020, California’s GHG emissions be reduced to 1990 levels.
- Forces an overall reduction of GHG gases in California by 25-40%, from business as usual, to be achieved by 2020.
- Must complement efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminants.

Statewide, the framework for developing the implementing regulations for AB 32 is under way. Maximum GHG reductions are expected to derive from increased vehicle fuel efficiency, from greater use of renewable energy and from increased structural energy efficiency. Additionally, through the California Climate Action Registry (CCAR now called the Climate Action Reserve), general and industry-specific protocols for assessing and reporting GHG emissions have been

developed. GHG sources are categorized into direct sources (i.e. company owned) and indirect sources (i.e. not company owned). Direct sources include combustion emissions from on-and off-road mobile sources, and fugitive emissions. Indirect sources include off-site electricity generation and non-company owned mobile sources.

THRESHOLDS OF SIGNIFICANCE

In response to the requirements of SB97, the State Resources Agency developed guidelines for the treatment of GHG emissions under CEQA. These new guidelines became state laws as part of Title 14 of the California Code of Regulations in March, 2010. The CEQA Appendix G guidelines were modified to include GHG as a required analysis element. A project would have a potentially significant impact if it:

- Generates GHG emissions, directly or indirectly, that may have a significant impact on the environment, or,
- Conflicts with an applicable plan, policy or regulation adopted to reduce GHG emissions.

Section 15064.4 of the Code specifies how significance of GHG emissions is to be evaluated. The process is broken down into quantification of project-related GHG emissions, making a determination of significance, and specification of any appropriate mitigation if impacts are found to be potentially significant. At each of these steps, the new GHG guidelines afford the lead agency with substantial flexibility.

Emissions identification may be quantitative, qualitative, or based on performance standards. CEQA guidelines allow the lead agency to “select the model or methodology it considers most appropriate.” The most common practice for transportation/combustion GHG emissions quantification is to use a computer model such as CalEEMod, as was used in the ensuing analysis.

The significance of those emissions then must be evaluated; the selection of a threshold of significance must take into consideration what level of GHG emissions would be cumulatively considerable. The guidelines are clear that they do not support a zero net emissions threshold. If the lead agency does not have sufficient expertise in evaluating GHG impacts, it may rely on thresholds adopted by an agency with greater expertise.

On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 Metric Tons (MT) CO₂ equivalent/year. This threshold was used for the project.

PROJECT RELATED GHG EMISSIONS GENERATION

Construction Activity GHG Emissions

The project is assumed to occur over a one and a half year period. During project construction, the CalEEMod2020.4.0 computer model predicts that the construction activities will generate the annual CO₂e emissions identified in Table 10.

Table 10
Construction Emissions (Metric Tons CO₂e)

On-Site	CO₂e
Year 2022	151.8
Year 2023	246.9
Off-Site	
Year 2023	43.5
Total	442.2
Amortized	14.7

CalEEMod Output provided in appendix

SCAQMD GHG emissions policy from construction activities is to amortize emissions over a 30-year lifetime. The amortized level is also provided. GHG impacts from construction are considered individually less-than-significant.

Project Operational GHG Emissions

Except for occasional maintenance, the only operational source of GHG emissions would be associated with pumping operations. Electricity is generated from a variety of resources at various locations in the western United States. The California Climate Action Registry Protocol (2009) states that each megawatt-hour (MW-HR) of electricity consumption in California results in the release of 0.331 MT of CO₂(e).

Below is preliminary data on power consumption provided by the project engineer which, as a worst case, assumes that the equipment will be operating continuously at full load. This assumption will provide a maximum estimate.

Location	Connected Load (kW)	kWh per day	kWh per year
Well 12	684	16,416	5,991,840
Chino State Street	749	17,976	6,561,240

The total project consumption is almost 13 MW per year. Electricity use will result in GHG emissions from the fossil fueled fraction of Southern California's electrical resource calculated as follows:

$$13 \text{ MWH/year} \times 0.331 \text{ MT/MWH} = 4.3 \text{ MT/year}$$

The screening threshold of 100,000 MT of CO₂(e) GHG emissions will not be exceeded.

CONSISTENCY WITH GHG PLANS, PROGRAMS AND POLICIES

In March 2014, the San Bernardino Associated Governments and Participating San Bernardino County Cities Partnership (Partnership) created a final draft of the San Bernardino County Regional Greenhouse Gas Reduction Plan (Reduction Plan) for each of the 25 jurisdictional Partner Cities in the County. The plan was recently updated in March of 2021. The Reduction Plan was created in accordance with AB 32, which established a greenhouse gas limit for the state of California. The Reduction Plan seeks to create an inventory of GHG gases and develop jurisdiction specific GHG reduction measures and baseline information that could be used by the Partnership Cities of San Bernardino County, including the County itself.

Projects that demonstrate consistency with the strategies, actions, and emission reduction targets contained in the Reduction Plan would have a less than significant impact on climate change. The project will generate minimal GHG emissions as shown. There are no reduction measures which are applicable to this project and therefore no consistency is required.

CALEEMOD2020.4.0 COMPUTER MODEL OUTPUT

- **ON-SITE DAILY EMISSIONS**
- **ON-SITE ANNUAL EMISSIONS**
- **OFF-SITE DAILY EMISSIONS**
- **OFF-SITE ANNUAL EMISSIONS**

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**HS-132 Chino Water Treatment On-Site****South Coast Air Basin, Summer****1.0 Project Characteristics****1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	4.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	10			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - approximate 4 acre site

Construction Phase - Demo: 1 month, Grade: 1 month, Pour Concrete Slabs: 3 months, Construct Buildings and Equipment: 10 months, Yard: 3 months

Off-road Equipment - Demo, 1 concrete saw, 1 dozer, 1 loader/backhoe, 2 skid steer loaders

Off-road Equipment - Grade: 1 loader/backhoe, 1 dozer, 1 excavator, 1 grader

Off-road Equipment - Construction and Equipment: 1 crane, 3 forklifts, 2 loader/backhoes, 1 welder, 1 gen set

Off-road Equipment - Concrete Slabs: 1 paver, 2 rollers, 1 loader/backhoe, 2 mixers, 1 compactor

Off-road Equipment - Yard Pipeline: 1 trencher, 2 forklifts, 1 crane, 2 skid steer loaders

Trips and VMT - 10 concrete trips per day for slabs

Demolition - 50 tons debris

Construction Off-road Equipment Mitigation -

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	200.00
tblConstructionPhase	NumDays	8.00	20.00
tblConstructionPhase	NumDays	18.00	60.00
tblConstructionPhase	PhaseEndDate	6/2/2023	8/2/2023
tblConstructionPhase	PhaseEndDate	7/15/2022	8/2/2022
tblConstructionPhase	PhaseEndDate	6/28/2023	10/25/2022
tblConstructionPhase	PhaseStartDate	7/16/2022	10/27/2022
tblConstructionPhase	PhaseStartDate	6/3/2023	8/3/2022
tblGrading	AcresOfGrading	20.00	8.00
tblLandUse	LotAcreage	0.00	4.00
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	PhaseName		Concrete Slabs
tblOffRoadEquipment	PhaseName		Yard Pipeline and Drainage
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Yard Pipeline and Drainage
tblOffRoadEquipment	PhaseName		Yard Pipeline and Drainage
tblOffRoadEquipment	PhaseName		Yard Pipeline and Drainage
tblTripsAndVMT	PhaseName		Yard Pipeline and Drainage

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	0.00	40.00
tblTripsAndVMT	WorkerTripNumber	20.00	40.00

2.0 Emissions Summary

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.7077	17.5400	15.9996	0.0292	6.6140	0.7616	7.3756	3.4005	0.7007	4.1012	0.0000	2,802.480 7	2,802.480 7	0.7380	0.0398	2,823.385 7
2023	1.5722	13.3094	15.7565	0.0290	0.4791	0.6369	1.1161	0.1278	0.6007	0.7285	0.0000	2,784.921 2	2,784.921 2	0.5611	0.0233	2,805.247 6
Maximum	1.7077	17.5400	15.9996	0.0292	6.6140	0.7616	7.3756	3.4005	0.7007	4.1012	0.0000	2,802.480 7	2,802.480 7	0.7380	0.0398	2,823.385 7

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.7077	17.5400	15.9996	0.0292	2.6817	0.7616	3.4433	1.3533	0.7007	2.0540	0.0000	2,802.480 7	2,802.480 7	0.7380	0.0398	2,823.385 7
2023	1.5722	13.3094	15.7565	0.0290	0.4791	0.6369	1.1161	0.1278	0.6007	0.7285	0.0000	2,784.921 2	2,784.921 2	0.5611	0.0233	2,805.247 6
Maximum	1.7077	17.5400	15.9996	0.0292	2.6817	0.7616	3.4433	1.3533	0.7007	2.0540	0.0000	2,802.480 7	2,802.480 7	0.7380	0.0398	2,823.385 7

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	55.44	0.00	46.31	58.02	0.00	42.39	0.00	0.00	0.00	0.00	0.00	0.00

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0000e-005	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000	0.0000	2.3000e-004

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0000e-005	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000	0.0000	2.3000e-004

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2022	6/28/2022	5	20	
2	Grade	Grading	7/6/2022	8/2/2022	5	20	
3	Building Construction	Building Construction	10/27/2022	8/2/2023	5	200	
4	Concrete Slabs	Paving	8/3/2022	10/25/2022	5	60	
5	Yard Pipeline and Drainage	Trenching	9/1/2023	11/23/2023	5	60	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 8****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Concrete Slabs	Cement and Mortar Mixers	2	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Concrete Slabs	Plate Compactors	1	1.00	8	0.43
Grade	Excavators	1	8.00	158	0.38

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grade	Graders	1	8.00	187	0.41
Concrete Slabs	Pavers	1	8.00	130	0.42
Yard Pipeline and Drainage	Trenchers	1	8.00	78	0.50
Concrete Slabs	Rollers	2	6.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grade	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Skid Steer Loaders	2	7.00	65	0.37
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Grade	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Concrete Slabs	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Yard Pipeline and Drainage	Rough Terrain Forklifts	2	8.00	100	0.40
Building Construction	Welders	1	8.00	46	0.45
Yard Pipeline and Drainage	Cranes	1	6.00	231	0.29
Yard Pipeline and Drainage	Skid Steer Loaders	2	6.00	65	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Yard Pipeline and Drainage	0	20.00	2.00		14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	40.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grade	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Concrete Slabs	8	40.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction**Water Exposed Area**

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Demolition - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0535	0.0000	0.0535	8.1000e-003	0.0000	8.1000e-003			0.0000			0.0000
Off-Road	1.4597	14.6735	11.6147	0.0211		0.7062	0.7062		0.6617	0.6617		2,031.4785	2,031.4785	0.4977		2,043.9203
Total	1.4597	14.6735	11.6147	0.0211	0.0535	0.7062	0.7597	8.1000e-003	0.6617	0.6698		2,031.4785	2,031.4785	0.4977		2,043.9203

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0512	0.0361	0.5683	1.5200e-003	0.1677	1.0000e-003	0.1687	0.0445	9.2000e-004	0.0454		153.1717	153.1717	4.0100e-003	3.6600e-003	154.3616
Total	0.0512	0.0361	0.5683	1.5200e-003	0.1677	1.0000e-003	0.1687	0.0445	9.2000e-004	0.0454		153.1717	153.1717	4.0100e-003	3.6600e-003	154.3616

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Demolition - 2022****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0209	0.0000	0.0209	3.1600e-003	0.0000	3.1600e-003			0.0000			0.0000
Off-Road	1.4597	13.0551	11.6147	0.0211		0.7062	0.7062		0.6617	0.6617	0.0000	2,031.4785	2,031.4785	0.4977		2,043.9203
Total	1.4597	13.0551	11.6147	0.0211	0.0209	0.7062	0.7271	3.1600e-003	0.6617	0.6649	0.0000	2,031.4785	2,031.4785	0.4977		2,043.9203

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0512	0.0361	0.5683	1.5200e-003	0.1677	1.0000e-003	0.1687	0.0445	9.2000e-004	0.0454		153.1717	153.1717	4.0100e-003	3.6600e-003	154.3616
Total	0.0512	0.0361	0.5683	1.5200e-003	0.1677	1.0000e-003	0.1687	0.0445	9.2000e-004	0.0454		153.1717	153.1717	4.0100e-003	3.6600e-003	154.3616

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Grade - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.4463	0.0000	6.4463	3.3560	0.0000	3.3560			0.0000			0.0000
Off-Road	1.6192	17.5039	10.7968	0.0234		0.7606	0.7606		0.6998	0.6998		2,269.568 5	2,269.568 5	0.7340		2,287.919 1
Total	1.6192	17.5039	10.7968	0.0234	6.4463	0.7606	7.2069	3.3560	0.6998	4.0558		2,269.568 5	2,269.568 5	0.7340		2,287.919 1

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0512	0.0361	0.5683	1.5200e-003	0.1677	1.0000e-003	0.1687	0.0445	9.2000e-004	0.0454		153.1717	153.1717	4.0100e-003	3.6600e-003	154.3616
Total	0.0512	0.0361	0.5683	1.5200e-003	0.1677	1.0000e-003	0.1687	0.0445	9.2000e-004	0.0454		153.1717	153.1717	4.0100e-003	3.6600e-003	154.3616

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Grade - 2022****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5141	0.0000	2.5141	1.3089	0.0000	1.3089			0.0000			0.0000
Off-Road	1.6192	17.5039	10.7968	0.0234		0.7606	0.7606		0.6998	0.6998	0.0000	2,269.568 5	2,269.568 5	0.7340		2,287.919 1
Total	1.6192	17.5039	10.7968	0.0234	2.5141	0.7606	3.2747	1.3089	0.6998	2.0086	0.0000	2,269.568 5	2,269.568 5	0.7340		2,287.919 1

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0512	0.0361	0.5683	1.5200e-003	0.1677	1.0000e-003	0.1687	0.0445	9.2000e-004	0.0454		153.1717	153.1717	4.0100e-003	3.6600e-003	154.3616
Total	0.0512	0.0361	0.5683	1.5200e-003	0.1677	1.0000e-003	0.1687	0.0445	9.2000e-004	0.0454		153.1717	153.1717	4.0100e-003	3.6600e-003	154.3616

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Building Construction - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5621	14.1495	14.4052	0.0242		0.7302	0.7302		0.6886	0.6886		2,290.7495	2,290.7495	0.5267		2,303.9169
Total	1.5621	14.1495	14.4052	0.0242		0.7302	0.7302		0.6886	0.6886		2,290.7495	2,290.7495	0.5267		2,303.9169

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.1300e-003	0.2359	0.0789	9.6000e-004	0.0320	2.4000e-003	0.0344	9.2200e-003	2.3000e-003	0.0115		103.2734	103.2734	3.8000e-003	0.0150	107.8378
Worker	0.1365	0.0963	1.5155	4.0400e-003	0.4471	2.6800e-003	0.4498	0.1186	2.4600e-003	0.1210		408.4579	408.4579	0.0107	9.7500e-003	411.6310
Total	0.1456	0.3323	1.5944	5.0000e-003	0.4791	5.0800e-003	0.4842	0.1278	4.7600e-003	0.1326		511.7312	511.7312	0.0145	0.0248	519.4688

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5621	14.1495	14.4052	0.0242		0.7302	0.7302		0.6886	0.6886	0.0000	2,290.7495	2,290.7495	0.5267		2,303.9169
Total	1.5621	14.1495	14.4052	0.0242		0.7302	0.7302		0.6886	0.6886	0.0000	2,290.7495	2,290.7495	0.5267		2,303.9169

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.1300e-003	0.2359	0.0789	9.6000e-004	0.0320	2.4000e-003	0.0344	9.2200e-003	2.3000e-003	0.0115		103.2734	103.2734	3.8000e-003	0.0150	107.8378
Worker	0.1365	0.0963	1.5155	4.0400e-003	0.4471	2.6800e-003	0.4498	0.1186	2.4600e-003	0.1210		408.4579	408.4579	0.0107	9.7500e-003	411.6310
Total	0.1456	0.3323	1.5944	5.0000e-003	0.4791	5.0800e-003	0.4842	0.1278	4.7600e-003	0.1326		511.7312	511.7312	0.0145	0.0248	519.4688

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Building Construction - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4403	13.0412	14.2916	0.0242		0.6334	0.6334		0.5974	0.5974		2,291.3305	2,291.3305	0.5225		2,304.3930
Total	1.4403	13.0412	14.2916	0.0242		0.6334	0.6334		0.5974	0.5974		2,291.3305	2,291.3305	0.5225		2,304.3930

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.3600e-003	0.1830	0.0702	9.1000e-004	0.0320	1.0100e-003	0.0330	9.2200e-003	9.7000e-004	0.0102		98.2901	98.2901	3.6400e-003	0.0143	102.6292
Worker	0.1265	0.0852	1.3947	3.9100e-003	0.4471	2.5200e-003	0.4496	0.1186	2.3200e-003	0.1209		395.3006	395.3006	9.5900e-003	9.0100e-003	398.2253
Total	0.1319	0.2682	1.4649	4.8200e-003	0.4791	3.5300e-003	0.4827	0.1278	3.2900e-003	0.1311		493.5907	493.5907	0.0132	0.0233	500.8545

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Building Construction - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4403	13.0412	14.2916	0.0242		0.6334	0.6334		0.5974	0.5974	0.0000	2,291.3305	2,291.3305	0.5225		2,304.3930
Total	1.4403	13.0412	14.2916	0.0242		0.6334	0.6334		0.5974	0.5974	0.0000	2,291.3305	2,291.3305	0.5225		2,304.3930

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.3600e-003	0.1830	0.0702	9.1000e-004	0.0320	1.0100e-003	0.0330	9.2200e-003	9.7000e-004	0.0102		98.2901	98.2901	3.6400e-003	0.0143	102.6292
Worker	0.1265	0.0852	1.3947	3.9100e-003	0.4471	2.5200e-003	0.4496	0.1186	2.3200e-003	0.1209		395.3006	395.3006	9.5900e-003	9.0100e-003	398.2253
Total	0.1319	0.2682	1.4649	4.8200e-003	0.4791	3.5300e-003	0.4827	0.1278	3.2900e-003	0.1311		493.5907	493.5907	0.0132	0.0233	500.8545

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Concrete Slabs - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7142	6.9471	8.4014	0.0129		0.3617	0.3617		0.3346	0.3346		1,217.737 0	1,217.737 0	0.3763		1,227.143 4
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7142	6.9471	8.4014	0.0129		0.3617	0.3617		0.3346	0.3346		1,217.737 0	1,217.737 0	0.3763		1,227.143 4

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0183	0.4719	0.1578	1.9200e-003	0.0640	4.8100e-003	0.0688	0.0184	4.6000e-003	0.0230		206.5467	206.5467	7.6000e-003	0.0300	215.6755
Worker	0.1365	0.0963	1.5155	4.0400e-003	0.4471	2.6800e-003	0.4498	0.1186	2.4600e-003	0.1210		408.4579	408.4579	0.0107	9.7500e-003	411.6310
Total	0.1547	0.5682	1.6733	5.9600e-003	0.5111	7.4900e-003	0.5186	0.1370	7.0600e-003	0.1441		615.0046	615.0046	0.0183	0.0398	627.3066

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Concrete Slabs - 2022****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7142	6.9156	8.4014	0.0129		0.3617	0.3617		0.3346	0.3346	0.0000	1,217.737 0	1,217.737 0	0.3763		1,227.143 4
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7142	6.9156	8.4014	0.0129		0.3617	0.3617		0.3346	0.3346	0.0000	1,217.737 0	1,217.737 0	0.3763		1,227.143 4

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0183	0.4719	0.1578	1.9200e-003	0.0640	4.8100e-003	0.0688	0.0184	4.6000e-003	0.0230		206.5467	206.5467	7.6000e-003	0.0300	215.6755
Worker	0.1365	0.0963	1.5155	4.0400e-003	0.4471	2.6800e-003	0.4498	0.1186	2.4600e-003	0.1210		408.4579	408.4579	0.0107	9.7500e-003	411.6310
Total	0.1547	0.5682	1.6733	5.9600e-003	0.5111	7.4900e-003	0.5186	0.1370	7.0600e-003	0.1441		615.0046	615.0046	0.0183	0.0398	627.3066

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Yard Pipeline and Drainage - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9201	10.1968	10.6390	0.0177		0.4782	0.4782		0.4399	0.4399		1,715.6595	1,715.6595	0.5549		1,729.5315
Total	0.9201	10.1968	10.6390	0.0177		0.4782	0.4782		0.4399	0.4399		1,715.6595	1,715.6595	0.5549		1,729.5315

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1500e-003	0.0732	0.0281	3.6000e-004	0.0128	4.0000e-004	0.0132	3.6900e-003	3.9000e-004	4.0700e-003		39.3160	39.3160	1.4600e-003	5.7000e-003	41.0517
Worker	0.0633	0.0426	0.6974	1.9600e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		197.6503	197.6503	4.7900e-003	4.5000e-003	199.1127
Total	0.0654	0.1158	0.7255	2.3200e-003	0.2364	1.6600e-003	0.2380	0.0630	1.5500e-003	0.0645		236.9663	236.9663	6.2500e-003	0.0102	240.1644

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Yard Pipeline and Drainage - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9201	2.8429	10.6390	0.0177		0.4782	0.4782		0.4399	0.4399	0.0000	1,715.6595	1,715.6595	0.5549		1,729.5315
Total	0.9201	2.8429	10.6390	0.0177		0.4782	0.4782		0.4399	0.4399	0.0000	1,715.6595	1,715.6595	0.5549		1,729.5315

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1500e-003	0.0732	0.0281	3.6000e-004	0.0128	4.0000e-004	0.0132	3.6900e-003	3.9000e-004	4.0700e-003		39.3160	39.3160	1.4600e-003	5.7000e-003	41.0517
Worker	0.0633	0.0426	0.6974	1.9600e-003	0.2236	1.2600e-003	0.2248	0.0593	1.1600e-003	0.0605		197.6503	197.6503	4.7900e-003	4.5000e-003	199.1127
Total	0.0654	0.1158	0.7255	2.3200e-003	0.2364	1.6600e-003	0.2380	0.0630	1.5500e-003	0.0645		236.9663	236.9663	6.2500e-003	0.0102	240.1644

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.544109	0.060768	0.184625	0.129879	0.023845	0.006339	0.011719	0.008584	0.000815	0.000515	0.024285	0.000743	0.003774

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.0 Energy Detail**

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

7.0 Water Detail**7.1 Mitigation Measures Water**

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**8.0 Waste Detail**

8.1 Mitigation Measures Waste**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

HS-132 Chino Water Treatment On-Site

South Coast Air Basin, Annual

1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	4.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	10			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - approximate 4 acre site

Construction Phase - Demo: 1 month, Grade: 1 month, Pour Concrete Slabs: 3 months, Construct Buildings and Equipment: 10 months, Yard: 3 months

Off-road Equipment - Demo, 1 concrete saw, 1 dozer, 1 loader/backhoe, 2 skid steer loaders

Off-road Equipment - Grade: 1 loader/backhoe, 1 dozer, 1 excavator, 1 grader

Off-road Equipment - Construction and Equipment: 1 crane, 3 forklifts, 2 loader/backhoes, 1 welder, 1 gen set

Off-road Equipment - Concrete Slabs: 1 paver, 2 rollers, 1 loader/backhoe, 2 mixers, 1 compactor

Off-road Equipment - Yard Pipeline: 1 trencher, 2 forklifts, 1 crane, 2 skid steer loaders

Trips and VMT - 10 concrete trips per day for slabs

Demolition - 50 tons debris

Construction Off-road Equipment Mitigation -

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	200.00
tblConstructionPhase	NumDays	8.00	20.00
tblConstructionPhase	NumDays	18.00	60.00
tblConstructionPhase	PhaseEndDate	6/2/2023	8/2/2023
tblConstructionPhase	PhaseEndDate	7/15/2022	8/2/2022
tblConstructionPhase	PhaseEndDate	6/28/2023	10/25/2022
tblConstructionPhase	PhaseStartDate	7/16/2022	10/27/2022
tblConstructionPhase	PhaseStartDate	6/3/2023	8/3/2022
tblGrading	AcresOfGrading	20.00	8.00
tblLandUse	LotAcreage	0.00	4.00
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	PhaseName		Concrete Slabs
tblOffRoadEquipment	PhaseName		Yard Pipeline and Drainage
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Yard Pipeline and Drainage
tblOffRoadEquipment	PhaseName		Yard Pipeline and Drainage
tblOffRoadEquipment	PhaseName		Yard Pipeline and Drainage
tblTripsAndVMT	PhaseName		Yard Pipeline and Drainage

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	0.00	40.00
tblTripsAndVMT	WorkerTripNumber	20.00	40.00

2.0 Emissions Summary

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**2.1 Overall Construction****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0978	0.8900	0.9077	1.7200e-003	0.0944	0.0430	0.1374	0.0415	0.0402	0.0817	0.0000	150.4637	150.4637	0.0335	1.7200e-003	151.8146
2023	0.1496	1.3293	1.5381	2.8100e-003	0.0430	0.0631	0.1061	0.0115	0.0592	0.0707	0.0000	245.0292	245.0292	0.0525	1.9500e-003	246.9231
Maximum	0.1496	1.3293	1.5381	2.8100e-003	0.0944	0.0631	0.1374	0.0415	0.0592	0.0817	0.0000	245.0292	245.0292	0.0525	1.9500e-003	246.9231

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0978	0.8729	0.9077	1.7200e-003	0.0548	0.0430	0.0978	0.0210	0.0402	0.0612	0.0000	150.4635	150.4635	0.0335	1.7200e-003	151.8145
2023	0.1496	1.1087	1.5381	2.8100e-003	0.0430	0.0631	0.1061	0.0115	0.0592	0.0707	0.0000	245.0289	245.0289	0.0525	1.9500e-003	246.9229
Maximum	0.1496	1.1087	1.5381	2.8100e-003	0.0548	0.0631	0.1061	0.0210	0.0592	0.0707	0.0000	245.0289	245.0289	0.0525	1.9500e-003	246.9229

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	10.71	0.00	0.00	28.87	0.00	16.28	38.73	0.00	13.47	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2022	8-31-2022	0.4411	0.4246
2	9-1-2022	11-30-2022	0.3677	0.3671
3	12-1-2022	2-28-2023	0.4936	0.4936
4	3-1-2023	5-31-2023	0.4892	0.4892
5	6-1-2023	8-31-2023	0.3348	0.3348
6	9-1-2023	9-30-2023	0.1211	0.0423
		Highest	0.4936	0.4936

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2022	6/28/2022	5	20	
2	Grade	Grading	7/6/2022	8/2/2022	5	20	
3	Building Construction	Building Construction	10/27/2022	8/2/2023	5	200	

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Concrete Slabs	Paving	8/3/2022	10/25/2022	5	60
5	Yard Pipeline and Drainage	Trenching	9/1/2023	11/23/2023	5	60

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 8****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Concrete Slabs	Cement and Mortar Mixers	2	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Concrete Slabs	Plate Compactors	1	1.00	8	0.43
Grade	Excavators	1	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grade	Graders	1	8.00	187	0.41
Concrete Slabs	Pavers	1	8.00	130	0.42
Yard Pipeline and Drainage	Trenchers	1	8.00	78	0.50
Concrete Slabs	Rollers	2	6.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grade	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Skid Steer Loaders	2	7.00	65	0.37
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Grade	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Concrete Slabs	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Yard Pipeline and Drainage	Rough Terrain Forklifts	2	8.00	100	0.40
Building Construction	Welders	1	8.00	46	0.45
Yard Pipeline and Drainage	Cranes	1	6.00	231	0.29
Yard Pipeline and Drainage	Skid Steer Loaders	2	6.00	65	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Yard Pipeline and Drainage	0	20.00	2.00		14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	40.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grade	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Concrete Slabs	8	40.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Demolition - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.3000e-004	0.0000	5.3000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0146	0.1467	0.1162	2.1000e-004		7.0600e-003	7.0600e-003		6.6200e-003	6.6200e-003	0.0000	18.4293	18.4293	4.5100e-003	0.0000	18.5421
Total	0.0146	0.1467	0.1162	2.1000e-004	5.3000e-004	7.0600e-003	7.5900e-003	8.0000e-005	6.6200e-003	6.7000e-003	0.0000	18.4293	18.4293	4.5100e-003	0.0000	18.5421

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-004	4.1000e-004	5.3100e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3306	1.3306	4.0000e-005	4.0000e-005	1.3422
Total	5.0000e-004	4.1000e-004	5.3100e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3306	1.3306	4.0000e-005	4.0000e-005	1.3422

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.1000e-004	0.0000	2.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0146	0.1306	0.1162	2.1000e-004		7.0600e-003	7.0600e-003		6.6200e-003	6.6200e-003	0.0000	18.4292	18.4292	4.5100e-003	0.0000	18.5421
Total	0.0146	0.1306	0.1162	2.1000e-004	2.1000e-004	7.0600e-003	7.2700e-003	3.0000e-005	6.6200e-003	6.6500e-003	0.0000	18.4292	18.4292	4.5100e-003	0.0000	18.5421

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-004	4.1000e-004	5.3100e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3306	1.3306	4.0000e-005	4.0000e-005	1.3422
Total	5.0000e-004	4.1000e-004	5.3100e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3306	1.3306	4.0000e-005	4.0000e-005	1.3422

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Grade - 2022****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0645	0.0000	0.0645	0.0336	0.0000	0.0336	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0162	0.1750	0.1080	2.3000e-004		7.6100e-003	7.6100e-003		7.0000e-003	7.0000e-003	0.0000	20.5892	20.5892	6.6600e-003	0.0000	20.7557
Total	0.0162	0.1750	0.1080	2.3000e-004	0.0645	7.6100e-003	0.0721	0.0336	7.0000e-003	0.0406	0.0000	20.5892	20.5892	6.6600e-003	0.0000	20.7557

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-004	4.1000e-004	5.3100e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3306	1.3306	4.0000e-005	4.0000e-005	1.3422
Total	5.0000e-004	4.1000e-004	5.3100e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3306	1.3306	4.0000e-005	4.0000e-005	1.3422

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Grade - 2022****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0251	0.0000	0.0251	0.0131	0.0000	0.0131	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0162	0.1750	0.1080	2.3000e-004		7.6100e-003	7.6100e-003		7.0000e-003	7.0000e-003	0.0000	20.5892	20.5892	6.6600e-003	0.0000	20.7556
Total	0.0162	0.1750	0.1080	2.3000e-004	0.0251	7.6100e-003	0.0328	0.0131	7.0000e-003	0.0201	0.0000	20.5892	20.5892	6.6600e-003	0.0000	20.7556

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-004	4.1000e-004	5.3100e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3306	1.3306	4.0000e-005	4.0000e-005	1.3422
Total	5.0000e-004	4.1000e-004	5.3100e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3306	1.3306	4.0000e-005	4.0000e-005	1.3422

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0367	0.3325	0.3385	5.7000e-004		0.0172	0.0172		0.0162	0.0162	0.0000	48.8361	48.8361	0.0112	0.0000	49.1168
Total	0.0367	0.3325	0.3385	5.7000e-004		0.0172	0.0172		0.0162	0.0162	0.0000	48.8361	48.8361	0.0112	0.0000	49.1168

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1000e-004	5.8200e-003	1.8800e-003	2.0000e-005	7.4000e-004	6.0000e-005	8.0000e-004	2.1000e-004	5.0000e-005	2.7000e-004	0.0000	2.2020	2.2020	8.0000e-005	3.2000e-004	2.2994
Worker	3.1400e-003	2.5400e-003	0.0333	9.0000e-005	0.0103	6.0000e-005	0.0104	2.7400e-003	6.0000e-005	2.8000e-003	0.0000	8.3381	8.3381	2.3000e-004	2.2000e-004	8.4108
Total	3.3500e-003	8.3600e-003	0.0351	1.1000e-004	0.0111	1.2000e-004	0.0112	2.9500e-003	1.1000e-004	3.0700e-003	0.0000	10.5401	10.5401	3.1000e-004	5.4000e-004	10.7103

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0367	0.3325	0.3385	5.7000e-004		0.0172	0.0172		0.0162	0.0162	0.0000	48.8361	48.8361	0.0112	0.0000	49.1168
Total	0.0367	0.3325	0.3385	5.7000e-004		0.0172	0.0172		0.0162	0.0162	0.0000	48.8361	48.8361	0.0112	0.0000	49.1168

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1000e-004	5.8200e-003	1.8800e-003	2.0000e-005	7.4000e-004	6.0000e-005	8.0000e-004	2.1000e-004	5.0000e-005	2.7000e-004	0.0000	2.2020	2.2020	8.0000e-005	3.2000e-004	2.2994
Worker	3.1400e-003	2.5400e-003	0.0333	9.0000e-005	0.0103	6.0000e-005	0.0104	2.7400e-003	6.0000e-005	2.8000e-003	0.0000	8.3381	8.3381	2.3000e-004	2.2000e-004	8.4108
Total	3.3500e-003	8.3600e-003	0.0351	1.1000e-004	0.0111	1.2000e-004	0.0112	2.9500e-003	1.1000e-004	3.0700e-003	0.0000	10.5401	10.5401	3.1000e-004	5.4000e-004	10.7103

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1102	0.9977	1.0933	1.8500e-003		0.0485	0.0485		0.0457	0.0457	0.0000	159.0175	159.0175	0.0363	0.0000	159.9240
Total	0.1102	0.9977	1.0933	1.8500e-003		0.0485	0.0485		0.0457	0.0457	0.0000	159.0175	159.0175	0.0363	0.0000	159.9240

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-004	0.0147	5.4500e-003	7.0000e-005	2.4100e-003	8.0000e-005	2.4900e-003	7.0000e-004	7.0000e-005	7.7000e-004	0.0000	6.8261	6.8261	2.5000e-004	9.9000e-004	7.1276
Worker	9.5000e-003	7.3200e-003	0.0997	2.9000e-004	0.0336	1.9000e-004	0.0338	8.9200e-003	1.8000e-004	9.0900e-003	0.0000	26.2711	26.2711	6.8000e-004	6.8000e-004	26.4893
Total	9.9000e-003	0.0220	0.1052	3.6000e-004	0.0360	2.7000e-004	0.0363	9.6200e-003	2.5000e-004	9.8600e-003	0.0000	33.0971	33.0971	9.3000e-004	1.6700e-003	33.6169

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1102	0.9977	1.0933	1.8500e-003		0.0485	0.0485		0.0457	0.0457	0.0000	159.0173	159.0173	0.0363	0.0000	159.9238
Total	0.1102	0.9977	1.0933	1.8500e-003		0.0485	0.0485		0.0457	0.0457	0.0000	159.0173	159.0173	0.0363	0.0000	159.9238

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-004	0.0147	5.4500e-003	7.0000e-005	2.4100e-003	8.0000e-005	2.4900e-003	7.0000e-004	7.0000e-005	7.7000e-004	0.0000	6.8261	6.8261	2.5000e-004	9.9000e-004	7.1276
Worker	9.5000e-003	7.3200e-003	0.0997	2.9000e-004	0.0336	1.9000e-004	0.0338	8.9200e-003	1.8000e-004	9.0900e-003	0.0000	26.2711	26.2711	6.8000e-004	6.8000e-004	26.4893
Total	9.9000e-003	0.0220	0.1052	3.6000e-004	0.0360	2.7000e-004	0.0363	9.6200e-003	2.5000e-004	9.8600e-003	0.0000	33.0971	33.0971	9.3000e-004	1.6700e-003	33.6169

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Concrete Slabs - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0214	0.2084	0.2520	3.9000e-004		0.0109	0.0109		0.0100	0.0100	0.0000	33.1414	33.1414	0.0102	0.0000	33.3974
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0214	0.2084	0.2520	3.9000e-004		0.0109	0.0109		0.0100	0.0100	0.0000	33.1414	33.1414	0.0102	0.0000	33.3974

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.4000e-004	0.0149	4.8100e-003	6.0000e-005	1.8900e-003	1.4000e-004	2.0400e-003	5.5000e-004	1.4000e-004	6.8000e-004	0.0000	5.6222	5.6222	2.1000e-004	8.2000e-004	5.8708
Worker	4.0100e-003	3.2500e-003	0.0425	1.2000e-004	0.0132	8.0000e-005	0.0133	3.5000e-003	7.0000e-005	3.5700e-003	0.0000	10.6444	10.6444	2.9000e-004	2.9000e-004	10.7373
Total	4.5500e-003	0.0181	0.0473	1.8000e-004	0.0151	2.2000e-004	0.0153	4.0500e-003	2.1000e-004	4.2500e-003	0.0000	16.2665	16.2665	5.0000e-004	1.1100e-003	16.6081

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Concrete Slabs - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0214	0.2075	0.2520	3.9000e-004		0.0109	0.0109		0.0100	0.0100	0.0000	33.1413	33.1413	0.0102	0.0000	33.3973
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0214	0.2075	0.2520	3.9000e-004		0.0109	0.0109		0.0100	0.0100	0.0000	33.1413	33.1413	0.0102	0.0000	33.3973

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.4000e-004	0.0149	4.8100e-003	6.0000e-005	1.8900e-003	1.4000e-004	2.0400e-003	5.5000e-004	1.4000e-004	6.8000e-004	0.0000	5.6222	5.6222	2.1000e-004	8.2000e-004	5.8708
Worker	4.0100e-003	3.2500e-003	0.0425	1.2000e-004	0.0132	8.0000e-005	0.0133	3.5000e-003	7.0000e-005	3.5700e-003	0.0000	10.6444	10.6444	2.9000e-004	2.9000e-004	10.7373
Total	4.5500e-003	0.0181	0.0473	1.8000e-004	0.0151	2.2000e-004	0.0153	4.0500e-003	2.1000e-004	4.2500e-003	0.0000	16.2665	16.2665	5.0000e-004	1.1100e-003	16.6081

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Yard Pipeline and Drainage - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0276	0.3059	0.3192	5.3000e-004		0.0144	0.0144		0.0132	0.0132	0.0000	46.6926	46.6926	0.0151	0.0000	47.0701
Total	0.0276	0.3059	0.3192	5.3000e-004		0.0144	0.0144		0.0132	0.0132	0.0000	46.6926	46.6926	0.0151	0.0000	47.0701

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-005	2.3000e-003	8.6000e-004	1.0000e-005	3.8000e-004	1.0000e-005	3.9000e-004	1.1000e-004	1.0000e-005	1.2000e-004	0.0000	1.0708	1.0708	4.0000e-005	1.6000e-004	1.1181
Worker	1.8600e-003	1.4400e-003	0.0196	6.0000e-005	6.5800e-003	4.0000e-005	6.6200e-003	1.7500e-003	3.0000e-005	1.7800e-003	0.0000	5.1512	5.1512	1.3000e-004	1.3000e-004	5.1940
Total	1.9200e-003	3.7400e-003	0.0204	7.0000e-005	6.9600e-003	5.0000e-005	7.0100e-003	1.8600e-003	4.0000e-005	1.9000e-003	0.0000	6.2220	6.2220	1.7000e-004	2.9000e-004	6.3120

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Yard Pipeline and Drainage - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0276	0.0853	0.3192	5.3000e-004		0.0144	0.0144		0.0132	0.0132	0.0000	46.6926	46.6926	0.0151	0.0000	47.0701
Total	0.0276	0.0853	0.3192	5.3000e-004		0.0144	0.0144		0.0132	0.0132	0.0000	46.6926	46.6926	0.0151	0.0000	47.0701

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-005	2.3000e-003	8.6000e-004	1.0000e-005	3.8000e-004	1.0000e-005	3.9000e-004	1.1000e-004	1.0000e-005	1.2000e-004	0.0000	1.0708	1.0708	4.0000e-005	1.6000e-004	1.1181
Worker	1.8600e-003	1.4400e-003	0.0196	6.0000e-005	6.5800e-003	4.0000e-005	6.6200e-003	1.7500e-003	3.0000e-005	1.7800e-003	0.0000	5.1512	5.1512	1.3000e-004	1.3000e-004	5.1940
Total	1.9200e-003	3.7400e-003	0.0204	7.0000e-005	6.9600e-003	5.0000e-005	7.0100e-003	1.8600e-003	4.0000e-005	1.9000e-003	0.0000	6.2220	6.2220	1.7000e-004	2.9000e-004	6.3120

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.544109	0.060768	0.184625	0.129879	0.023845	0.006339	0.011719	0.008584	0.000815	0.000515	0.024285	0.000743	0.003774

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

[illegible]

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated

[illegible]

Mitigated

[illegible]

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

7.0 Water Detail**7.1 Mitigation Measures Water**

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**7.2 Water by Land Use****Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

HS-132 Chino Water Treatment On-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**10.0 Stationary Equipment**

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

HS-132 Chino Water Piping Off-Site

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	10			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - pipeline alignment

Construction Phase - Asphalt Removal: 1 month, Trench and Install Pipe: 3 months, Backfill and Pave: 1 month

Off-road Equipment - Demo: 1 concrete saw, 2 skid steer loaders, 2 loader/backhoes

Off-road Equipment - Paving: 4 mixers, 1 paver, 1 roller, 1 loader/backhoe, 2 compactors

Off-road Equipment - Trench and Install Pipe: 2 trenchers, 2 forklifts, 1 loader/backhoe

Trips and VMT - increased worker trips

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	PhaseEndDate	1/13/2023	1/27/2023

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstructionPhase	PhaseEndDate	6/14/2023	5/26/2023
tblConstructionPhase	PhaseStartDate	6/8/2023	5/1/2023
tblDemolition	PhaseName	Demolition	Paving
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	PhaseName	Paving	Demolition
tblOffRoadEquipment	PhaseName	Demolition	Paving
tblOffRoadEquipment	PhaseName	Paving	Demolition
tblOffRoadEquipment	PhaseName	Paving	Demolition
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName	Demolition	Paving
tblOffRoadEquipment	PhaseName	Paving	Demolition
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName		Paving
tblOnRoadDust	PhaseName	Trench and Install Pipe	Paving
tblOnRoadDust	PhaseName	Demolition	Paving
tblOnRoadDust	PhaseName	Paving	Demolition
tblTripsAndVMT	PhaseName		Paving
tblTripsAndVMT	PhaseName	Demolition	Paving
tblTripsAndVMT	PhaseName	Paving	Demolition
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	10.00	40.00

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT

WorkerTripNumber

18.00

40.00

2.0 Emissions Summary**2.1 Overall Construction (Maximum Daily Emission)****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	1.8352	15.1356	20.4082	0.0335	1.6935	0.8560	2.5495	0.4339	0.7978	1.2317	0.0000	3,273.0795	3,273.0795	0.6483	0.0237	3,296.3568
Maximum	1.8352	15.1356	20.4082	0.0335	1.6935	0.8560	2.5495	0.4339	0.7978	1.2317	0.0000	3,273.0795	3,273.0795	0.6483	0.0237	3,296.3568

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	1.8352	6.4697	20.4082	0.0335	1.6935	0.8560	2.5495	0.4339	0.7978	1.2317	0.0000	3,273.0795	3,273.0795	0.6483	0.0237	3,296.3568
Maximum	1.8352	6.4697	20.4082	0.0335	1.6935	0.8560	2.5495	0.4339	0.7978	1.2317	0.0000	3,273.0795	3,273.0795	0.6483	0.0237	3,296.3568

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

[illegible]

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0000e-005	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000	0.0000	2.3000e-004

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0000e-005	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000	0.0000	2.3000e-004

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Trench and Install Pipe	Trenching	2/2/2023	4/26/2023	5	60	
2	Demolition	Demolition	1/1/2023	1/27/2023	5	20	
3	Paving	Paving	5/1/2023	5/26/2023	5	20	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Skid Steer Loaders	2	6.00	65	0.37
Demolition	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Plate Compactors	2	7.00	8	0.43
Paving	Trenchers	2	7.00	78	0.50
Paving	Forklifts	2	7.00	89	0.20
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Demolition	Pavers	1	7.00	130	0.42

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Demolition	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Paving	0	40.00	2.00		14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trench and Install Pipe										
Paving	4	40.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	7	40.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction**3.2 Trench and Install Pipe - 2023****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Trench and Install Pipe - 2023****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Total					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000

3.3 Demolition - 2023**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6813	5.9443	7.3893	0.0121		0.2814	0.2814		0.2637	0.2637		1,096.4267	1,096.4267	0.3081		1,104.1286
Total	0.6813	5.9443	7.3893	0.0121		0.2814	0.2814		0.2637	0.2637		1,096.4267	1,096.4267	0.3081		1,104.1286

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Demolition - 2023****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1500e-003	0.0732	0.0281	3.6000e-004	0.0128	4.0000e-004	0.0132	3.6900e-003	3.9000e-004	4.0700e-003		39.3160	39.3160	1.4600e-003	5.7000e-003	41.0517
Worker	0.1265	0.0852	1.3947	3.9100e-003	0.4471	2.5200e-003	0.4496	0.1186	2.3200e-003	0.1209		395.3006	395.3006	9.5900e-003	9.0100e-003	398.2253
Total	0.1287	0.1584	1.4228	4.2700e-003	0.4599	2.9200e-003	0.4628	0.1223	2.7100e-003	0.1250		434.6167	434.6167	0.0111	0.0147	439.2770

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6813	5.5046	7.3893	0.0121		0.2814	0.2814		0.2637	0.2637	0.0000	1,096.4267	1,096.4267	0.3081		1,104.1286
Total	0.6813	5.5046	7.3893	0.0121		0.2814	0.2814		0.2637	0.2637	0.0000	1,096.4267	1,096.4267	0.3081		1,104.1286

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Demolition - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1500e-003	0.0732	0.0281	3.6000e-004	0.0128	4.0000e-004	0.0132	3.6900e-003	3.9000e-004	4.0700e-003		39.3160	39.3160	1.4600e-003	5.7000e-003	41.0517
Worker	0.1265	0.0852	1.3947	3.9100e-003	0.4471	2.5200e-003	0.4496	0.1186	2.3200e-003	0.1209		395.3006	395.3006	9.5900e-003	9.0100e-003	398.2253
Total	0.1287	0.1584	1.4228	4.2700e-003	0.4599	2.9200e-003	0.4628	0.1223	2.7100e-003	0.1250		434.6167	434.6167	0.0111	0.0147	439.2770

3.4 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5800	14.8920	17.5907	0.0254		0.8505	0.8505		0.7928	0.7928		2,443.162 2	2,443.162 2	0.6277		2,458.854 4
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.5800	14.8920	17.5907	0.0254		0.8505	0.8505		0.7928	0.7928		2,443.162 2	2,443.162 2	0.6277		2,458.854 4

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1500e-003	0.0732	0.0281	3.6000e-004	0.0219	4.0000e-004	0.0223	5.9300e-003	3.9000e-004	6.3100e-003		39.3160	39.3160	1.4600e-003	5.7000e-003	41.0517
Worker	0.2530	0.1704	2.7894	7.8200e-003	1.6716	5.0400e-003	1.6767	0.4280	4.6400e-003	0.4326		790.6012	790.6012	0.0192	0.0180	796.4507
Total	0.2552	0.2436	2.8175	8.1800e-003	1.6935	5.4400e-003	1.6990	0.4339	5.0300e-003	0.4389		829.9173	829.9173	0.0206	0.0237	837.5024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5800	6.2260	17.5907	0.0254		0.8505	0.8505		0.7928	0.7928	0.0000	2,443.162 2	2,443.162 2	0.6277		2,458.854 4
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.5800	6.2260	17.5907	0.0254		0.8505	0.8505		0.7928	0.7928	0.0000	2,443.162 2	2,443.162 2	0.6277		2,458.854 4

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Paving - 2023****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.1500e-003	0.0732	0.0281	3.6000e-004	0.0219	4.0000e-004	0.0223	5.9300e-003	3.9000e-004	6.3100e-003		39.3160	39.3160	1.4600e-003	5.7000e-003	41.0517
Worker	0.2530	0.1704	2.7894	7.8200e-003	1.6716	5.0400e-003	1.6767	0.4280	4.6400e-003	0.4326		790.6012	790.6012	0.0192	0.0180	796.4507
Total	0.2552	0.2436	2.8175	8.1800e-003	1.6935	5.4400e-003	1.6990	0.4339	5.0300e-003	0.4389		829.9173	829.9173	0.0206	0.0237	837.5024

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.544109	0.060768	0.184625	0.129879	0.023845	0.006339	0.011719	0.008584	0.000815	0.000515	0.024285	0.000743	0.003774

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.0 Energy Detail**

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

7.0 Water Detail**7.1 Mitigation Measures Water**

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**8.0 Waste Detail**

8.1 Mitigation Measures Waste**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

HS-132 Chino Water Piping Off-Site

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	10			Operational Year	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - pipeline alignment

Construction Phase - Asphalt Removal: 1 month, Trench and Install Pipe: 3 months, Backfill and Pave: 1 month

Off-road Equipment - Demo: 1 concrete saw, 2 skid steer loaders, 2 loader/backhoes

Off-road Equipment - Paving: 4 mixers, 1 paver, 1 roller, 1 loader/backhoe, 2 compactors

Off-road Equipment - Trench and Install Pipe: 2 trenchers, 2 forklifts, 1 loader/backhoe

Trips and VMT - increased worker trips

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	PhaseEndDate	1/13/2023	1/27/2023

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstructionPhase	PhaseEndDate	6/14/2023	5/26/2023
tblConstructionPhase	PhaseStartDate	6/8/2023	5/1/2023
tblDemolition	PhaseName	Demolition	Paving
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	PhaseName	Paving	Demolition
tblOffRoadEquipment	PhaseName	Demolition	Paving
tblOffRoadEquipment	PhaseName	Paving	Demolition
tblOffRoadEquipment	PhaseName	Paving	Demolition
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName	Demolition	Paving
tblOffRoadEquipment	PhaseName	Paving	Demolition
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName		Paving
tblOnRoadDust	PhaseName	Trench and Install Pipe	Paving
tblOnRoadDust	PhaseName	Demolition	Paving
tblOnRoadDust	PhaseName	Paving	Demolition
tblTripsAndVMT	PhaseName		Paving
tblTripsAndVMT	PhaseName	Demolition	Paving
tblTripsAndVMT	PhaseName	Paving	Demolition
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	10.00	40.00

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblTripsAndVMT

WorkerTripNumber

18.00

40.00

2.0 Emissions Summary**2.1 Overall Construction****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0264	0.2128	0.2895	4.9000e-004	0.0211	0.0114	0.0325	5.4600e-003	0.0106	0.0161	0.0000	43.1268	43.1268	8.7800e-003	3.7000e-004	43.4562
Maximum	0.0264	0.2128	0.2895	4.9000e-004	0.0211	0.0114	0.0325	5.4600e-003	0.0106	0.0161	0.0000	43.1268	43.1268	8.7800e-003	3.7000e-004	43.4562

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0264	0.1217	0.2895	4.9000e-004	0.0211	0.0114	0.0325	5.4600e-003	0.0106	0.0161	0.0000	43.1268	43.1268	8.7800e-003	3.7000e-004	43.4561
Maximum	0.0264	0.1217	0.2895	4.9000e-004	0.0211	0.0114	0.0325	5.4600e-003	0.0106	0.0161	0.0000	43.1268	43.1268	8.7800e-003	3.7000e-004	43.4561

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	42.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2023	3-31-2023	0.0668	0.0626
2	4-1-2023	6-30-2023	0.1576	0.0771
		Highest	0.1576	0.0771

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Trench and Install Pipe	Trenching	2/2/2023	4/26/2023	5	60	
2	Demolition	Demolition	1/1/2023	1/27/2023	5	20	
3	Paving	Paving	5/1/2023	5/26/2023	5	20	

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Skid Steer Loaders	2	6.00	65	0.37
Demolition	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Plate Compactors	2	7.00	8	0.43
Paving	Trenchers	2	7.00	78	0.50
Paving	Forklifts	2	7.00	89	0.20
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Demolition	Pavers	1	7.00	130	0.42
Demolition	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Paving	0	40.00	2.00		14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trench and Install Pipe										
Paving	4	40.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	7	40.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Trench and Install Pipe - 2023

Unmitigated Construction Off-Site

[illegible]

HS-132 Chino Water Piping Off-Site - South Coast Air Basin, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Trench and Install Pipe - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

3.3 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.8100e-003	0.0594	0.0739	1.2000e-004		2.8100e-003	2.8100e-003		2.6400e-003	2.6400e-003	0.0000	9.9466	9.9466	2.7900e-003	0.0000	10.0165
Total	6.8100e-003	0.0594	0.0739	1.2000e-004		2.8100e-003	2.8100e-003		2.6400e-003	2.6400e-003	0.0000	9.9466	9.9466	2.7900e-003	0.0000	10.0165

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Demolition - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	7.7000e-004	2.9000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.3569	0.3569	1.0000e-005	5.0000e-005	0.3727
Worker	1.2400e-003	9.6000e-004	0.0130	4.0000e-005	4.3900e-003	3.0000e-005	4.4100e-003	1.1700e-003	2.0000e-005	1.1900e-003	0.0000	3.4341	3.4341	9.0000e-005	9.0000e-005	3.4627
Total	1.2600e-003	1.7300e-003	0.0133	4.0000e-005	4.5200e-003	3.0000e-005	4.5400e-003	1.2100e-003	2.0000e-005	1.2300e-003	0.0000	3.7910	3.7910	1.0000e-004	1.4000e-004	3.8353

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.8100e-003	0.0551	0.0739	1.2000e-004		2.8100e-003	2.8100e-003		2.6400e-003	2.6400e-003	0.0000	9.9466	9.9466	2.7900e-003	0.0000	10.0165
Total	6.8100e-003	0.0551	0.0739	1.2000e-004		2.8100e-003	2.8100e-003		2.6400e-003	2.6400e-003	0.0000	9.9466	9.9466	2.7900e-003	0.0000	10.0165

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Demolition - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	7.7000e-004	2.9000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.3569	0.3569	1.0000e-005	5.0000e-005	0.3727
Worker	1.2400e-003	9.6000e-004	0.0130	4.0000e-005	4.3900e-003	3.0000e-005	4.4100e-003	1.1700e-003	2.0000e-005	1.1900e-003	0.0000	3.4341	3.4341	9.0000e-005	9.0000e-005	3.4627
Total	1.2600e-003	1.7300e-003	0.0133	4.0000e-005	4.5200e-003	3.0000e-005	4.5400e-003	1.2100e-003	2.0000e-005	1.2300e-003	0.0000	3.7910	3.7910	1.0000e-004	1.4000e-004	3.8353

3.4 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0158	0.1489	0.1759	2.5000e-004		8.5100e-003	8.5100e-003		7.9300e-003	7.9300e-003	0.0000	22.1640	22.1640	5.6900e-003	0.0000	22.3064
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0158	0.1489	0.1759	2.5000e-004		8.5100e-003	8.5100e-003		7.9300e-003	7.9300e-003	0.0000	22.1640	22.1640	5.6900e-003	0.0000	22.3064

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	7.7000e-004	2.9000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.3569	0.3569	1.0000e-005	5.0000e-005	0.3727
Worker	2.4800e-003	1.9100e-003	0.0261	7.0000e-005	0.0164	5.0000e-005	0.0164	4.2000e-003	5.0000e-005	4.2500e-003	0.0000	6.8683	6.8683	1.8000e-004	1.8000e-004	6.9253
Total	2.5000e-003	2.6800e-003	0.0264	7.0000e-005	0.0166	5.0000e-005	0.0167	4.2600e-003	5.0000e-005	4.3100e-003	0.0000	7.2252	7.2252	1.9000e-004	2.3000e-004	7.2980

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0158	0.0623	0.1759	2.5000e-004		8.5100e-003	8.5100e-003		7.9300e-003	7.9300e-003	0.0000	22.1640	22.1640	5.6900e-003	0.0000	22.3063
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0158	0.0623	0.1759	2.5000e-004		8.5100e-003	8.5100e-003		7.9300e-003	7.9300e-003	0.0000	22.1640	22.1640	5.6900e-003	0.0000	22.3063

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Paving - 2023****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-005	7.7000e-004	2.9000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.3569	0.3569	1.0000e-005	5.0000e-005	0.3727
Worker	2.4800e-003	1.9100e-003	0.0261	7.0000e-005	0.0164	5.0000e-005	0.0164	4.2000e-003	5.0000e-005	4.2500e-003	0.0000	6.8683	6.8683	1.8000e-004	1.8000e-004	6.9253
Total	2.5000e-003	2.6800e-003	0.0264	7.0000e-005	0.0166	5.0000e-005	0.0167	4.2600e-003	5.0000e-005	4.3100e-003	0.0000	7.2252	7.2252	1.9000e-004	2.3000e-004	7.2980

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.544109	0.060768	0.184625	0.129879	0.023845	0.006339	0.011719	0.008584	0.000815	0.000515	0.024285	0.000743	0.003774

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

[illegible]

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated

[illegible]

Mitigated

[illegible]

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

7.0 Water Detail**7.1 Mitigation Measures Water**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**7.2 Water by Land Use****Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation
