APPENDIX 1

CEQA/NEPA AIR QUALITY and GHG IMPACT ANALYSES

MS-277
MISSION SPRINGS WATER DISTRICT
AREAS H AND I SEWER IMPROVEMENTS PROJECT

DESERT HOT SPRINGS, CALIFORNIA

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ATMOSPHERIC SETTING

The proposed project site is in the Coachella Valley Planning Area (CVPA) of the Salton Sea Air Basin (SSAB). The SSAB was part of the Southeast Desert Air Basin (SEDAB) until May, 1996 when the SSAB was created. The project site is in the hottest and driest parts of California. The climate is characterized by hot, dry summers and relatively mild winters. Rainfall is scant in all seasons, so differences between the seasons are characterized principally by differences in temperature. Average annual precipitation in the air basin ranges from 2 to 6 inches per year.

Seasonal temperature differences in the basin are large, confirming the absence of marine influences due to the blocking action of the mountains to the west. Average monthly maximum temperatures in the project vicinity range from 108ºF in July to 57ºF in January. The average monthly minima range from about 40ºF in January to about 80ºF in July.

During much of the year, California is covered by a moderately intense high-pressure system. In winter, the Pacific High retreats to the south, so that frontal systems from the North Pacific can move onto the California coast. On average, 20 to 30 frontal systems pass through California each winter. The first front usually arrives around the middle of October, and the average period of frontal activity is five to six months. Most of these systems are relatively weak by the time they reach the SSAB, however, and they become more diffuse as they move southeastward.

Spring is a transition season between the winter period of frontal activity and the generally dry summer; some precipitation continues during the early part of the season.

During the summer, the Pacific High is well developed to the west of California, and a thermal trough overlies the SSAB. The intensity and orientation of the trough varies from day to day. Although the rugged mountainous country prevents a normal circulation, the influence of this trough does permit some inter-basin exchange with coastal locations through the passes. Summer is also the season with occasional moisture influx from the Gulfs of Mexico or California which causes isolated thundershowers and flash flooding (the summer "monsoon").

Fall is the transition period from the hot summer back to the season of frontal activity, but it is still very dry, and temperatures are still mild.

Desert regions tend to be windy, since little friction is generated between the moving air and the low, sparse vegetation cover. In addition, the rapid daytime heating of the lower air over the desert leads to strong convection activity. This exchange of lower and upper air accelerates surface winds during the warm part of the day when convection is at a maximum. During winter, however, the rapid cooling in the surface layers at night retards this exchange of momentum, and the result is often a high frequency of nearly calm winds, especially at night.

During all seasons, the prevailing wind direction is predominantly from the west to east. Banning Pass is an area where air is squeezed through a narrow opening with accelerated airflow that supports wind farms. The strong winds also occasionally lead to blowing sand that sandblasts painted surfaces and makes driving unsafe. As the west to east winds fan out into the Coachella

Valley, they slow down quickly. By the time the onshore flow reaches the project site, it has again returned to its normal speed.

The mixing depth, i.e., the height available for dispersion of airborne pollutants emitted near the surface, is limited by the occurrence of temperature inversions. A temperature inversion is a layer of air in which the temperature increases with height. The temperature inversion conditions of the SSAB are quite different from those of the coastal regions of California. In coastal environments, warm, subsiding air aloft creates a lid above the shallow marine layer at the surface. The base of this subsidence inversion is perhaps 1,500 feet above the surface in coastal portions of the Los Angeles Basin. When a subsidence inversion exists over the desert, the height of the inversion base lies some 6,000 to 8,000 feet above the surface.

Nighttime surface inversions in the desert are common, especially during the cooler months. Mixing heights are predominantly 1,000 feet or less. These inversions are caused by nighttime radiational cooling of the land surface in contact with overlying air that cools more slowly. They tend to be destroyed early in the day in summer, due to intense solar radiation and heating of the land surface. In winter, however, these radiation inversions tend to persist until mid-morning, limiting mixing in the lower atmosphere to heights of 200 to 2,000 feet above the surface. Nuisance air quality problems in the Coachella Valley, such as dust near mining operations or odors near feedlots or wastewater plants, occur mainly late at night or early in the morning when such radiation inversions are strongest.

AIR QUALITY SETTING

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 (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[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 Flourescence; 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 …

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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 $\mu g/m^3$ 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 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ 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 $\mu g/m^3$ 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 NOx, 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 ($NO_{2)}$ that is more stringent than the corresponding federal standard, and strengthened the state one-hour NO_2 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 $\mu g/m^3$ to 12 $\mu g/m^3$ 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 (NO_2) 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 (SO_2) was also recently revised. However, with minimal combustion of coal and mandatory use of low sulfur fuels in California, SO_2 is typically not a problem pollutant.

BASELINE AIR QUALITY

In the CVPA portion of the SSAB, air quality planning, enforcement and monitoring responsibilities are carried out by the South Coast Air Quality Management District (SCAQMD). Existing and probable future levels of air quality around the project area can be best inferred from ambient air quality measurements conducted by the SCAQMD at the Indio and Palm Springs air quality monitoring stations. In Indio, ozone and 10 microns or less in diameter, (respirable) particulates called PM-10, are monitored. These two pollutants are the main air pollution problems in the CVPA portion of the SSAB. Vehicular pollution levels such as carbon monoxide (CO) and nitrogen dioxide (NO_2) are monitored at Palm Springs. Levels of CO and NO_2 at the project site are likely lower than those monitored in Palm Springs. However, because CO and NO_2 levels in Palm Springs are well within acceptable limits, their use to characterize the project site introduces no complications. The last four years of published data from Indio and Palm Springs stations are summarized in Table 3. The following conclusions can be drawn from this data:

Photochemical smog (ozone) levels periodically exceed standards. The 1-hour state standard was violated less than one percent of all days in the last four years near Indio. The 8-hour state ozone standard has been exceeded an average of 11 percent of all days per year during the same time. The Federal eight-hour ozone standard is violated on around eight percent of all days per year. Ozone levels 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.

Carbon monoxide (CO) measurements near the project site have declined throughout the last decade, and 8-hour CO levels were at their lowest in 2017. Federal and state CO standards have not been exceeded in the last 10+ years. Despite continued basin-wide growth, maximum CO levels at the closest air monitoring station are less than 25 percent of their most stringent standards because of continued vehicular improvements.

PM-10 levels as measured at Indio, have exceeded the state 24-hour standard on 12 percent of all measurement days in the last four years, but the national 24-hour particulate standard has not been exceeded during the same period. The state standard is considerably more restrictive.

A fraction of PM-10 is comprised of ultra-small diameter particulates capable of being inhaled into deep lung tissue (PM-2.5). There have no violations of the 24-hour federal PM-2.5 standard in recent years. With dustier conditions along the I-10 Corridor, there may be occasional violations of PM-2.5 standards at the project site.

Table 3
Air Quality Monitoring Summary
(Days Standards Were Exceeded and Maximum Observed Concentrations 2016-2019)

Pollutant/Standard	2016	2017	2018	2019
Ozone[a]				
1-Hour > 0.09 ppm (S)	2	8	4	4
8-Hour > 0.07 ppm (S)	27	44	49	43
8- Hour > 0.075 ppm (F)	12	27	28	43
Max. 1-Hour Conc. (ppm)	0.099	0.107	0.106	0.103
Max. 8-Hour Conc. (ppm)	0.089	0.093	0.091	0.087
Carbon Monoxide[b]				
1-hour > 20. ppm (S)	0	0	0	0
8- Hour > 9. ppm (S,F)	0	0	0	0
Max 8-hour Conc. (ppm)	1.5	0.5	1.1	0.7
Nitrogen Dioxide[b]				
1-Hour > 0.18 ppm (S)	0	0	0	0
Max 1-hour Conc. (ppm)	0.04	0.04	0.04	0.04
Respirable Particulates (PM-10)[a]				
24-hour > 50 $\mu g/m^3$ (S)	56/313	43/363	43/353	27/361
24-hour > 150 $\mu g/m^3$ (F)	0/313	0/363	0/363	0/361
Max. 24-Hr. Conc. ($\mu g/m^3$)	137.	128.	146.	41.
Ultra-Fine Particulates (PM-2.5)[a]				
24-Hour > 35 $\mu g/m^3$ (F)	0/115	0/110	0/122	0/118
Max. 24-Hr. Conc. ($\mu g/m^3$)	25.8	18.8	28.7	15.0

(S) = state standard, (F) = federal standard
[a]Data from Indio monitoring station.
[b]Data from Palm Springs air monitoring station.

Source: SCAQMD Air Monitoring Summaries.

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 NOx) and for carbon monoxide (CO) and for particulate matter are shown in Table 4. Substantial reductions in emissions of ROG, NOx 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]	2020[b]	2025[b]	2030[b]
NOx	357	289	266	257
VOC	400	393	393	391
PM-10	161	165	170	172
PM-2.5	67	68	70	71

[a]2015 Base Year.
[b]With 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 NOx, 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 $\mu g/m^3$)	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 NOx 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 NOx 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 infrastructure 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 development 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 would:

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

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

c) Expose sensitive receptors to substantial pollutant concentrations?

d) Result in other emissions (such as those leading to odors) adversely 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 amount 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 in the Coachella Valley

portion of the SCAQMD with daily emissions that exceed any of the following emission thresholds are to be considered significant under CEQA guidelines.

Table 5
Daily Emissions Thresholds

Pollutant	Construction[1]	Operations[2]
ROG	75	75
NOx	100	100
CO	550	550
PM-10	150	150
PM-2.5	55	55
SOx	150	150
Lead	3	3

[1] Construction thresholds apply to both the SCAB and the Coachella Valley (Salton Sea and Mojave Desert Air Basins.
[2] For Coachella Valley the mass daily emissions thresholds for operation are the same as the construction daily emissions thresholds.
Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

SENSITIVE USES

The project will occur within various roadways generally located south of Desert View Avenue, west of Mountain View Road, and east of Miracle Hill Road. The southern boundary of the project site is about a half mile south of Hacienda Avenue.

The gross project area encompasses about 220 acres within the City of Desert Hot Springs, though the area of disturbance (trenches for installing the sewer line) is much less. The area is primarily residential with a few spa hotels. Most homes have at least a 50-foot setback to the roadway centerline.

CONSTRUCTION ACTIVITY IMPACTS

CalEEMod was developed by the SCAQMD to provide a model by which to calculate both construction emissions and operational 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.

It is assumed that installation of 30,000 lineal feet of sewer line will occur over 160 days of construction over a period of about 8 months. The final activity associated with the sewer installation is repaving of roads disturbed by the construction. This is anticipated to occur over a 30 day period. Construction is assumed to begin in the summer of 2021.

Estimated construction emissions were modeled using CalEEMod2016.3.2 to identify maximum daily emissions for each pollutant during project construction. Construction was modeled using default construction equipment and schedule for a project of this size using input from the project engineer as shown in Table 6.

Table 6
Pipeline Install
30,000 LF

Demo Roadway and Trench **2 months**	1 Loader/Backhoe
	2 Trencher
	1 Concrete Saw
Install Pipe **6 months**	2 Forklifts
	1 Welder
	1 Loader/Backhoe
Backfill and Pave **1 month**	2 Concrete Mixers
	1 Paver
	1 Loader/Backhoes
	1 Roller
	1 Mixer

Utilizing this indicated equipment fleet and durations shown in Table 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	**ROG**	**NOx**	**CO**	**SO_2**	**PM-10**	**PM-2.5**
2021 Unmitigated	1.2	10.2	10.2	0.0	5.5	3.2
2021 Mitigated	1.2	10.2	10.2	0.0	3.0	1.8
2022 Unmitigated	0.9	7.6	10.1	0.0	0.6	0.4
2022 Mitigated	0.9	7.6	10.1	0.0	0.6	0.4
SCAQMD Thresholds	75	100	550	150	150	55

Peak daily construction activity emissions are estimated to be below SCAQMD CEQA thresholds without the need for added mitigation. Mitigated conditions reflect dust suppression associated with twice daily watering during demo and grading.

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 (NOx), 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, the closest receptor 25-meter distance was used.

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. For this site, the most stringent thresholds for a one-acre site were utilized.

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

Table 8
LST and Project Emissions (pounds/day)

LST Coachella Valley	CO	NOx	PM-10	PM-2.5
LST Threshold	878	132	4	3
Max On-Site Emissions				
Unmitigated	10	10	5	3
Mitigated	10	10	3	2

CalEEMod Output in Appendix

LSTs were compared to the maximum daily construction activities. As seen in Table 8, LST impacts are less-than-significant with at least twice daily watering during demo and grading activities.

NEPA CONFORMITY

Annualized construction activity emissions were calculated by assuming all construction activities would occur during the same calendar year to represent a worst-case condition. The calculated 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.

If the project-related emissions from construction and operations are less than specified "*de minimis*" levels, no further SIP consistency demonstration is required. There are no operational emissions associated with this project. The SCAB Coachella Valley is designated as a "extreme" non-attainment area for the federal 8-hour ozone standard. The basin is a non-attainment area for PM-2.5. 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	-	100 tons/year
PM-10*	-	70 tons/year
SO_2	-	100 tons/year

*Air quality in Coachella Valley now meets the national PM10 standards. A request for redesignation to attainment has been submitted to EPA(2020)[1]

Annual construction emissions were calculated with the CalEEMod computer model. Maximum annual project-related air pollution emissions relative to federal standard attainment designations and appropriate *de minimis* thresholds are shown in Table 8.

Table 8
Total Annual Construction Emissions
(tons/year)

Activity	ROG	NOx	CO	SO_2	PM-10	PM-2.5	CO_2
Maximal Construction Emissions							
2021	0.05	0.38	0.42	0.00	0.14	0.08	55.55
2022	0.03	0.22	0.29	0.00	0.02	0.01	40.48
Total	0.08	0.60	0.71	0.00	0.16	0.09	96.03
NEPA Threshold	10	10	100	100	70	100	-

Maximum annual emissions are much less than their associated *de minimis* thresholds. A formal SIP consistency analysis is not required.

OPERATIONAL IMPACTS

A gravity sewer project does not have any associated operational impacts.

[1] https://ww3.arb.ca.gov/regact/2021/sad20/appc.pdf

ODOR IMPACTS

Project operations (pumping and conveyance) are essentially a closed system with negligible odor potential. In addition, the project likely decrease odors as it will abate over 458 on-site septic systems.

CONSTRUCTION EMISSIONS MINIMIZATION

Construction activities are not anticipated to cause dust emissions to exceed SCAQMD CEQA thresholds. Nevertheless, emissions minimization through enhanced dust control measures is recommended for use because of the non-attainment status of the air basin and proximity of residential uses. 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 NOx) 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 statues 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 enough 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 all land use projects where the SCAQMD is the lead agency of 3,000 Metric Tons (MT) CO_2 equivalent/year.

PROJECT RELATED GHG EMISSIONS GENERATION

Construction Activity GHG Emissions

The project is assumed to require less than one year for construction but will overlap two calendar years with construction commencing in the summer of 2021. During project construction, the CalEEMod2016.3.2 computer model predicts that the construction activities will generate the annual CO_2e emissions identified in Table 9.

Table 9
Construction Emissions (Metric Tons CO_2e)

	CO_2e
Year 2021	56.6
Year 2022	40.5
Total	97.1
Amortized	**3.2**

CalEEMod Output provided in appendix

SCAQMD GHG emissions policy from construction activities is to amortize emissions over a 30-year lifetime. Both the total and the amortized level are provided. GHG impacts from construction are considered less-than-significant.

Consistency with GHG Plans, Programs and Policies

The City of Desert Hot Springs adopted an Initial Study, Negative Declaration for a Climate Action Plan in 2013. The plan identifies 80 specific actions to reduce GHG emissions. However, the proposed project is GHG neutral and will not increase electrical consumption or require additional personnel or maintenance. The project could be considered GHG positive because it will eliminate the need to clean and maintain individual septic systems for 676 parcels (458 on-site septic systems).

Since the project results in GHG emissions below the recommended SCAQMD 3,000 metric ton threshold for any land use project, the project would not conflict with any applicable plan, policy, or regulation to reduce GHG emissions.

CALEEMOD2016.3.2 COMPUTER MODEL OUTPUT

- **DAILY EMISISONS**
- **ANNUAL EMISSIONS**

MSWD Areas H and I Sewer

Riverside-Salton Sea County, 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	1.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 30,000 linear feet

Construction Phase - Demo and Trench: 2 months, Pipeline Install: 6 months, Backfill and Pave: 1 month

Off-road Equipment - Trenching: 1 loader/backhoe, 2 trenchers, 1 concrete saw

Off-road Equipment - Pipeline Install: 2 forklifts, 1 loader/backhoe, 1 welder

Off-road Equipment - Paving: 2 mixers, 1 paver, 1 paving, 1 pump, 1 loader/backhoe, 1 roller

Trips and VMT - 30 worker trips per day

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	129.00
tblConstructionPhase	NumDays	4.00	44.00
tblConstructionPhase	NumDays	10.00	21.00
tblConstructionPhase	PhaseEndDate	5/12/2022	3/30/2022
tblConstructionPhase	PhaseEndDate	8/5/2021	9/30/2021
tblConstructionPhase	PhaseEndDate	5/26/2022	4/29/2022
tblConstructionPhase	PhaseStartDate	8/6/2021	10/1/2021
tblConstructionPhase	PhaseStartDate	5/13/2022	4/1/2022
tblGrading	AcresOfGrading	16.50	1.50
tblLandUse	LotAcreage	0.00	1.50
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	PhaseName		Grading and Trenching
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName		Grading and Trenching
tblTripsAndVMT	WorkerTripNumber	0.00	30.00
tblTripsAndVMT	WorkerTripNumber	8.00	30.00
tblTripsAndVMT	WorkerTripNumber	13.00	30.00

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					
2021	1.2422	10.1768	10.1754	0.0158	4.8037	0.6777	5.4814	2.5532	0.6338	3.1870	0.0000	1,523.4507	1,523.4507	0.3028	0.0000	1,531.0198
2022	0.9268	7.5953	10.0814	0.0173	0.2510	0.3917	0.6427	0.0666	0.3714	0.4380	0.0000	1,639.9735	1,639.9735	0.3167	0.0000	1,647.8915
Maximum	**1.2422**	**10.1768**	**10.1754**	**0.0173**	**4.8037**	**0.6777**	**5.4814**	**2.5532**	**0.6338**	**3.1870**	**0.0000**	**1,639.9735**	**1,639.9735**	**0.3167**	**0.0000**	**1,647.8915**

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					
2021	1.2422	4.7622	10.1754	0.0158	2.2997	0.6777	2.9774	1.1855	0.6338	1.8194	0.0000	1,523.4507	1,523.4507	0.3028	0.0000	1,531.0198
2022	0.9268	5.3686	10.0814	0.0173	0.2510	0.3917	0.6427	0.0666	0.3714	0.4380	0.0000	1,639.9735	1,639.9735	0.3167	0.0000	1,647.8915
Maximum	**1.2422**	**5.3686**	**10.1754**	**0.0173**	**2.2997**	**0.6777**	**2.9774**	**1.1855**	**0.6338**	**1.8194**	**0.0000**	**1,639.9735**	**1,639.9735**	**0.3167**	**0.0000**	**1,647.8915**

	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	N20	CO2e
Percent Reduction	**0.00**	**43.00**	**0.00**	**0.00**	**49.54**	**0.00**	**40.89**	**52.20**	**0.00**	**37.73**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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
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
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**

	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	N20	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	Grading and Trenching	Grading	8/1/2021	9/30/2021	5	44	
2	Pipeline Install	Building Construction	10/1/2021	3/30/2022	5	129	
3	Paving	Paving	4/1/2022	4/29/2022	5	21	

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	Cement and Mortar Mixers	2	6.00	9	0.56
Grading and Trenching	Trenchers	2	7.00	78	0.50
Pipeline Install	Forklifts	2	6.00	89	0.20
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Pumps	1	6.00	84	0.74
Grading and Trenching	Concrete/Industrial Saws	1	6.00	81	0.73
Pipeline Install	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading and Trenching	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Pipeline Install	Welders	1	8.00	46	0.45

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
Pipeline Install	7	30.00	0.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT
Grading and Trenching	3	30.00	0.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	30.00	0.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading and Trenching - 2021

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					4.5527	0.0000	4.5527	2.4866	0.0000	2.4866			0.0000			0.0000
Off-Road	1.1252	10.1141	9.3171	0.0133		0.6761	0.6761		0.6324	0.6324		1,282.7610	1,282.7610	0.2969		1,290.1841
Total	**1.1252**	**10.1141**	**9.3171**	**0.0133**	**4.5527**	**0.6761**	**5.2289**	**2.4866**	**0.6324**	**3.1190**		**1,282.7610**	**1,282.7610**	**0.2969**		**1,290.1841**

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
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
Worker	0.1171	0.0627	0.8583	2.4200e-003	0.2510	1.5300e-003	0.2525	0.0666	1.4000e-003	0.0680		240.6897	240.6897	5.8400e-003		240.8358
Total	**0.1171**	**0.0627**	**0.8583**	**2.4200e-003**	**0.2510**	**1.5300e-003**	**0.2525**	**0.0666**	**1.4000e-003**	**0.0680**		**240.6897**	**240.6897**	**5.8400e-003**		**240.8358**

3.2 Grading and Trenching - 2021

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					2.0487	0.0000	2.0487	1.1190	0.0000	1.1190			0.0000			0.0000
Off-Road	1.1252	1.6588	9.3171	0.0133		0.6761	0.6761		0.6324	0.6324	0.0000	1,282.7610	1,282.7610	0.2969		1,290.1841
Total	**1.1252**	**1.6588**	**9.3171**	**0.0133**	**2.0487**	**0.6761**	**2.7249**	**1.1190**	**0.6324**	**1.7514**	**0.0000**	**1,282.7610**	**1,282.7610**	**0.2969**		**1,290.1841**

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
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
Worker	0.1171	0.0627	0.8583	2.4200e-003	0.2510	1.5300e-003	0.2525	0.0666	1.4000e-003	0.0680		240.6897	240.6897	5.8400e-003		240.8358
Total	**0.1171**	**0.0627**	**0.8583**	**2.4200e-003**	**0.2510**	**1.5300e-003**	**0.2525**	**0.0666**	**1.4000e-003**	**0.0680**		**240.6897**	**240.6897**	**5.8400e-003**		**240.8358**

3.3 Pipeline Install - 2021

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	0.6371	4.6994	5.1658	7.1800e-003		0.2835	0.2835		0.2667	0.2667		655.1990	655.1990	0.1718		659.4945
Total	**0.6371**	**4.6994**	**5.1658**	**7.1800e-003**		**0.2835**	**0.2835**		**0.2667**	**0.2667**		**655.1990**	**655.1990**	**0.1718**		**659.4945**

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
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
Worker	0.1171	0.0627	0.8583	2.4200e-003	0.2510	1.5300e-003	0.2525	0.0666	1.4000e-003	0.0680		240.6897	240.6897	5.8400e-003		240.8358
Total	**0.1171**	**0.0627**	**0.8583**	**2.4200e-003**	**0.2510**	**1.5300e-003**	**0.2525**	**0.0666**	**1.4000e-003**	**0.0680**		**240.6897**	**240.6897**	**5.8400e-003**		**240.8358**

3.3 Pipeline Install - 2021

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	0.6371	4.6994	5.1658	7.1800e-003		0.2835	0.2835		0.2667	0.2667	0.0000	655.1990	655.1990	0.1718		659.4945
Total	**0.6371**	**4.6994**	**5.1658**	**7.1800e-003**		**0.2835**	**0.2835**		**0.2667**	**0.2667**	**0.0000**	**655.1990**	**655.1990**	**0.1718**		**659.4945**

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
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
Worker	0.1171	0.0627	0.8583	2.4200e-003	0.2510	1.5300e-003	0.2525	0.0666	1.4000e-003	0.0680		240.6897	240.6897	5.8400e-003		240.8358
Total	**0.1171**	**0.0627**	**0.8583**	**2.4200e-003**	**0.2510**	**1.5300e-003**	**0.2525**	**0.0666**	**1.4000e-003**	**0.0680**		**240.6897**	**240.6897**	**5.8400e-003**		**240.8358**

3.3 Pipeline Install - 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	0.5707	4.3020	5.1049	7.1800e-003		0.2363	0.2363		0.2225	0.2225		655.4532	655.4532	0.1697		659.6959
Total	**0.5707**	**4.3020**	**5.1049**	**7.1800e-003**		**0.2363**	**0.2363**		**0.2225**	**0.2225**		**655.4532**	**655.4532**	**0.1697**		**659.6959**

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
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
Worker	0.1093	0.0564	0.7911	2.3300e-003	0.2510	1.4900e-003	0.2525	0.0666	1.3700e-003	0.0679		231.8998	231.8998	5.2500e-003		232.0310
Total	**0.1093**	**0.0564**	**0.7911**	**2.3300e-003**	**0.2510**	**1.4900e-003**	**0.2525**	**0.0666**	**1.3700e-003**	**0.0679**		**231.8998**	**231.8998**	**5.2500e-003**		**232.0310**

3.3 Pipeline Install - 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	0.5707	4.3020	5.1049	7.1800e-003		0.2363	0.2363		0.2225	0.2225	0.0000	655.4532	655.4532	0.1697		659.6959
Total	**0.5707**	**4.3020**	**5.1049**	**7.1800e-003**		**0.2363**	**0.2363**		**0.2225**	**0.2225**	**0.0000**	**655.4532**	**655.4532**	**0.1697**		**659.6959**

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
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
Worker	0.1093	0.0564	0.7911	2.3300e-003	0.2510	1.4900e-003	0.2525	0.0666	1.3700e-003	0.0679		231.8998	231.8998	5.2500e-003		232.0310
Total	**0.1093**	**0.0564**	**0.7911**	**2.3300e-003**	**0.2510**	**1.4900e-003**	**0.2525**	**0.0666**	**1.3700e-003**	**0.0679**		**231.8998**	**231.8998**	**5.2500e-003**		**232.0310**

3.4 Paving - 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	0.8175	7.5389	9.2903	0.0149		0.3902	0.3902		0.3700	0.3700		1,408.0736	1,408.0736	0.3115		1,415.8606
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8175**	**7.5389**	**9.2903**	**0.0149**		**0.3902**	**0.3902**		**0.3700**	**0.3700**		**1,408.0736**	**1,408.0736**	**0.3115**		**1,415.8606**

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
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
Worker	0.1093	0.0564	0.7911	2.3300e-003	0.2510	1.4900e-003	0.2525	0.0666	1.3700e-003	0.0679		231.8998	231.8998	5.2500e-003		232.0310
Total	**0.1093**	**0.0564**	**0.7911**	**2.3300e-003**	**0.2510**	**1.4900e-003**	**0.2525**	**0.0666**	**1.3700e-003**	**0.0679**		**231.8998**	**231.8998**	**5.2500e-003**		**232.0310**

3.4 Paving - 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	0.8175	5.3122	9.2903	0.0149		0.3902	0.3902		0.3700	0.3700	0.0000	1,408.0736	1,408.0736	0.3115		1,415.8606
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8175**	**5.3122**	**9.2903**	**0.0149**		**0.3902**	**0.3902**		**0.3700**	**0.3700**	**0.0000**	**1,408.0736**	**1,408.0736**	**0.3115**		**1,415.8606**

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
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
Worker	0.1093	0.0564	0.7911	2.3300e-003	0.2510	1.4900e-003	0.2525	0.0666	1.3700e-003	0.0679		231.8998	231.8998	5.2500e-003		232.0310
Total	**0.1093**	**0.0564**	**0.7911**	**2.3300e-003**	**0.2510**	**1.4900e-003**	**0.2525**	**0.0666**	**1.3700e-003**	**0.0679**		**231.8998**	**231.8998**	**5.2500e-003**		**232.0310**

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
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

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	12.50	4.20	5.40	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	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

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**

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

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**

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

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

MSWD Areas H and I Sewer

Riverside-Salton Sea County, 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	1.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 30,000 linear feet

Construction Phase - Demo and Trench: 2 months, Pipeline Install: 6 months, Backfill and Pave: 1 month

Off-road Equipment - Trenching: 1 loader/backhoe, 2 trenchers, 1 concrete saw

Off-road Equipment - Pipeline Install: 2 forklifts, 1 loader/backhoe, 1 welder

Off-road Equipment - Paving: 2 mixers, 1 paver, 1 paving, 1 pump, 1 loader/backhoe, 1 roller

Trips and VMT - 30 worker trips per day

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	129.00
tblConstructionPhase	NumDays	4.00	44.00
tblConstructionPhase	NumDays	10.00	21.00
tblConstructionPhase	PhaseEndDate	5/12/2022	3/30/2022
tblConstructionPhase	PhaseEndDate	8/5/2021	9/30/2021
tblConstructionPhase	PhaseEndDate	5/26/2022	4/29/2022
tblConstructionPhase	PhaseStartDate	8/6/2021	10/1/2021
tblConstructionPhase	PhaseStartDate	5/13/2022	4/1/2022
tblGrading	AcresOfGrading	16.50	1.50
tblLandUse	LotAcreage	0.00	1.50
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	PhaseName		Grading and Trenching
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName		Grading and Trenching
tblTripsAndVMT	WorkerTripNumber	0.00	30.00
tblTripsAndVMT	WorkerTripNumber	8.00	30.00
tblTripsAndVMT	WorkerTripNumber	13.00	30.00

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					
2021	0.0515	0.3813	0.4161	6.5000e-004	0.1137	0.0243	0.1381	0.0583	0.0228	0.0811	0.0000	56.2716	56.2716	0.0113	0.0000	56.5549
2022	0.0307	0.2172	0.2869	4.7000e-004	0.0104	0.0116	0.0220	2.7500e-003	0.0110	0.0137	0.0000	40.2774	40.2774	8.0000e-003	0.0000	40.4773
Maximum	**0.0515**	**0.3813**	**0.4161**	**6.5000e-004**	**0.1137**	**0.0243**	**0.1381**	**0.0583**	**0.0228**	**0.0811**	**0.0000**	**56.2716**	**56.2716**	**0.0113**	**0.0000**	**56.5549**

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					
2021	0.0515	0.1953	0.4161	6.5000e-004	0.0587	0.0243	0.0830	0.0282	0.0228	0.0510	0.0000	56.2715	56.2715	0.0113	0.0000	56.5549
2022	0.0307	0.1938	0.2869	4.7000e-004	0.0104	0.0116	0.0220	2.7500e-003	0.0110	0.0137	0.0000	40.2773	40.2773	8.0000e-003	0.0000	40.4773
Maximum	**0.0515**	**0.1953**	**0.4161**	**6.5000e-004**	**0.0587**	**0.0243**	**0.0830**	**0.0282**	**0.0228**	**0.0510**	**0.0000**	**56.2715**	**56.2715**	**0.0113**	**0.0000**	**56.5549**

	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	N20	CO2e
Percent Reduction	**0.00**	**34.99**	**0.00**	**0.00**	**44.38**	**0.00**	**34.43**	**49.28**	**0.00**	**31.73**	**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	8-1-2021	10-31-2021	0.3098	0.1256
2	11-1-2021	1-31-2022	0.1759	0.1759
3	2-1-2022	4-30-2022	0.1926	0.1695
		Highest	0.3098	0.1759

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	2.0000e-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**	**2.0000e-005**

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	2.0000e-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**	**2.0000e-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	N20	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	Grading and Trenching	Grading	8/1/2021	9/30/2021	5	44	
2	Pipeline Install	Building Construction	10/1/2021	3/30/2022	5	129	
3	Paving	Paving	4/1/2022	4/29/2022	5	21	

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	Cement and Mortar Mixers	2	6.00	9	0.56
Grading and Trenching	Trenchers	2	7.00	78	0.50
Pipeline Install	Forklifts	2	6.00	89	0.20
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Pumps	1	6.00	84	0.74
Grading and Trenching	Concrete/Industrial Saws	1	6.00	81	0.73
Pipeline Install	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading and Trenching	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Pipeline Install	Welders	1	8.00	46	0.45

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
Pipeline Install	7	30.00	0.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT
Grading and Trenching	3	30.00	0.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	30.00	0.00	0.00	11.00	5.40	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading and Trenching - 2021

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					0.1002	0.0000	0.1002	0.0547	0.0000	0.0547	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0248	0.2225	0.2050	2.9000e-004		0.0149	0.0149		0.0139	0.0139	0.0000	25.6014	25.6014	5.9300e-003	0.0000	25.7496
Total	**0.0248**	**0.2225**	**0.2050**	**2.9000e-004**	**0.1002**	**0.0149**	**0.1150**	**0.0547**	**0.0139**	**0.0686**	**0.0000**	**25.6014**	**25.6014**	**5.9300e-003**	**0.0000**	**25.7496**

3.2 Grading and Trenching - 2021

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	2.2900e-003	1.4700e-003	0.0162	5.0000e-005	5.4300e-003	3.0000e-005	5.4600e-003	1.4400e-003	3.0000e-005	1.4700e-003	0.0000	4.4222	4.4222	1.1000e-004	0.0000	4.4248
Total	**2.2900e-003**	**1.4700e-003**	**0.0162**	**5.0000e-005**	**5.4300e-003**	**3.0000e-005**	**5.4600e-003**	**1.4400e-003**	**3.0000e-005**	**1.4700e-003**	**0.0000**	**4.4222**	**4.4222**	**1.1000e-004**	**0.0000**	**4.4248**

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					0.0451	0.0000	0.0451	0.0246	0.0000	0.0246	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0248	0.0365	0.2050	2.9000e-004		0.0149	0.0149		0.0139	0.0139	0.0000	25.6014	25.6014	5.9300e-003	0.0000	25.7496
Total	**0.0248**	**0.0365**	**0.2050**	**2.9000e-004**	**0.0451**	**0.0149**	**0.0600**	**0.0246**	**0.0139**	**0.0385**	**0.0000**	**25.6014**	**25.6014**	**5.9300e-003**	**0.0000**	**25.7496**

3.2 Grading and Trenching - 2021

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	2.2900e-003	1.4700e-003	0.0162	5.0000e-005	5.4300e-003	3.0000e-005	5.4600e-003	1.4400e-003	3.0000e-005	1.4700e-003	0.0000	4.4222	4.4222	1.1000e-004	0.0000	4.4248
Total	**2.2900e-003**	**1.4700e-003**	**0.0162**	**5.0000e-005**	**5.4300e-003**	**3.0000e-005**	**5.4600e-003**	**1.4400e-003**	**3.0000e-005**	**1.4700e-003**	**0.0000**	**4.4222**	**4.4222**	**1.1000e-004**	**0.0000**	**4.4248**

3.3 Pipeline Install - 2021

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	0.0210	0.1551	0.1705	2.4000e-004		9.3600e-003	9.3600e-003		8.8000e-003	8.8000e-003	0.0000	19.6148	19.6148	5.1400e-003	0.0000	19.7434
Total	**0.0210**	**0.1551**	**0.1705**	**2.4000e-004**		**9.3600e-003**	**9.3600e-003**		**8.8000e-003**	**8.8000e-003**	**0.0000**	**19.6148**	**19.6148**	**5.1400e-003**	**0.0000**	**19.7434**

3.3 Pipeline Install - 2021

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	3.4300e-003	2.2100e-003	0.0244	7.0000e-005	8.1400e-003	5.0000e-005	8.2000e-003	2.1600e-003	5.0000e-005	2.2100e-003	0.0000	6.6332	6.6332	1.6000e-004	0.0000	6.6372
Total	**3.4300e-003**	**2.2100e-003**	**0.0244**	**7.0000e-005**	**8.1400e-003**	**5.0000e-005**	**8.2000e-003**	**2.1600e-003**	**5.0000e-005**	**2.2100e-003**	**0.0000**	**6.6332**	**6.6332**	**1.6000e-004**	**0.0000**	**6.6372**

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	0.0210	0.1551	0.1705	2.4000e-004		9.3600e-003	9.3600e-003		8.8000e-003	8.8000e-003	0.0000	19.6147	19.6147	5.1400e-003	0.0000	19.7433
Total	**0.0210**	**0.1551**	**0.1705**	**2.4000e-004**		**9.3600e-003**	**9.3600e-003**		**8.8000e-003**	**8.8000e-003**	**0.0000**	**19.6147**	**19.6147**	**5.1400e-003**	**0.0000**	**19.7433**

3.3 Pipeline Install - 2021

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	3.4300e-003	2.2100e-003	0.0244	7.0000e-005	8.1400e-003	5.0000e-005	8.2000e-003	2.1600e-003	5.0000e-005	2.2100e-003	0.0000	6.6332	6.6332	1.6000e-004	0.0000	6.6372
Total	**3.4300e-003**	**2.2100e-003**	**0.0244**	**7.0000e-005**	**8.1400e-003**	**5.0000e-005**	**8.2000e-003**	**2.1600e-003**	**5.0000e-005**	**2.2100e-003**	**0.0000**	**6.6332**	**6.6332**	**1.6000e-004**	**0.0000**	**6.6372**

3.3 Pipeline Install - 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	0.0180	0.1355	0.1608	2.3000e-004		7.4400e-003	7.4400e-003		7.0100e-003	7.0100e-003	0.0000	18.7304	18.7304	4.8500e-003	0.0000	18.8517
Total	**0.0180**	**0.1355**	**0.1608**	**2.3000e-004**		**7.4400e-003**	**7.4400e-003**		**7.0100e-003**	**7.0100e-003**	**0.0000**	**18.7304**	**18.7304**	**4.8500e-003**	**0.0000**	**18.8517**

3.3 Pipeline Install - 2022

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	3.0600e-003	1.9000e-003	0.0214	7.0000e-005	7.7700e-003	5.0000e-005	7.8200e-003	2.0600e-003	4.0000e-005	2.1100e-003	0.0000	6.1008	6.1008	1.4000e-004	0.0000	6.1042
Total	**3.0600e-003**	**1.9000e-003**	**0.0214**	**7.0000e-005**	**7.7700e-003**	**5.0000e-005**	**7.8200e-003**	**2.0600e-003**	**4.0000e-005**	**2.1100e-003**	**0.0000**	**6.1008**	**6.1008**	**1.4000e-004**	**0.0000**	**6.1042**

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	0.0180	0.1355	0.1608	2.3000e-004		7.4400e-003	7.4400e-003		7.0100e-003	7.0100e-003	0.0000	18.7304	18.7304	4.8500e-003	0.0000	18.8517
Total	**0.0180**	**0.1355**	**0.1608**	**2.3000e-004**		**7.4400e-003**	**7.4400e-003**		**7.0100e-003**	**7.0100e-003**	**0.0000**	**18.7304**	**18.7304**	**4.8500e-003**	**0.0000**	**18.8517**

3.3 Pipeline Install - 2022

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	3.0600e-003	1.9000e-003	0.0214	7.0000e-005	7.7700e-003	5.0000e-005	7.8200e-003	2.0600e-003	4.0000e-005	2.1100e-003	0.0000	6.1008	6.1008	1.4000e-004	0.0000	6.1042
Total	**3.0600e-003**	**1.9000e-003**	**0.0214**	**7.0000e-005**	**7.7700e-003**	**5.0000e-005**	**7.8200e-003**	**2.0600e-003**	**4.0000e-005**	**2.1100e-003**	**0.0000**	**6.1008**	**6.1008**	**1.4000e-004**	**0.0000**	**6.1042**

3.4 Paving - 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	8.5800e-003	0.0792	0.0976	1.6000e-004		4.1000e-003	4.1000e-003		3.8900e-003	3.8900e-003	0.0000	13.4125	13.4125	2.9700e-003	0.0000	13.4867
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.5800e-003**	**0.0792**	**0.0976**	**1.6000e-004**		**4.1000e-003**	**4.1000e-003**		**3.8900e-003**	**3.8900e-003**	**0.0000**	**13.4125**	**13.4125**	**2.9700e-003**	**0.0000**	**13.4867**

3.4 Paving - 2022

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	1.0200e-003	6.3000e-004	7.1400e-003	2.0000e-005	2.5900e-003	2.0000e-005	2.6100e-003	6.9000e-004	1.0000e-005	7.0000e-004	0.0000	2.0336	2.0336	5.0000e-005	0.0000	2.0347
Total	**1.0200e-003**	**6.3000e-004**	**7.1400e-003**	**2.0000e-005**	**2.5900e-003**	**2.0000e-005**	**2.6100e-003**	**6.9000e-004**	**1.0000e-005**	**7.0000e-004**	**0.0000**	**2.0336**	**2.0336**	**5.0000e-005**	**0.0000**	**2.0347**

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	8.5800e-003	0.0558	0.0976	1.6000e-004		4.1000e-003	4.1000e-003		3.8900e-003	3.8900e-003	0.0000	13.4125	13.4125	2.9700e-003	0.0000	13.4867
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.5800e-003**	**0.0558**	**0.0976**	**1.6000e-004**		**4.1000e-003**	**4.1000e-003**		**3.8900e-003**	**3.8900e-003**	**0.0000**	**13.4125**	**13.4125**	**2.9700e-003**	**0.0000**	**13.4867**

3.4 Paving - 2022

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	1.0200e-003	6.3000e-004	7.1400e-003	2.0000e-005	2.5900e-003	2.0000e-005	2.6100e-003	6.9000e-004	1.0000e-005	7.0000e-004	0.0000	2.0336	2.0336	5.0000e-005	0.0000	2.0347
Total	**1.0200e-003**	**6.3000e-004**	**7.1400e-003**	**2.0000e-005**	**2.5900e-003**	**2.0000e-005**	**2.6100e-003**	**6.9000e-004**	**1.0000e-005**	**7.0000e-004**	**0.0000**	**2.0336**	**2.0336**	**5.0000e-005**	**0.0000**	**2.0347**

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	12.50	4.20	5.40	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	0.545527	0.036856	0.186032	0.115338	0.015222	0.004970	0.017525	0.069528	0.001397	0.001160	0.004547	0.000932	0.000965

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	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	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	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	tons/yr										MT/yr					
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	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**	**0.0000**

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	tons/yr										MT/yr					
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	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**	**0.0000**

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**

5.3 Energy by Land Use - Electricity

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

	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	2.0000e-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	2.0000e-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	2.0000e-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**	**2.0000e-005**

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	2.0000e-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**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	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**

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

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

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