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Memorandum

To: County of San Diego Planning and Development Services	From: Valorie Thompson
Re: Chinese Bible Church Revision to Project Description	Date: December 16, 2016

Urgent **For Review** **Please Comment** **Please Reply** **Please Recycle**

SRA prepared the Air Quality Assessment for the Chinese Bible Church of San Diego Project¹. SRA understands that the applicant has revised the project design to eliminate the preschool/kindergarten use, and to include solar panels to provide electricity at the site. These project revisions were included to reduce emissions of greenhouse gases.

Due to the revisions to the project design, the vehicle trips associated with the preschool/kindergarten uses would be eliminated, thus reducing emissions of criteria pollutants associated with these vehicle trips. Inclusion of solar panels would also reduce emissions of criteria pollutants from energy use.

Impacts would therefore be lower than presented in the Air Quality Assessment due to the project design revisions. Accordingly, the Air Quality Assessment presents a conservative evaluation of potential impacts to air quality.

Valorie L. Thompson, Ph.D.
Principal

¹ Scientific Resources Associated. 2016. *Air Quality Assessment for the Chinese Bible Church of San Diego*. June 15.

Air Quality Assessment

for the

Chinese Bible Church Of San Diego

Submitted To:

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Prepared By:



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June 15, 2016

A handwritten signature in black ink that reads "Valorie L. Thompson". The signature is written in a cursive style with a large, looping initial "V".

Prepared By: _____

**Valorie L. Thompson, Ph.D.
Principal**

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Glossary of Terms and Acronyms

APCD	Air Pollution Control District
AQIA	Air Quality Impact Assessment
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
BACM	Best Available Control Measure
BACT	Best Available Control Technology
BMPs	Best Management Practices
CAA	Clean Air Act (Federal)
CAAQS	California Ambient Air Quality Standard
CALINE4	California Line Source Dispersion Model (Version 4)
Caltrans	California Department of Transportation
CCAA	California Clean Air Act
CO	Carbon Monoxide
DPLU	San Diego County Department of Planning and Land Use
H ₂ S	Hydrogen Sulfide
HARP	HotSpots Analysis and Reporting Program
HI	Hazard Index
ISCST	Industrial Source Complex Short Term Model
mg/m ³	Milligrams per Cubic Meter
µg/m ³	Micrograms per Cubic Meter
NAAQS	National Ambient Air Quality Standard
NO _x	Oxides of Nitrogen
NO ₂	Nitrogen Dioxide
O ₃	Ozone
PM _{2.5}	Fine Particulate Matter (particulate matter with an aerodynamic diameter of 2.5 microns or less)
PM ₁₀	Respirable Particulate Matter (particulate matter with an aerodynamic diameter of 10 microns or less)
ppm	Parts per million
PSD	Prevention of Significant Deterioration
RAQS	San Diego County Regional Air Quality Strategy
ROCs	Reactive Organic Compounds
ROG	Reactive Organic Gases
SANDAG	San Diego Association of Governments
SCAQMD	South Coast Air Quality Management District
SCAB	South Coast Air Basin
SDAB	San Diego Air Basin
SDAPCD	San Diego County Air Pollution Control District
SIP	State Implementation Plan
SO _x	Oxides of Sulfur
SO ₂	Sulfur Dioxide
TACs	Toxic Air Contaminants

T-BACT Toxics Best Available Control Technology
USEPA United States Environmental Protection Agency
VOCs Volatile Organic Compounds

Executive Summary

This report presents an assessment of potential air quality impacts associated with the proposed Chinese Bible Church of San Diego Project in the Santa Fe Valley Specific Plan area of the County of San Diego. The evaluation addresses the potential for air emissions during construction and after full buildout of the project, including an assessment of the potential for localized concentrations of CO that are above the ambient air quality standards (CO “hot spots”) to form due to traffic associated with the proposed project.

The proposed project is a multiple-use religious assembly in the Santa Fe Valley Specific Plan Area, which is located in the unincorporated community of San Dieguito. At full buildout, the project would include a total of 89,234 square feet of building space and 417 parking spaces with overflow parking located on a 9.09 acre site. Access to the property would be from Four Gee Road.

The project would include the following 5 buildings:

- Sanctuary/Administration Building (Building A – Phase I)
- Fellowship Learning Center (Building E – Phase II)
- Christian Ed Building (Building B – Phase I)
- Religious Meeting Building (Building C – Phase I)
- Fellowship Hall (Building D – Phase I)

The project would include the following components which are included in the buildings listed above:

- Parking – 417 spaces with overflow
- Miscellaneous Facilities (parsonages, kitchen, etc.)
- Special Events

Figure 1 provides a site plan for the project site.

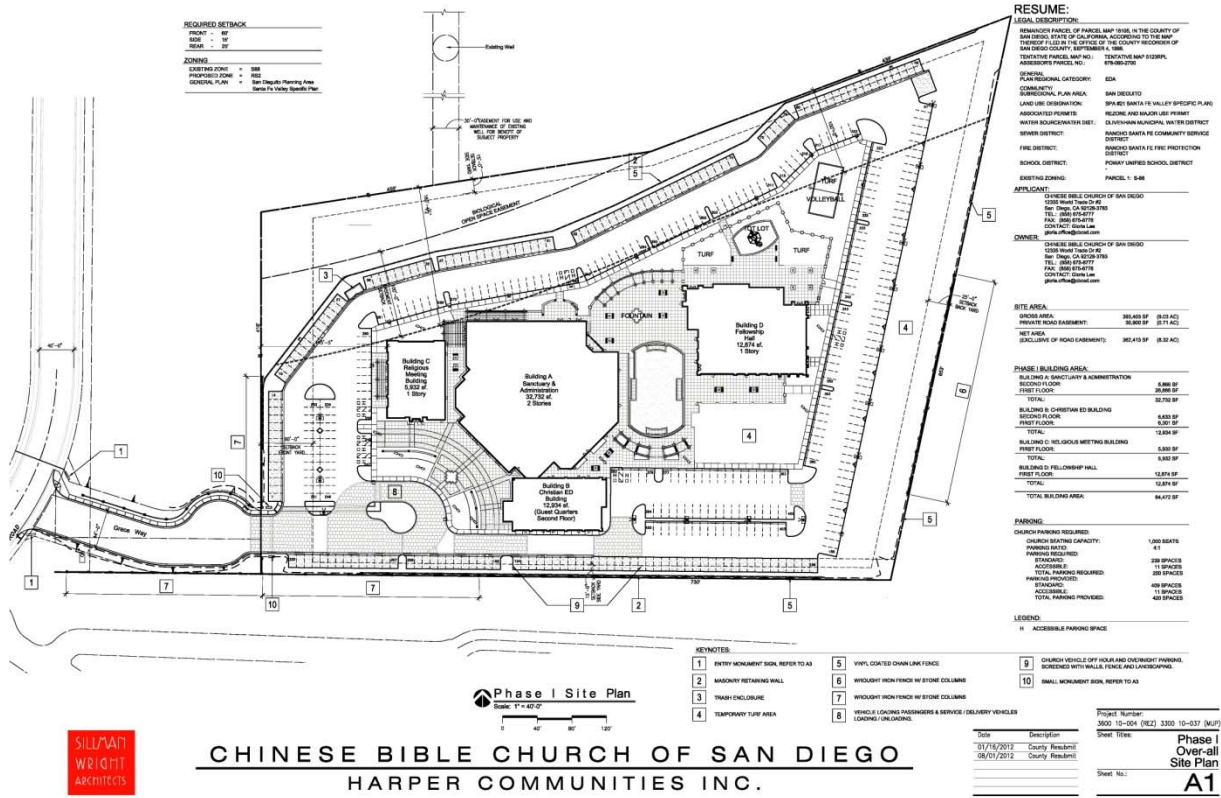


Figure 1. Site Layout

Church operations would include active programs on weekdays (days and evenings) as well as weekends. Activities include worship, fellowship, recreation, pastoral offices, and a preschool/kindergarten program. The project would be constructed in two phases, with the first phase including a 1,000 seat main sanctuary and ancillary facilities. The second phase would expand the main sanctuary to 1,500 seats, with construction of a new Fellowship Learning Center building and in buildings A, B, D, and E additional classrooms, offices, recreation facilities, kitchen, and a preschool/kindergarten.

According to the Project Description and Supplemental Application prepared by the Applicant, the project will be consistent with the General Plan. As discussed in Section 4.1 of this report, the project will therefore be consistent with the Regional Air Quality Strategy (RAQS) and the State Implementation Plan (SIP).

To reduce the emissions to the extent feasible, fugitive dust control measures will be implemented during construction. Measures that are incorporated into the project description to reduce emissions associated with construction include the following:

- Application of water three times daily during grading on active grading sites
- Dust control during equipment loading and unloading
- Application of water three times daily to unpaved roads
- Reduce speeds to 15 mph on unpaved roads
- Use architectural coatings with a volatile organic compound (VOC) content of 150 g/l or less
- Require the construction fleet to use California Air Resources Board (ARB) certified Tier III or IV equipment.

These measures constitute best management practices for dust control, architectural coatings, diesel particulate, and construction equipment emissions.

The proposed project would result in emissions of air pollutants for both the construction phase and operational phase of the project. Construction emissions would include emissions associated with fugitive dust, heavy construction equipment and construction workers commuting to and from the site. As discussed in Section 4.2 of this report, emissions of criteria pollutants during construction would be below the screening-level thresholds.

The main operational impacts associated with the Project would include emissions of air pollutants associated with mobile sources; with additional emissions associated with area sources such as energy use and landscaping. As discussed in Section 4.2 of this report, emissions of all pollutants would be below the screening-level thresholds. As discussed in Section 4.3 of this report, impacts would not be cumulatively considerable.

A health risk assessment was conducted to evaluate the potential for project construction or operations to result in a significant impact to nearby sensitive receptors. The risk assessment focused on diesel particulate matter, which is the main toxic air contaminant (TAC) emitted from vehicles. As shown in Section 4.4 of this report, the risk assessment concluded that risks were less than significant.

As shown in Section 4.5 of this report, an evaluation of odors indicated that odor impacts would be less than significant.

1.0 INTRODUCTION

This Air Quality Technical Report includes an evaluation of existing conditions in the project vicinity, an assessment of potential impacts associated with project construction, and an evaluation of project operational impacts.

Purpose of the Report

This report presents an assessment of potential air quality impacts associated with the proposed Chinese Bible Church of San Diego Project in the Santa Fe Valley Specific Plan area of the County of San Diego. The evaluation addresses the potential for air emissions during construction and after full buildout of the project, including an assessment of the potential for CO “hot spots” to form due to traffic associated with the proposed project.

Project Location and Description

The proposed project is a multiple-use religious assembly in the Santa Fe Valley Specific Plan Area, which is located in the unincorporated community of San Dieguito. At full buildout, the project would include a total of 89,234 square feet of building space and 5417 parking spaces with overflow parking located on a 9.09 acre site. Access to the property would be from Four Gee Road.

The project would include the following 5 buildings:

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The project would include the following components which are included in the buildings listed above:

- Parking – 417 spaces with overflow
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Figure 1 in the Executive Summary provides a site plan for the project site.

Church operations would include active programs on weekdays (days and evenings) as well as weekends. Activities include worship, fellowship, recreation, church café/Bible bookstore, pastoral offices, and a preschool/kindergarten program. The project would be constructed in two phases, with the first phase including a 1,000 seat main sanctuary and ancillary facilities. The second phase would expand the main sanctuary to 1,500 seats, with construction of a new Fellowship Learning Center building and expanded classrooms, offices, recreation facilities, kitchen, and a preschool/kindergarten.

2.0 EXISTING CONDITIONS

2.1 Existing Setting

The project site is located in the Santa Fe Valley Specific Plan Area of unincorporated San Diego County. The site is located near the 4S Ranch development, approximately 2 miles east of the Rancho Bernardo area of the City of San Diego. There is currently a single-family residence and guest house on the site that would be removed, with some unused agricultural land adjacent. The site is relatively flat. Sensitive receptors in the vicinity of the site include residences to the south on Wild Horse Glen, residences to the north of Campania Avenue, and residences to the east on Silver Crest Lane.

2.2 Climate and Meteorology

The project area, like the rest of San Diego County's inland valley areas, has a Mediterranean climate characterized by warm, dry summers and mild, wet winters. The average annual temperature in the Escondido area (the nearest climatic monitoring station where temperature data are measured) is 61.6 °F, with an average maximum temperature of 75.9 °F and an average minimum temperature of 47.4 °F. The highest temperatures occur in July and August, when the average maximum temperatures are 88.2 °F. The lowest temperatures occur in January, when the average minimum temperature is 37.1 °F. (WRCC 2015a). The average annual precipitation is 17.46 inches. Most precipitation occur from November through April. (WRCC 2015b).

The dominant meteorological feature affecting the region is the Pacific High Pressure Zone, which produces the prevailing westerly to northwesterly winds. These winds tend to transport pollutants from the coastal areas toward the inland areas. Data collected by the SDAPCD indicate that pollutant levels are often lower at the coast and higher inland as pollutants become trapped by the local mountains. Pollutants may be trapped by periodic temperature inversions. A temperature inversion is a thin layer of the atmosphere where the decrease in temperature with elevation is less than normal. The inversion does not allow pollutants to be transported, but traps pollutants resulting in increased concentrations. Generally, the morning inversion layer is lower than the afternoon inversion layer; therefore, pollutant concentrations tend to be higher in the afternoon.

The SDAPCD measures meteorological data in locations where it operates a monitoring station. There is no monitoring station that measures micro-scale meteorology in the immediate area. The nearest monitoring station to the site is the Escondido monitoring station.

The project site is located in the San Diego Air Basin (SDAB). The climate of the SDAB is dominated by a semi-permanent high pressure cell located over the Pacific Ocean. This cell influences the direction of prevailing winds (westerly to northwesterly) and maintains clear skies for much of the year. Figure 1 provides a graphic representation of the prevailing winds in the project vicinity, as measured at the San Diego Air Pollution Control District's (APCD's) Escondido Monitoring Station (the closest meteorological monitoring station to the site). The high pressure cell also creates two types of temperature inversions that may act to degrade local air quality.

Subsidence inversions occur during the warmer months as descending air associated with the Pacific high pressure cell comes into contact with cool marine air. The boundary between the two layers of air creates a temperature inversion that traps pollutants. The other type of inversion, a radiation inversion, develops on winter nights when air near the ground cools by heat radiation and air aloft remains warm. The shallow inversion layer formed between these two air masses also can trap pollutants. As the pollutants become more concentrated in the atmosphere, photochemical reactions occur that produce ozone, commonly known as smog.

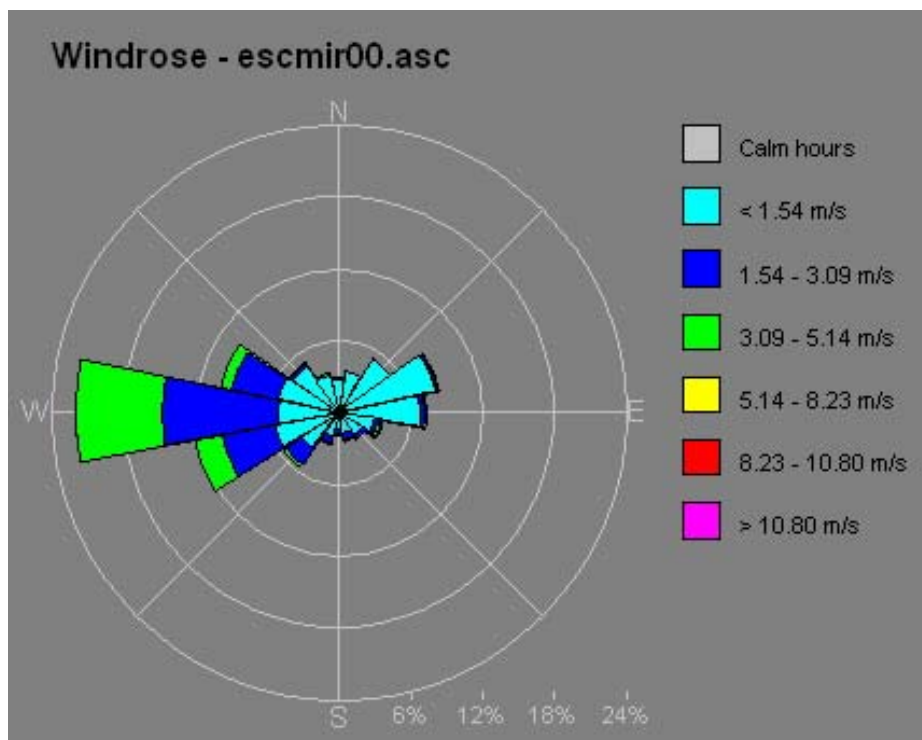


Figure 2. Wind Rose – Escondido Monitoring Station

2.3 Regulatory Setting

Air quality is defined by ambient air concentrations of specific pollutants identified by the United States Environmental Protection Agency (USEPA) to be of concern with respect to health and welfare of the general public. The USEPA is responsible for enforcing the Federal Clean Air Act (CAA) of 1970 and its 1977 and 1990 Amendments. The CAA required the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the USEPA established both primary and secondary standards for several pollutants (called “criteria” pollutants). Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and the public welfare from air pollutants in the atmosphere.

The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. The California Air Resources Board (ARB) has

established the generally more stringent California Ambient Air Quality Standards (CAAQS) for the six criteria pollutants through the California Clean Air Act of 1988, and also has established CAAQS for additional pollutants, including sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be “nonattainment areas” for that pollutant. On April 15, 2004, the SDAB was designated a basic nonattainment area for the 8-hour NAAQS for ozone (O₃). The SDAB is in attainment for the NAAQS for all other criteria pollutants. The SDAB is currently classified as a nonattainment area under the CAAQS for O₃, particulate matter with an aerodynamic diameter less than 2.5 microns (PM_{2.5}), and particulate matter with an aerodynamic diameter less than 10 microns (PM₁₀).

The following specific descriptions of health effects for each of the criteria air pollutants associated with project construction and operations are based on USEPA (2007) and ARB (2001).

Ozone. Ozone (O₃) is considered a photochemical oxidant, which is a chemical that is formed when volatile organic compounds (VOCs) and oxides of nitrogen (NO_x), both by-products of combustion, react in the presence of ultraviolet light. O₃ is considered a respiratory irritant and prolonged exposure can reduce lung function, aggravate asthma and increase susceptibility to respiratory infections. Children and those with existing respiratory diseases are at greatest risk from exposure to O₃.

Carbon Monoxide. Carbon monoxide (CO) is a product of combustion, and the main source of CO in the SDAB is from motor vehicle exhaust. CO is an odorless, colorless gas. CO affects red blood cells in the body by binding to hemoglobin and reducing the amount of oxygen that can be carried to the body’s organs and tissues. CO can cause health effects to those with cardiovascular disease, and can also affect mental alertness and vision.

Nitrogen Dioxide. Nitrogen dioxide (NO₂) is also a by-product of fuel combustion, and is formed both directly as a product of combustion and in the atmosphere through the reaction of nitrogen oxide (NO) with oxygen. NO₂ is a respiratory irritant and may affect those with existing respiratory illness, including asthma. NO₂ can also increase the risk of respiratory illness.

Respirable Particulate Matter and Fine Particulate Matter. Respirable particulate matter, or PM₁₀, refers to particulate matter with an aerodynamic diameter of 10 microns or less. Fine particulate matter, or PM_{2.5}, refers to particulate matter with an aerodynamic diameter of 2.5 microns or less. Particulate matter in this size range has been determined to have the potential to lodge in the lungs and contribute to respiratory problems. PM₁₀ and PM_{2.5} arise from a variety of sources, including road dust, diesel exhaust, combustion, tire and brake wear, construction operations and windblown dust. PM₁₀ and PM_{2.5} can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases such as asthma and chronic bronchitis. PM_{2.5} is considered to have the potential to lodge deeper in the lungs.

Sulfur dioxide. Sulfur dioxide (SO₂) is a colorless, reactive gas that is produced from the burning of sulfur-containing fuels such as coal and oil, and by other industrial processes. Generally, the highest concentrations of SO₂ are found near large industrial sources. SO₂ is a respiratory irritant that can cause narrowing of the airways leading to wheezing and shortness of breath. Long-term exposure to SO₂ can cause respiratory illness and aggravate existing cardiovascular disease.

Lead. Lead (Pb) in the atmosphere occurs as particulate matter. Pb has historically been emitted from vehicles combusting leaded gasoline, as well as from industrial sources. With the phase-out of leaded gasoline, large manufacturing facilities are the sources of the largest amounts of lead emissions. Pb has the potential to cause gastrointestinal, central nervous system, kidney and blood diseases upon prolonged exposure. Pb is also classified as a probable human carcinogen.

Sulfates. Sulfates are the fully oxidized ionic form of sulfur. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to sulfur dioxide (SO₂) during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO₂ to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features. The ARB's sulfates standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms and an

increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and due to the fact that they are usually acidic, can harm ecosystems and damage materials and property.

Hydrogen Sulfide. Hydrogen sulfide (H₂S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation. Breathing H₂S at levels above the standard would result in exposure to a very disagreeable odor. In 1984, a ARB committee concluded that the ambient standard for H₂S is adequate to protect public health and to significantly reduce odor annoyance.

Vinyl Chloride. Vinyl chloride, a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants and hazardous waste sites, due to microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air causes central nervous system effects, such as dizziness, drowsiness and headaches. Long-term exposure to vinyl chloride through inhalation and oral exposure causes liver damage. Cancer is a major concern from exposure to vinyl chloride via inhalation. Vinyl chloride exposure has been shown to increase the risk of angiosarcoma, a rare form of liver cancer, in humans.

2.3.1 California Air Resources Board

The ARB is the state regulatory agency with authority to enforce regulations to both achieve and maintain the NAAQS and CAAQS. The ARB is responsible for the development, adoption, and enforcement of the state's motor vehicle emissions program, as well as the adoption of the CAAQS. The ARB also reviews operations and programs of the local air districts, and requires each air district with jurisdiction over a nonattainment area to develop its own strategy for achieving the NAAQS and CAAQS. The local air district has the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations.

2.3.2 San Diego Air Pollution Control District

The San Diego APCD is the local agency responsible for the administration and enforcement of air quality regulations for San Diego County.

The APCD and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The San Diego County Regional Air Quality Strategy (RAQS) was initially adopted in 1991, and is updated on a triennial basis. The RAQS was updated in 1995, 1998, 2001, 2004, and most recently in 2009. The RAQS outlines APCD's plans and control measures designed to attain the state air quality standards for O₃. The APCD has also developed the air basin's input to the SIP, which is required under the Federal Clean Air Act for areas that are out of attainment of air quality standards. The SIP includes the APCD's plans and control measures for attaining the O₃ NAAQS. The SIP is also updated on a triennial basis. The latest SIP update was submitted by the ARB to the USEPA in 2007, and was approved in 2012. The latest revisions to the SIP were submitted by the ARB to the USEPA in 2011. The APCD has developed its *Eight-Hour Ozone Attainment Plan for San Diego County* (APCD 2007), which provides plans for attaining and maintaining the 8-hour NAAQS for ozone. This is the most recent ozone attainment plan for the SDAB.

The RAQS relies on information from ARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. The ARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County as part of the development of the jurisdiction's General Plan. As such, projects that propose development that is consistent with the growth anticipated by the general plans would be consistent with the RAQS. In the event that a project would propose development which is less dense than anticipated within the general plan, the project would likewise be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the general plan

and SANDAG's growth projections, the project might be in conflict with the RAQS and SIP, and might have a potentially significant impact on air quality.

The SIP relies on the same information from SANDAG to develop emission inventories and emission reduction strategies that are included in the attainment demonstration for the air basin. The SIP also includes rules and regulations that have been adopted by the APCD to control emissions from stationary sources. These SIP-approved rules may be used as a guideline to determine whether a project's emissions would have the potential to conflict with the SIP and thereby hinder attainment of the NAAQS for O₃.

Table 1 presents a summary of the ambient air quality standards pursuant to the federal and California Clean Air Acts.

**Table 1
Ambient Air Quality Standards**

POLLUTANT	AVE. TIME	CALIFORNIA STANDARDS		NATIONAL STANDARDS		
		Concentration	Measurement Method	Primary	Secondary	Measurement Method
Ozone (O ₃)	1 hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	--	--	Ethylene Chemiluminescence
	8 hour	0.070 ppm (137 µg/m ³)		0.075 ppm (147 µg/m ³)	0.075 ppm (147 µg/m ³)	
Carbon Monoxide (CO)	8 hours	9.0 ppm (10 mg/m ³)	Non-Dispersive Infrared Spectroscopy (NDIR)	9 ppm (10 mg/m ³)	None	Non-Dispersive Infrared Spectroscopy (NDIR)
	1 hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)		
Nitrogen Dioxide (NO ₂)	Annual Average	0.030 ppm (56 µg/m ³)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m ³)	0.053 ppm (100 µg/m ³)	Gas Phase Chemiluminescence
	1 hour	0.18 ppm (338 µg/m ³)		0.100 ppm (188 µg/m ³)	--	
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	--	Ultraviolet Fluorescence	0.030 ppm for certain areas	--	Pararosaniline
	24 hours	0.04 ppm (105 µg/m ³)		--	--	
	3 hours	--		--	0.5 ppm (1300 µg/m ³)	
	1 hour	0.25 ppm (655 µg/m ³)		0.075 ppm (196 µg/m ³)	--	
Respirable Particulate Matter (PM ₁₀)	24 hours	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	150 µg/m ³	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		--	--	
Fine Particulate Matter (PM _{2.5})	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	15 µg/m ³	15 µg/m ³	Inertial Separation and Gravimetric Analysis
	24 hours	--		35 µg/m ³	35 µg/m ³	
Sulfates	24 hours	25 µg/m ³	Ion Chromatography	--	--	--
Lead (Pb)	30-day Average	1.5 µg/m ³	Atomic Absorption	--	--	Atomic Absorption
	Calendar Quarter	--		1.5 µg/m ³	1.5 µg/m ³	
	3-month Rolling Average	--		0.15 µg/m ³	0.15 µg/m ³	
Hydrogen Sulfide (H ₂ S)	1 hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence	--	--	--
Vinyl Chloride	24 hours	0.010 ppm (26 µg/m ³)	Gas Chromatography	--	--	--

ppm= parts per million
µg/m³ = micrograms per cubic meter
mg/m³= milligrams per cubic meter

Source: California Air Resources Board 2015, www.arb.ca.gov

2.4 Background Air Quality

The APCD operates a network of ambient air monitoring stations throughout San Diego County. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. The nearest ambient monitoring station to the project site is the Escondido monitoring station, which measures O₃, PM₁₀, PM_{2.5}, CO, and NO₂. Because the Escondido monitoring station is located in areas where there is some traffic congestion, it is likely that pollutant concentrations measured at this monitoring station are higher than concentrations that would be observed or measured in the Project area, and would thus provide a conservative estimate of background ambient air quality. Ambient concentrations of pollutants over the last three years are presented in Table 2.

The 8-hour federal ozone standard was exceeded at the Escondido monitoring station 5 times in 2014. The standard was not exceeded in 2012 or 2013. The Escondido monitoring station has also measured exceedances of the 24-hour NAAQS for PM_{2.5}. The Escondido monitoring station has measured exceedances of the CAAQS for ozone and PM₁₀ during the period from 2012 to 2014. The data from the monitoring station indicates that air quality is in attainment of all other standards.

Pollutant	Averaging Time	2012	2013	2014	Most Stringent Ambient Air Quality Standard	Monitoring Station
Ozone	8 hour	0.073	0.074	0.079	0.070	Escondido
	1 hour	0.084	0.084	0.099	0.09	Escondido
PM ₁₀	Annual	18.0 µg/m ³	23.2 µg/m ³	21.5 µg/m ³	20 µg/m ³	Escondido
	24 hour	33.0 µg/m ³	82.0 µg/m ³	44.0 µg/m ³	50 µg/m ³	Escondido
PM _{2.5}	Annual	10.5 µg/m ³	10.5 µg/m ³	9.6 µg/m ³	12 µg/m ³	Escondido
	24 hour	70.7 µg/m ³	56.3 µg/m ³	77.5 µg/m ³	35 µg/m ³	Escondido
NO ₂	Annual	0.013	0.013	0.011	0.030	Escondido
	1 hour	0.062	0.061	0.063	0.100	Escondido
CO	8 hour	3.70	NA	NA	9.0	Escondido
	1 hour	4.4	NA	NA	20.0	Escondido

Source: www.arb.ca.gov/aqd/aqd.htm (Measurements of all pollutants at Escondido station)

3.0 SIGNIFICANCE CRITERIA AND ANALYSIS METHODOLOGIES

3.1 County Significance Criteria

The County of San Diego (County of San Diego 2007) has approved guidelines for determining significance based on Appendix G.III of the State CEQA Guidelines. These 2007 guidelines are the most recent guidelines for Air Quality. Section 4.0 of the County of San Diego Department of Planning and Development Services *Guidelines for Determining Significance and Report Format and Content Requirements – Air Quality* (County of San Diego 2007) provides guidance that a project would have a significant environmental impact if:

1. The project will conflict with or obstruct the implementation of the San Diego Regional Air Quality Strategy (RAQS) and/or applicable portions of the State Implementation Plan (SIP).
2. The project would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation.
3. The project will result in emissions that exceed 250 pounds per day of NO_x, or 75 pounds per day of VOCs.
4. The project will result in emissions of carbon monoxide that when totaled with the ambient concentrations will exceed a 1-hour concentration of 20 parts per million (ppm) or an 8-hour average of 9 ppm.
5. The project will result in emissions of PM_{2.5} that will exceed 55 pounds per day.
6. The project will result in emissions of PM₁₀ that exceed 100 pounds per day and increase the ambient PM₁₀ concentration by 5 micrograms per cubic meter (5.0 µg/m³) or greater at the maximum exposed individual.
7. The project will result in a cumulatively considerable net increase of any criteria pollutant for which the San Diego Air Basin is non-attainment under an applicable Federal or State Ambient Air Quality Standard (including emissions which exceed the SLTs for ozone precursors listed in Table 5 of the Guidelines).
8. The project will expose sensitive receptors to substantial pollutant concentrations.
9. The project which is not an agricultural, commercial or an industrial activity subject to SDAPCD standards, as a result of implementation, will either generate objectionable odors

or place sensitive receptors next to existing objectionable odors, which will affect a considerable number of persons or the public.

3.2 Conflict With or Obstruct Implementation of the RAQS and SIP

The County of San Diego recognizes the APCD's established screening level thresholds for air quality emissions (Rules 20.1 et seq.) as screening-level thresholds for land development projects. Projects that propose development that is consistent with the growth anticipated by the general plans and SANDAG's growth forecasts would be consistent with the RAQS and SIP. Also, projects that are consistent with the SIP rules (i.e., the federally-approved rules and regulations adopted by the APCD) are consistent with the SIP. Thus projects would be required to conform with measures adopted in the RAQS (including use of low-VOC architectural coatings, use of low-NO_x water heaters, and compliance with rules and regulations governing stationary sources) and would also be required to comply with all applicable rules and regulations adopted by the APCD.

The project's impacts were analyzed by determining if the project would be consistent with the County of San Diego General Plan and SANDAG's growth projections, and whether the project would be in conformance with applicable rules and regulations adopted by the APCD to implement the RAQS and SIP.

3.3 Violation of an Ambient Air Quality Standard

To determine whether a project would (a) result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation; or (b) result in a cumulatively considerable net increase of PM₁₀ or PM_{2.5} or exceed quantitative thresholds for O₃ precursors, NO_x and VOCs, project emissions may be evaluated based on the quantitative emission thresholds established by the San Diego APCD. As part of its air quality permitting process, the APCD has established thresholds in Rule 20.2 for the preparation of Air Quality Impact Assessments (AQIA). The County of San Diego has also approved the use of the South Coast Air Quality Management District's (SCAQMD's) screening threshold of 55 pounds per day or 10 tons per year as a significance threshold for PM_{2.5}.

For CEQA purposes, these screening criteria can be used as numeric methods to demonstrate that a project's total emissions would not result in a significant impact to air quality. The screening thresholds are included in the table below.

Table 3 Screening-Level Thresholds for Air Quality Impact Analysis			
Pollutant	Total Emissions		
Construction Emissions			
	Lb. per Day		
Respirable Particulate Matter (PM ₁₀)	100		
Fine Particulate Matter (PM _{2.5})	55		
Oxides of Nitrogen (NO _x)	250		
Oxides of Sulfur (SO _x)	250		
Carbon Monoxide (CO)	550		
Volatile Organic Compounds (VOCs) ¹	75		
Operational Emissions			
	Lb. Per Hour	Lb. per Day	Tons per Year
Respirable Particulate Matter (PM ₁₀)	---	100	15
Fine Particulate Matter (PM _{2.5})	---	55	10
Oxides of Nitrogen (NO _x)	25	250	40
Oxides of Sulfur (SO _x)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	---	3.2	0.6
Volatile Organic Compounds (VOC)	---	75	13.7
Toxic Air Contaminant Emissions			
Excess Cancer Risk	1 in 1 million without Toxics Best Available Control Technology (T-BACT) 10 in 1 million with T-BACT		
Non-Cancer Hazard	1.0		

In the event that emissions exceed these screening-level thresholds, air dispersion modeling may be required to demonstrate that the project's total air quality impacts result in ground-level concentrations that are below the State and Federal Ambient Air Quality Standards, including appropriate background levels.

To evaluate whether the project would result in a significant impact, emissions from the construction and operational phases of the project were estimated using the CalEEMod Model,

Version 2013.2.2. Emission estimates were then compared with the levels identified in Table 3 above to assess the significance of impacts.

In addition, to evaluate the project's potential to create a CO "hot spot", an evaluation of mobile source CO emissions attributable to traffic congestion was conducted. The potential for CO "hot spots" was evaluated based on the results of the Traffic Impact Study. The Caltrans ITS Transportation Project-Level Carbon Monoxide Protocol (Caltrans 1998) should be followed to determine whether a CO "hot spot" is likely to form due to Project-generated traffic. In accordance with the Protocol, CO "hot spots" are typically evaluated when (a) the level of service (LOS) of an intersection or roadway decreases to a LOS E or worse; (b) signalization and/or channelization is added to an intersection; and (c) sensitive receptors such as residences, commercial developments, schools, hospitals, etc. are located in the vicinity of the affected intersection or roadway segment. The qualitative analysis identifies the potential for project-related traffic to result in a degradation in level of service (LOS) to LOS E or F; evaluates whether mitigation measures proposed in the traffic analysis reduce congestion and improve LOS; and provides a comparative analysis of CO "hot spot" modeling conducted in the South Coast Air Basin (SCAB) for their CO attainment demonstration.

3.3 Cumulatively Considerable Net Increase of Nonattainment Pollutants

For nonattainment pollutants (ozone, with ozone precursors NO_x and VOCs, PM_{2.5} and PM₁₀), if emissions exceed the thresholds shown in Table 3, the project could have the potential to result in a cumulatively considerable net increase in these pollutants and thus could have a significant impact on the ambient air quality.

To evaluate whether the project would have a cumulatively considerable net increase of nonattainment pollutants, pollutant levels were compared with the significance thresholds in Table 3. In addition, projects in the vicinity of the Chinese Bible Church project were identified to assess whether combined emissions could result in a significant impact during construction.

3.4 Exposure of Sensitive Receptors to Substantial Pollutant Concentrations

In addition to impacts from criteria pollutants, project impacts may include emissions of pollutants identified by the state and federal government as toxic air contaminants (TACs) or Hazardous Air Pollutants (HAPs). In San Diego County, the County Department of Planning and Development Services identifies an excess cancer risk level of 1 in 1 million or less for projects that do not implement Toxics Best Available Control Technology (T-BACT), and an excess cancer risk level of 10 in 1 million or less for projects that do implement T-BACT as a significant impact. The significance threshold for non-cancer health effects is a health hazard index of one or less. These significance thresholds are consistent with the San Diego Air Pollution Control District's Rule 1210 requirements for stationary sources. If a project has the potential to result in emissions of any TAC or HAP which result in a cancer risk of greater than 1 in 1 million without T-BACT, 10 in 1 million with T-BACT, or health hazard index of one or more, the project would be deemed to have a potentially significant impact.

With regard to evaluating whether a project would have a significant impact on sensitive receptors, air quality regulators typically define sensitive receptors as residences, schools (Preschool-12th Grade), hospitals, resident care facilities, day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. Any project which has the potential to directly impact a sensitive receptor located within 1 mile and results in a health risk greater than the risk significance thresholds discussed above would be deemed to have a potentially significant impact. For the purpose of this analysis, a one mile distance from the site provides as a conservative means of evaluating significance. As discussed in the SCAQMD's CEQA Air Quality Handbook, if there is an industrial source within a quarter mile of a sensitive receptor, planners should review the potential for toxic impacts. Therefore, use of a one mile radius is conservative.

To evaluate whether project construction could pose a significant impact to nearby sensitive receptors, an evaluation of diesel exhaust particulate matter was conducted. Diesel exhaust particulate matter is known to the state of California as carcinogenic compounds. To assess whether there is a potential for a significant impact associated with exposure to diesel exhaust

particulate matter, a health risk evaluation was conducted on the diesel exhaust particulate emissions emitted during construction. The evaluation focused on construction because that is the period when emissions of diesel exhaust particulate would occur.

The risks associated with exposure to substances with carcinogenic effects were evaluated in accordance with the California Office of Environmental Health Hazard Assessment (OEHHA) guidelines, *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2015).

The U.S. EPA's approved air dispersion model, AERMOD (U.S. EPA 2009), was used to estimate the downwind impacts at the closest receptors to the construction site. The model was run using preprocessed meteorological data from the Escondido surface meteorological monitoring station provided by the San Diego Air Pollution Control District. The construction heavy equipment sources were represented as an elevated volume source placed in each construction zone at the site. The sources were modeled as elevated volume sources to account for buoyancy resulting from the heat of the exhaust. The nearest existing receptors were located based on the site map and aerial photographs for the project area. A grid was placed from the site boundary outward to include residences surrounding the project area. The risk evaluation was conducted to assess the potential for an unacceptable risk at these existing receptors due to exposure to diesel particulate emissions from heavy construction equipment during construction. The residential receptors identified are the closest residences. No other sensitive receptors are located in the project vicinity.

Risks were calculated on the basis of the 30-year exposure period, accounting for childhood sensitivity, using the OEHHA-recommended age sensitivity factors (ASFs) to take into account the increased sensitivity to carcinogens during early-in-life exposure. Risks were then compared with the County's significance thresholds of 10 in a million for excess cancer risk and 1.0 for chronic hazards to assess whether a significant impact would result.

3.5 Objectionable Odors

Section 6318 of the San Diego County Zoning Ordinance requires all commercial and industrial uses “be operated as not to emit matter causing unpleasant odors which is perceptible by the average person at or beyond any lot line of the lot containing said uses.” Section 6318 goes on to further provide specific dilution standards that must be met “at or beyond any lot line of the lot containing the uses.” APCD Rule 51 (Public Nuisance) also prohibits emission of any material which causes nuisance to a considerable number of persons or endangers the comfort, health or safety of any person. A project that proposes a use which would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of offsite receptors.

To evaluate whether the project would result in a significant odor impact, a qualitative evaluation of the project’s land use versus odor-causing land uses was conducted.

The impacts associated with construction and operation of the project were evaluated for significance based on these significance criteria.

4.0 PROJECT IMPACT ANALYSIS

The proposed Chinese Bible Church of San Diego includes both construction and operational impacts. Construction impacts include emissions associated with the construction of the project. Operational impacts include emissions associated with the project, including mobile source emissions, area source emissions, and energy use emissions, at full buildout.

4.1 Conformance to the Regional Air Quality Strategy

4.1.1 Guidelines for the Determination of Significance

The project will result in a significant impact to air quality if:

The project will conflict with or obstruct the implementation of the San Diego Regional Air Quality Strategy (RAQS) and/or applicable portions of the State Implementation Plan (SIP).

The RAQS outlines APCD's plans and control measures designed to attain the State air quality standards for ozone. In addition, the APCD relies on the SIP, which includes the APCD's plans and control measures for attaining the ozone NAAQS. These plans accommodate emissions from all sources, including natural sources, through implementation of control measures, where feasible, on stationary sources to attain the standards. Mobile sources are regulated by the USEPA and the ARB, and the emissions and reduction strategies related to mobile sources are considered in the RAQS and SIP.

The RAQS relies on information from ARB and SANDAG, including projected growth in the County, mobile, area and all other source emissions in order to project future emissions and determine from that the strategies necessary for the reduction of stationary source emissions through regulatory controls. The ARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County. As such, projects that propose development that is consistent with the growth anticipated by the general plans would be consistent with the RAQS. In the event that a project would propose development which is less dense than anticipated within the general plan, the

project would likewise be consistent with the RAQS. If a project proposes development that is not consistent with the County of San Diego General Plan and SANDAG's growth projections, the project would be in conflict with the RAQS and SIP, and might have a potentially significant impact on air quality. This situation would warrant further analysis to determine if the proposed project and the surrounding projects exceed the growth projections used in the RAQS for the specific subregional area.

4.1.2 Significance of Impacts Prior to Mitigation

As discussed in Section 1.0, the proposed project is a multiple-use religious assembly in the Santa Fe Valley Specific Plan Area, which is located in the unincorporated community of San Dieguito. At full buildout, the project would include a total of 89,234 square feet of building space and 417 parking spaces with overflow parking located on a 9.09 acre site. Access to the property would be from Four Gee Road.

The property is currently zoned S88 as a residential area in the Santa Fe Valley Specific Plan. The project is not proposing housing on site that would be more dense than anticipated in the General Plan. The project is also not creating new jobs that would increase VMT; rather, the project's employment is moving from the church's existing location. The project does not extend infrastructure to previously undeveloped areas, nor is the project of such magnitude (either in terms of employment or services provided) that it would result in substantial numbers of people relocating to the area to access the project. The project does not induce growth within the Santa Fe Valley Specific Plan Area. Therefore, the project would not exceed SANDAG's population, housing, or employment projections for the Specific Plan Area.

Adjacent to the Santa Fe Valley Specific Plan, six churches were planned in the 4S Ranch Village. To date, none have been built to provide local access to places of worship. The project will be consistent with the 4S Ranch Specific Plan by providing this use adjacent to the 4S Ranch Village. The County's General Plan includes general civic uses, and promotes the siting of civic uses near Villages. This project meets the needs of the community, and will provide a civic use for the local residents. Because it provides a civic use that meets the needs of the community adjacent to the

Village, vehicle miles traveled would be reduced by the project because church members would not be required to drive out of the area to attend church. Because the project would reduce vehicle miles traveled by providing a civic use within the Village, the project is consistent with the General Plan.

In addition, because the project involves moving an existing church use to the project site, emissions associated with vehicles traveling to the church are existing within the SDAB and are not new emissions. Based on the analysis presented in the Greenhouse Gas Analysis (RECON 2016), the annual vehicle miles traveled from the point of origin to the proposed project location would decrease slightly from the vehicle miles traveled from the point of origin to the existing church location. Based on this calculation, the reduction in annual vehicle miles traveled would result in a slight reduction in the emissions of ozone precursors within the SDAB.

The project therefore would not conflict with or obstruct implementation of the RAQS and SIP.

As part of its attainment planning process, the San Diego Air Pollution Control District proposes and adopts Rules and Regulations to control air pollutants to demonstrate further progress toward attainment as part of the RAQS and SIP. The Project also will comply with any County, State and Federal applicable rules and regulations (such as SDAPCD Rule 67.0, which governs the VOC content of architectural coatings, or SDAPCD Rule 55, which governs fugitive dust during construction) that have been adopted as part of the RAQS and SIP by the San Diego Air Pollution Control District.

4.1.3 Design Considerations

The design consideration for this project is the completion of the Specific Plan Amendment for the site. The project is consistent with current land uses, and provides a civic use adjacent to the Village. The project is therefore consistent with the RAQS and SIP.

4.1.4 Conclusions

Because the Chinese Bible Church of San Diego Project is consistent with the allowable land use at the site and provides a civic use adjacent to Village, the project is consistent with the RAQS and SIP.

4.2 Conformance to Federal and State Ambient Air Quality Standards

The project will result in a significant impact to air quality if:

The project would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation.

The project will result in emissions that exceed 250 pounds per day of NO_x, or 75 pounds per day of VOCs.

The project will result in emissions of carbon monoxide that when totaled with the ambient concentrations will exceed a 1-hour concentration of 20 parts per million (ppm) or an 8-hour average of 9 ppm.

The project will result in emissions of PM_{2.5} that will exceed 55 pounds per day.

The project will result in emissions of PM₁₀ that exceed 100 pounds per day and increase the ambient PM₁₀ concentration by 5 micrograms per cubic meter (5.0 µg/m³) or greater at the maximum exposed individual.

4.2.1 Construction Impacts

4.2.1.1 Guidelines for the Determination of Significance

Based on the County of San Diego Guidelines (County of San Diego 2007), construction impacts would be potentially significant if they exceed the quantitative screening-level thresholds for attainment pollutants (NO₂, SO₂, and CO), and would result in a significant impact if they exceed the screening-level thresholds for nonattainment pollutants (ozone precursors and particulate matter).

4.2.1.2 Significance of Impacts Prior to Mitigation

As discussed in Section 1.0, the Chinese Bible Church of San Diego would be constructed in two phases. The first phase includes a 1,000 seat main sanctuary and ancillary facilities. The second phase would expand the main sanctuary to 1,500 seats, with construction of additional classrooms, offices, recreation facilities, café, bookstore, kitchen, and a preschool/kindergarten facility.

Emissions of pollutants such as fugitive dust and heavy equipment exhaust that are generated during construction are generally highest near the construction site. Emissions from the construction phase of the project were estimated using the CalEEMod Model, Version 2013.2.2 (ENVIRON 2013). For the purpose of estimating emissions from construction, it was assumed that the main grading activities would occur during Phase 1 of construction, and that Phase 2 would involve only fine grading activities.

Construction emission calculations were based on the construction phases and equipment and crew requirements identified for the project by the project developer and construction contractors. Table 4 presents a summary of the equipment needs for each construction phase.

**Table 4
Construction Phases and Equipment/Crew Requirements**

Construction Phase	Duration	Equipment/Crew	Number
Mass Grading	55 days	Grader	1
		Rubber-Tired Dozers	1
		Tractor/Backhoe/Loaders	1
		Water Trucks	1
Fine Grading	25 days	Grader	1
		Rubber-Tired Dozers	1
		Tractor/Backhoe/Loaders	1
		Water Trucks	1
Trenching	10 days	Excavator	2
		Other General Industrial Equipment	1
		Tractor/Loader/Backhoe	1
Paving	10 days	Paving Equipment	2
		Pavers	1
		Roller	1
		Cement and Mortar mixer	4
Building Construction	140 days	Tractor/Loader/Backhoe	1
		Cranes	1
		Forklifts	2
		Generators	1
		Tractor/Loader/Backhoe	1
		Welders	3

CalEEMod relies on the total area of the site and estimates site disturbance based on the maximum acres that can be graded given the construction equipment input in an 8-hour day. To account for standard dust control measures within the CalEEMod Model, it was assumed that watering active grading areas three times day would reduce particulate matter emissions by 61%. No other control measures were taken into account in the CalEEMod model.

Architectural coatings would be required to meet the requirements of SDAPCD Rule 67.0, which limits VOC content to 150 g/l for exterior paints and 100 g/l for interior paints. This rule was taken into account in the CalEEMod Model.

Tables 5a and 5b provide a summary of the emission estimates for Phase 1 and Phase 2, respectively. Refer to Attachment A for detailed CalEEMod Model outputs. In the original analysis, as shown in the Appendix, construction of Phase 1 was assumed to commence in April 2015 and be completed in February 2016. Construction of Phase 2 was assumed to commence in

June 2017 and be completed in April 2018. Because the project has not yet been approved, this provides a conservative estimate of construction emissions given that the CalEEMod model assumes that emissions from vehicles and construction equipment decrease in future years due to implementation of more stringent emission standards and requirements.

The following construction best management practices were assumed to be implemented during construction:

- Application of water three times daily during grading on active grading sites
- Dust control during equipment loading and unloading
- Application of water three times daily to unpaved roads
- Reduce speeds to 15 mph on unpaved roads
- Use architectural coatings with a VOC content of 150 g/l or less
- The project will request the construction contractor to provide a construction fleet that uses any combination of diesel catalytic converters, diesel oxidation catalysts, diesel particulate filters and/or ARB certified Tier III or IV equipment. If construction fleets cannot meet this it should be noted that even with the assumption that the construction fleet is represented by the average fleet for the years 2016 to 2018 when the project is being constructed, the impact would not exceed the County's threshold of 10 in a million. The average fleet does include equipment that is rated to Tier II and Tier III; and as time progresses, more of the construction equipment in the fleet will meet more stringent standards.

**Table 5a
Maximum Daily Estimated Construction Emissions, Phase 1**

Emission Source	VOCs	NOx	CO	SO_x	PM₁₀	PM_{2.5}
lbs/day						
Demolition						
Fugitive Dust	-	-	-	-	0.11	0.02
Off Road Diesel	3.94	40.64	29.80	0.04	2.31	2.15
Hauling	0.03	0.42	0.28	0.001	0.03	0.02
Worker Trips	0.03	0.04	0.40	0.001	0.07	0.02
TOTAL	4.00	41.10	30.48	0.04	2.52	2.21
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	No	No	No	No	No	No
Mass Grading						
Fugitive Dust	-	-	-	-	1.84	0.98
Off Road Diesel	5.05	55.13	32.88	0.04	2.76	2.54
Worker Trips	0.04	0.05	0.49	0.001	0.08	0.02
TOTAL	5.09	55.18	33.37	0.04	4.68	3.54
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	No	No	No	No	No	No
Fine Grading						
Fugitive Dust	-	-	-	-	1.93	0.97
Off Road Diesel	5.05	55.13	32.88	0.04	2.76	2.54
Worker Trips	0.04	0.05	0.49	0.001	0.08	0.02
TOTAL	5.09	55.18	33.37	0.04	4.77	3.53
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	No	No	No	No	No	No
Trenching						
Off Road Diesel	2.29	25.37	17.45	0.03	1.40	1.29
Worker Trips	0.04	0.05	0.49	0.001	0.08	0.02
TOTAL	3.33	25.42	17.94	0.03	1.48	1.31
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	No	No	No	No	No	No
Paving						
Asphalt Offgassing	0.00	-	-	-	-	-
Off Road Diesel	2.37	21.41	13.76	0.02	1.60	1.48
On Road Diesel	0.05	0.44	0.49	0.001	0.03	0.01
Worker Trips	0.09	0.10	1.14	0.002	0.19	0.05
TOTAL	2.51	21.95	15.39	0.02	1.82	1.54
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	No	No	No	No	No	No

Table 5a						
Maximum Daily Estimated Construction Emissions, Phase 1						
Emission Source	VOCs	NOx	CO	SO_x	PM₁₀	PM_{2.5}
lbs/day						
Building Construction						
Off Road Diesel	4.18	28.04	18.97	0.03	1.83	1.75
Vendor Trips	0.18	1.20	1.34	0.003	0.09	0.04
Worker Trips	0.10	0.12	1.33	0.003	0.22	0.06
TOTAL	4.46	29.36	21.64	0.04	2.14	1.85
Screening-Level Thresholds	75	250	550	250	100	55
<i>Above Screening-Level Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
Architectural Coatings						
Architectural Coatings Emissions	20.42	-	-	-	-	-
Off Road Diesel	0.37	2.37	1.88	0.003	0.20	0.20
Worker Trips	0.02	0.02	0.22	0.001	0.04	0.01
TOTAL	20.81	2.39	2.10	0.00	0.24	0.21
Screening-Level Thresholds	75	250	550	250	100	55
<i>Above Screening-Level Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
Maximum Simultaneous Emissions – Phase 1¹	20.81	96.27	63.84	0.08	10.22	7.28
Screening-Level Thresholds	75	250	550	250	100	55
<i>Above Screening-Level Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

¹Maximum emissions occur during demolition and mass grading, except for VOCs, which occur during simultaneous architectural coatings application and building construction.

Table 5b						
Maximum Daily Estimated Construction Emissions, Phase 2						
Emission Source	VOCs	NOx	CO	SO_x	PM₁₀	PM_{2.5}
lbs/day						
Fine Grading						
Fugitive Dust	-	-	-	-	1.97	0.97
Off Road Diesel	4.57	48.56	30.70	0.04	2.42	2.22
Worker Trips	0.03	0.04	0.44	0.001	0.08	0.02
TOTAL	4.60	48.60	31.14	0.04	4.47	3.21
Screening-Level Thresholds	75	250	550	250	100	55
<i>Above Screening-Level Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
Trenching						
Off Road Diesel	2.01	21.29	17.28	0.03	1.17	1.08
Worker Trips	0.03	0.04	0.44	0.001	0.08	0.02
TOTAL	2.04	21.33	17.72	0.03	1.25	1.10

Table 5b
Maximum Daily Estimated Construction Emissions, Phase 2

Emission Source	VOCs	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
lbs/day						
Screening-Level Thresholds	75	250	550	250	100	55
<i>Above Screening-Level Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<i>Paving</i>						
Asphalt Offgassing	0.00	-	-	-	-	-
Off Road Diesel	2.10	18.93	13.53	0.02	1.38	1.27
On Road Diesel	0.04	0.34	0.42	0.001	0.03	0.01
Worker Trips	0.07	0.09	0.93	0.002	0.19	0.05
TOTAL	2.21	19.36	14.88	0.02	1.60	1.33
Screening-Level Thresholds	75	250	550	250	100	55
<i>Above Screening-Level Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<i>Building Construction</i>						
Off Road Diesel	3.48	24.78	18.23	0.03	1.53	1.46
Vendor Trips	0.11	0.93	1.15	0.003	0.09	0.03
Worker Trips	0.09	0.10	1.09	0.003	0.22	0.06
TOTAL	3.68	25.81	20.47	0.04	1.84	1.55
Screening-Level Thresholds	75	250	550	250	100	55
<i>Above Screening-Level Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<i>Architectural Coatings</i>						
Architectural Coatings Emissions	3.85	-	-	-	-	-
Off Road Diesel	0.30	2.01	1.85	0.003	0.15	0.15
Worker Trips	0.01	0.02	0.18	0.001	0.04	0.01
TOTAL	4.16	2.03	2.03	0.00	0.19	0.16
Screening-Level Thresholds	75	250	550	250	100	55
<i>Above Screening-Level Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
Maximum Simultaneous Emissions – Phase 2¹	4.60	48.60	31.10	0.04	4.47	3.24
Screening-Level Thresholds	75	250	550	250	100	55
<i>Above Screening-Level Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

¹Maximum emissions occur during mass grading, except for VOCs, which occur during simultaneous building construction, and architectural coatings application.

As shown in Tables 5a and 5b, maximum simultaneous emissions are below the screening-level thresholds for all criteria pollutants.

4.2.1.3 Design Considerations

Project construction would employ dust control measures to reduce impacts. Dust control measures would include watering the site at least three times daily during active grading. In addition, the project would utilize low-VOC coatings in accordance with APCD Rule 67.0 requirements. The project would reduce emissions to the extent feasible. Emissions would therefore be less than significant.

4.2.1.4 Conclusions

Project criteria pollutants emissions during construction would be less than significant.

4.2.2 Operational Impacts

4.2.2.1 Guidelines for the Determination of Significance

Based on the County of San Diego Guidelines (County of San Diego 2007), operational impacts would be potentially significant if they exceed the quantitative screening-level thresholds for attainment pollutants (NO₂, SO₂, and CO), and would result in a significant impact if they exceed the screening-level thresholds for nonattainment pollutants (ozone precursors and particulate matter).

4.2.2.2 Significance of Impacts Prior to Mitigation

The main operational impacts of the Project are impacts associated with mobile source emissions; additional emissions would be associated with area sources such as energy use and landscaping.

Project-generated traffic was addressed in the Chinese Bible Church of San Diego Traffic Impact Study (KOA Corporation 2014). Based on the Traffic Impact Study, under Buildout conditions the weekday trip generation under buildout conditions would be 914 average daily trips (ADT), and the Sunday trip generation would be 2,775 ADT. Based on this trip generation and the

proposed land use, project operational emissions were estimated using the CalEEMod Model, Version 2013.2.2, assuming an operational year of 2016 for Phase 1 and 2018 for Phase 2, for conservative purposes. These assumptions are conservative because emissions from vehicles decrease with time due to increasingly stringent emission standards. Emissions were calculated for both summer and winter conditions, as well as for annual operations.

The results of the emission calculations, in lbs/day and tons/year, are summarized in Table 6 for buildout conditions, along with emissions associated with area sources and a comparison with the County of San Diego significance criteria. The CalEEMod outputs are presented in Appendix A.

Table 6						
Total Operational Emissions						
	VOCs	NOx	CO	Sox	PM₁₀	PM_{2.5}
Summer, Lbs/day						
Area Sources	2.39	0.00	0.01	0.00	0.00	0.00
Energy Use	0.03	0.26	0.21	0.002	0.02	0.02
Vehicular Emissions	8.14	14.67	70.49	0.17	11.18	3.11
TOTAL	10.53	14.92	70.71	0.17	11.20	3.13
Screening-Level Thresholds	75	250	550	250	100	55
<i>Above Screening-Level Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
Winter, Lbs/day						
Area Sources	2.00	0.00	0.01	0.00	0.00	0.00
Energy Use	0.03	0.26	0.21	0.002	0.02	0.02
Vehicular Emissions	8.73	15.56	76.95	0.16	11.18	3.12
TOTAL	10.75	15.81	77.17	0.16	11.20	3.14
Screening-Level Thresholds	75	250	550	250	100	55
<i>Above Screening-Level Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
Tons/year						
Area Sources	0.44	0.00	0.00	0.00	0.00	0.00
Energy Use	0.005	0.05	0.04	0.00	0.004	0.004
Vehicular Emissions	0.77	1.47	7.03	0.02	1.04	0.29
TOTAL	1.22	1.47	7.07	0.02	1.04	0.29
Screening-Level Thresholds	13.7	40	100	40	15	10
<i>Above Screening-Level Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Emissions associated with the project are below the County's screening-level thresholds for all pollutants. Because vehicular emissions decrease over time with phase-out of older vehicles and implementation of increasingly stringent emission controls, future emissions would decrease.

Projects involving traffic impacts may result in the formation of locally high concentrations of CO, known as CO "hot spots." To verify that the project would not cause or contribute to a violation of the CO standard, a screening evaluation of the potential for CO "hot spots" was conducted. The Traffic Impact Study (KOA Corporation 2014) evaluated whether or not there would be a decrease in the level of service at the roadways and/or intersections affected by the Project. The potential for CO "hot spots" was evaluated based on the results of the Traffic Impact Study. The Caltrans ITS Transportation Project-Level Carbon Monoxide Protocol (Caltrans 1998) should be followed to determine whether a CO "hot spot" is likely to form due to Project-generated traffic. In accordance with the Protocol, CO "hot spots" are typically evaluated when (a) the level of service (LOS) of an intersection or roadway decreases to a LOS E or worse; (b) signalization and/or channelization is added to an intersection; and (c) sensitive receptors such as residences, commercial developments, schools, hospitals, etc. are located in the vicinity of the affected intersection or roadway segment.

The Traffic Impact Study evaluated 10 intersections in the project vicinity to evaluate the LOS for Existing, Existing plus Project, Near-Term, and Buildout Conditions. CO "hot spots" would be possible at intersections because intersection traffic is subject to congestion and idling. The Traffic Impact Study identified significant impacts (i.e., a reduction in LOS to significant levels or a significant delay) at the following intersections:

- Camino del Norte at I-15 NB Ramps, am and pm peak hour
- Camino del Sur at 4 Gee Road, pm peak hour
- Camino del Norte at Bernardo Center Drive, pm peak hour

The Traffic Impact Study has recommended traffic mitigation measures that would reduce the traffic impacts to less than significant levels. The recommended mitigation measures would include widening the northbound approach at Camino del Sur and 4 Gee Road to provide a left turn lane, through lane, and 100 foot right turn pocket; widening the westbound approach at Camino del Norte and Bernardo Center Drive to provide two left turn lanes, three through lanes, and a 230 foot right turn pocket; and contributing to the traffic impact fee to reduce impacts at Camino del Norte at I-15 NB Ramps. These traffic mitigation measures reduce the impacts at the intersections listed above to less than significant levels; therefore, they improve the LOS and/or delay such that CO “hot spots” would not be anticipated.

To provide a qualitative, comparative analysis that identifies the potential for an exceedance of the CO standard based on intersection traffic volumes, a comparison of the project’s traffic volumes with traffic volumes modeled by the South Coast Air Quality Management District (SCAQMD) in their attainment demonstration for the CO standard. The SCAQMD modeled the three most congested intersections in the City of Los Angeles, plus an additional intersection within the South Coast Air Basin (SCAB) that was subject to high CO background concentrations, and demonstrated that these intersections would not experience a CO "hot spot."

In the attainment demonstration for the NAAQS for CO, the SCAQMD conducted a CO “hot spots” evaluation for four intersections within the SCAB. The four intersections that were chosen for the analysis included:

- Long Beach Blvd. and Imperial Highway – This intersection is located near the Lynwood ambient monitoring station, where the highest 8-hour CO concentrations within the SCAB are recorded.
- Wilshire Blvd. and Veteran Ave. – This intersection was identified as the most congested intersection in Los Angeles County, with traffic volumes of more than 100,000 vehicles/day.
- Highland Ave. and Sunset Blvd. – This intersection was identified as one of the most congested intersections in Los Angeles County.

- Century Blvd. and La Cienega Blvd. – This intersection was identified as one of the most congested intersections in Los Angeles County.

The SCAQMD's attainment demonstration, which was discussed in their 2003 AQMP (SCAQMD 2003), demonstrated that for these four intersections, which experience more than 100,000 ADT, no CO "hot spots" would result. These intersections studied by the SCAQMD in their attainment demonstration experience more than 100,000 ADT. If the peak hour traffic at a given intersection represents 17% to 18% of total ADT, peak hour traffic at the congested intersections in the SCAB would experience 18,000 vehicles in the am and pm peak hours. This level of peak hour traffic would still not result in a CO "hot spot", as demonstrated by the SCAQMD in their attainment demonstration in the 2003 AQMP.

In contrast, the intersections identified above would experience the following peak hour traffic:

- Camino del Norte at I-15 NB Ramps, am peak hour: 5,117 ADT
- Camino del Norte at I-15 NB Ramps, pm peak hour: 5,245 ADT
- Camino del Sur at 4 Gee Road, pm peak hour: 1,764 ADT
- Camino del Norte at Bernardo Center Drive, pm peak hour: 5,650 ADT

Thus these intersections would experience far less traffic than the intersections studied for the SCAB attainment demonstration. Intersections within the study area for the Chinese Bible Church Project would therefore experience less congestion than the attainment demonstration study intersections listed above, and would also experience lower levels of gasoline-powered vehicles than the study intersections. If congested intersections in downtown Los Angeles with more than 100,000 ADT would not experience a CO "hot spot", intersections in the vicinity of the project would not experience a CO "hot spot" even if not mitigated as proposed in the traffic analysis. The Project would therefore not result in CO "hot spots," and no further analysis was conducted.

Operational impacts would therefore be less than significant.

4.2.2.3 Design Considerations

No additional measures would be required to reduce impacts to less than significant beyond the mitigation measure proposed in the Traffic Impact Study. Even if mitigation measures were not required for traffic, because the ADT at all intersections studied for the Project is well below the levels studied by the SCAQMD in their CO attainment demonstration, no CO “hot spots” would result from Project traffic. Therefore, no mitigation measures would be required to reduce air quality impacts from Project traffic.

4.2.2.4 Conclusions

Emissions of all criteria pollutants would be less than the screening-level thresholds for project operations and would therefore not result in a significant impact to the ambient air quality.

4.3 Cumulatively Considerable Net Increase of Criteria Pollutants

The project will result in a significant impact to air quality if:

The project will result in a cumulatively considerable net increase of any criteria pollutant for which the San Diego Air Basin is non-attainment under an applicable Federal or State Ambient Air Quality Standard (including emissions which exceed the Screening Level Thresholds (SLTs) for ozone precursors listed in Table 5 of the Guidelines).

4.3.1 Construction Impacts

4.3.1.1 Guidelines for the Determination of Significance

Based on the County of San Diego Guidelines (County of San Diego 2007), a project would result in a cumulatively significant impact if the project results in a significant contribution to the cumulative increase in pollutants for which the SDAB is listed as nonattainment for the CAAQS

and NAAQS. As discussed in Section 2.0, the SDAB is considered a nonattainment area for the NAAQS for ozone and the CAAQS for ozone, PM₁₀, and PM_{2.5}.

Cumulatively considerable net increases during the construction phase would typically happen if two or more projects near each other are simultaneously under construction. A project that has a significant direct impact on air quality with regard to emissions of PM₁₀, PM_{2.5}, NO_x, or VOCs during construction would also have a significant cumulatively considerably net increase. In the event direct impacts from a proposed project are less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions of concern from the proposed project, in combination with the emissions of concern from other proposed projects or reasonably foreseeable future projects within a proximity relevant to the pollutants of concern, are in excess of the guidelines identified in Section 3.0.

4.3.1.2 Significance of Impacts Prior to Mitigation

The emissions budget for 2015 in the SIP, as reported on the ARB's website, includes the following emissions for construction for the SDAB:

- Off-Road Equipment: 10.05 tons/day VOC, 11.79 tons/day NO_x
- Construction Fugitive Dust: 28.67 tons/day PM₁₀, 2.87 tons/day PM_{2.5}

Emissions of nonattainment pollutants from the project would be a small percentage of the construction emissions evaluated in the RAQS and SIP for construction projects, and are also below the significance thresholds set forth by the County of San Diego.

The following cumulative projects were identified in the vicinity of the project:

- Lot 11 – 290,000 square feet of office uses (under construction)
- Lots A & B – 390,000 square feet of office uses (planned)
- The Vista – 270,000 square feet of office uses (unoccupied)
- BMR North Village – Multiple Uses

It is likely that Lot 11 and the Summit at Rancho Bernardo would be complete by the time the project is under construction. Lots A & B and 4S Village Phase 2 could be under construction simultaneously with the project. In general, impacts associated with fugitive dust from construction are generally localized and would affect the area within approximately one-quarter mile of the project site. To evaluate the potential for cumulative impacts from grading at the Chinese Bible Church of San Diego Project, the following equation was used (Desert Research Institute 1996), which is utilized in the SCAQMD's Localized Significance Threshold Methodology (SCAQMD 2003) to evaluate localized PM₁₀ impacts:

$$C_x = 0.9403 C_0 e^{-0.0462X}$$

Where C_x = predicted PM₁₀ concentration at X meters from the fenceline;

C_0 = PM₁₀ concentration at the fenceline;

e = natural logarithm; and

X = distance in meters from the fenceline.

Conservatively assuming C_0 equals the 24-hour ambient air quality standard of 50 µg/m³, fugitive PM₁₀ concentrations would decrease with distance from the fenceline. As shown in the chart below, by 100 meters (approximately 330 feet) from the project boundary, the concentration of PM₁₀ would decrease by 99 percent.

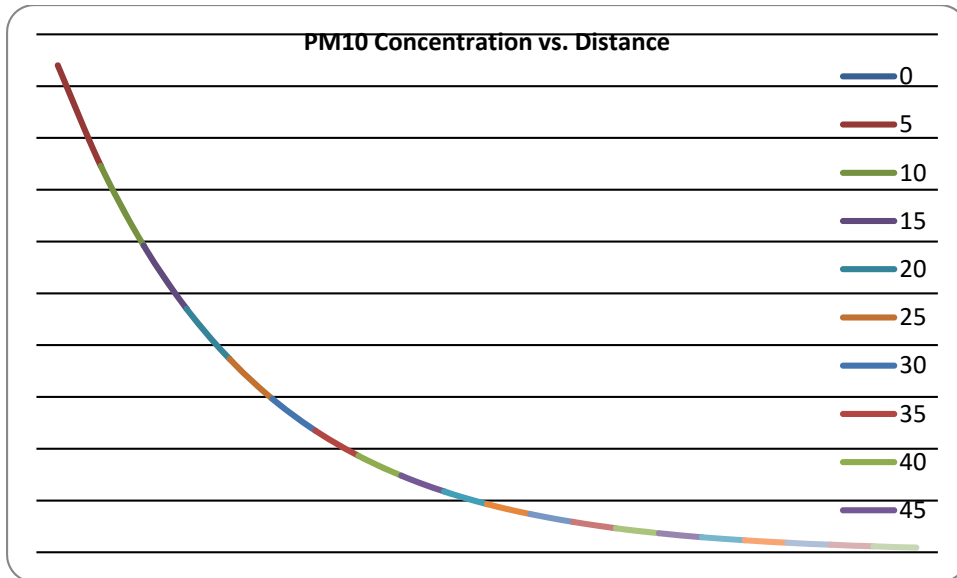


Figure 3. Concentration of PM₁₀ versus Distance

A review of other projects in the vicinity of the Santa Fe Valley Chinese Bible Church Project conducted for the traffic analysis identified four planned projects that were included in the cumulative analysis. These projects include the following:

- Lot 11 – 290,000 square feet of office uses
- Lots A & B – 390,000 square feet of office uses
- The Vista – 270,000 square feet of office uses
- BMR North Village – Multiple Uses

Based on this listing, none of the projects is within 100 meters of the site. Therefore the combined impact of PM₁₀ would not be substantial.

Because impacts would be limited to localized areas and emissions are below the significance thresholds, impacts would be less than cumulatively considerable.

4.3.1.3 Design Considerations

As no cumulatively considerable impact has been identified for the project, no design considerations are required.

4.3.1.4 Conclusions

Impacts would be less than significant.

4.3.2 Operational Impacts

4.3.2.1 Guidelines for the Determination of Significance

As discussed above in Section 4.3.1.1, based on the County of San Diego Guidelines (County of San Diego 2007), a project would result in a cumulatively significant impact if the project results in a significant contribution to the cumulative increase in NO_x, VOCs, PM₁₀, and PM_{2.5}. In accordance with the guidelines, a project that does not conform to the RAQS and/or has a significant direct impact on air quality with regard to operational emissions of nonattainment pollutants would also have a cumulatively considerable net increase.

4.3.2.2 Significance of Impacts Prior to Mitigation

Emissions of nonattainment pollutants PM₁₀, PM_{2.5}, NO_x, or VOCs would be below the screening-level thresholds for project operations. The project would therefore not result in a cumulatively considerable net increase in nonattainment pollutants. The evaluation of CO “hot spots” took into account cumulative traffic at the intersections, and no exceedance of the CO standard would result from cumulative traffic.

4.3.2.3 Design Considerations

As discussed in Section 4.1.3, the project is consistent with the RAQS and SIP because it provides a civic use adjacent to the Village, and is consistent with SANDAG projections. The project is therefore consistent with the RAQS and SIP.

4.3.2.4 Conclusions

Emissions of nonattainment pollutants are less than the screening-level thresholds for nonattainment pollutants. Therefore, the project would not result in an exceedance of the ozone standard. The project is consistent with the RAQS and SIP. Therefore impacts are less than cumulatively considerable.

4.4 Impacts to Sensitive Receptors

4.4.1 Guidelines for the Determination of Significance

The project will result in a significant impact to air quality if:

The project will expose sensitive receptors to substantial pollutant concentrations.

Air quality regulators typically define “sensitive receptors” as schools, hospitals, resident care facilities, day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. However, for the purpose of CEQA analysis, the County of San Diego definition of “sensitive receptors” includes residences (County of San Diego 2007). The two primary emissions of concern for impacts to sensitive receptors are CO and diesel particulate matter. As discussed in Section 4.2.3.2, operational impacts would not result in CO “hot spots”. This analysis therefore focuses on diesel particulate matter.

4.4.2 Significance of Impacts Prior to Mitigation

The project would result in emissions of diesel exhaust particulate matter during construction activities and from truck traffic associated with project operations. To evaluate whether project construction could pose a significant impact to nearby sensitive receptors, an evaluation of diesel exhaust particulate matter was conducted. Diesel exhaust particulate matter is known to the state of California as carcinogenic compounds. The risks associated with exposure to substances with carcinogenic effects are typically evaluated based on a lifetime of chronic exposure, which is defined in the California Office of Environmental Health Hazard Assessment (OEHHA) guidelines, *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2015) as 24 hours per day, 7 days per week, 350 days per year, for 30 years. Diesel exhaust particulate matter would be emitted during construction due to the operation of heavy equipment at the site. Because diesel exhaust particulate matter is considered to be carcinogenic, long-term exposure to diesel exhaust emissions have the potential to result in adverse health impacts.

To assess whether there is a potential for a significant impact associated with exposure to diesel exhaust particulate matter, a health risk evaluation was conducted on the particulate emissions. The amount of diesel particulate varies with the project schedule and construction phasing; there are two phases proposed to construct the project.

The construction contractor provided a detailed list of equipment and estimates of the duration and location of use for each piece of equipment. Emissions for the duration of construction were then calculated based on these estimates. The analysis differs from the analysis used to calculate maximum daily emissions because it takes into account limitations on equipment use at the site. Table 7 provides a list of the construction equipment used for each phase of construction.

**Table 7
List of Construction Equipment and Total Usage**

Phase	Equipment	Amount	CalEEMod Values			Hours per Day	Duration (days)	Total Hours
			Horsepower	Load Factor	DPM Emission Factor, g/bhp-hr			
Mass Site Grading	Scrapers/Grader	1	362	0.48	0.2321	6	30	180
	Rubber Tired Dozer	1	255	0.4	0.3588	6	15	90
	Tractor/Loader/Backhoe	1	98	0.37	0.3959	7	15	105
	Water Truck	1	400	0.28	0.1527	8	30	240
Fine Site Grading	Grader	1	175	0.41	0.4635	6	10	60
	Rubber Tired Dozer	1	255	0.4	0.3588	6	5	30
	Tractor/Loader/Backhoe	1	98	0.37	0.3959	7	5	35
	Water Truck	1	400	0.28	0.1527	8	10	80
Trenching	Excavators	2	163	0.38	0.2008	8	10	80
	Other General Industrial Equipment	1	88	0.34	0.5178	8	10	80
	Tractor/Loader/Backhoe	1	98	0.37	0.3959	8	5	40
Paving	Cement and Mortar Mixers	4	9	0.56	0.167	6	10	60
	Paver	1	126	0.42	0.2422	7	10	70
	Paving Equipment	2	131	0.36	0.2145	6	10	60
	Roller	1	81	0.38	0.4275	7	10	70
	Tractor/Loader/Backhoe	1	98	0.37	0.3959	7	10	70
Building Construction	Crane	1	226	0.29	0.3349	4	8	32
	Forklifts	2	100	0.2	0.2131	6	60	360
	Generator Set	1	84	0.74	0.309	8	30	240
	Tractor/Loader/Backhoe	1	98	0.37	0.3959	8	20	160
	Welders	3	46	0.45	0.389	8	10	80

Table 8 provides an estimate of the total usage for each piece of construction equipment used at the site. Figure 4 provides a diagram showing the construction zones.

Phase	Equipment	Estimated hours in each Construction Zone								
		A	B	C	D	E	F	G	H	I
Mass Site Grading	Scrapers/Grader	6	6	28	28	28	14	28	14	28
	Rubber Tired Dozer	3	3	14	14	14	7	14	7	14
	Tractor/Loader/Backhoe	7	7	10	17	17	7	24	7	10
	Water Truck	8	8	38	38	38	19	38	19	38
Fine Site Grading	Grader	7	7	7	7	7	7	10	3	7
	Rubber Tired Dozer	4	4	4	4	4	4	5	2	2
	Tractor/Loader/Backhoe	4	4	4	4	4	4	6	2	2
	Water Truck	9	9	9	9	9	9	13	4	9
Trenching	Excavators	0	36	0	0	0	0	36	0	7
	Other General Industrial Equipment	0	36	0	0	0	0	36	0	7
	Tractor/Loader/Backhoe	0	20	0	0	0	0	13	0	7
Paving	Cement and Mortar Mixers	0	60	0	0	0	0	0	0	0
	Paver	0	70	0	0	0	0	0	0	0
	Paving Equipment	0	60	0	0	0	0	0	0	0
	Roller	0	70	0	0	0	0	0	0	0
	Tractor/Loader/Backhoe	0	70	0	0	0	0	0	0	0
Building Construction	Crane	0	32	0	0	0	0	0	0	0
	Forklifts	0	360	0	0	0	0	0	0	0
	Generator Set	0	240	0	0	0	0	0	0	0
	Tractor/Loader/Backhoe	0	160	0	0	0	0	0	0	0
	Welders	0	80	0	0	0	0	0	0	0

Table 9 provides an estimate of the total DPM emissions for each piece of equipment based on the usage in each construction zone.

Table 9 Diesel Particulate Matter Emissions per Construction Zone										
Phase	Equipment	Total DPM per Construction Zone, lbs per duration of construction								
		A	B	C	D	E	F	G	H	I
Mass Site Grading	Scrapers/Grader	0.50	0.50	2.50	2.50	2.50	1.25	2.50	1.25	2.50
	Rubber Tired Dozer	0.23	0.23	1.13	1.13	1.13	0.57	1.13	0.57	1.13
	Tractor/Loader/Backhoe	0.21	0.21	0.32	0.54	0.54	0.21	0.75	0.21	0.32
	Water Truck	0.28	0.28	1.41	1.41	1.41	0.71	1.41	0.71	1.41
Fine Site Grading	Grader	0.49	0.49	0.49	0.49	0.49	0.49	0.73	0.24	0.49
	Rubber Tired Dozer	0.28	0.28	0.28	0.28	0.28	0.28	0.43	0.14	0.14
	Tractor/Loader/Backhoe	0.13	0.13	0.13	0.13	0.13	0.13	0.20	0.07	0.07
	Water Truck	0.34	0.34	0.34	0.34	0.34	0.34	0.50	0.17	0.34
Trenching	Excavators	0.00	1.99	0.00	0.00	0.00	0.00	1.99	0.00	0.40
	Other General Industrial Equipment	0.00	1.24	0.00	0.00	0.00	0.00	1.24	0.00	0.25
	Tractor/Loader/Backhoe	0.00	0.63	0.00	0.00	0.00	0.00	0.42	0.00	0.21
Paving	Cement and Mortar Mixers	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Paver	0.00	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Paving Equipment	0.00	2.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Roller	0.00	2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Tractor/Loader/Backhoe	0.00	2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Crane	0.00	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Forklifts	0.00	6.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Generator Set	0.00	10.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Tractor/Loader/Backhoe	0.00	5.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Welders	0.00	4.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		2.46	43.48	6.61	6.82	6.82	3.98	11.32	3.36	7.26

The construction heavy equipment sources were represented as an elevated volume source placed in each construction zone at the site. The sources were modeled as elevated volume sources to account for buoyancy resulting from the heat of the exhaust. Emissions were allocated to each source based on the estimated emission rates for diesel particulate during construction in each zone, as shown in Table 9.

The nearest existing receptors were located based on the site map and aerial photographs for the project area. A grid was placed from the site boundary outward to include residences surrounding the project area. The source and receptor configuration is shown in Figure 2. The risk evaluation was conducted to assess the potential for an unacceptable risk at these existing receptors due to exposure to diesel particulate emissions from heavy construction equipment during construction. The residential receptors identified are the closest residences. No other sensitive receptors are located in the project vicinity.

The U.S. EPA's approved air dispersion model, AERMOD (U.S. EPA 2009), was used to estimate the downwind impacts at the closest receptors to the construction site. The model was run using preprocessed meteorological data from the Escondido surface meteorological monitoring station provided by the San Diego Air Pollution Control District. Risks were estimated using the Office of Environmental Health Hazard Assessment (OEHHA)'s March 2015 *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*.

OEHHA recommends exposure assumptions to calculate potential health risks, including adjustments to account for childhood exposure, to calculate excess cancer risks. The guidance recommends a 30-year exposure period for use as the basis for estimating cancer risk at residential receptors. Risks are calculated on the basis of the 30-year exposure period, accounting for childhood sensitivity, using the OEHHA-recommended age sensitivity factors (ASFs) to take into account the increased sensitivity to carcinogens during early-in-life exposure. In addition, high-end breathing rates recommended by OEHHA were used to provide a conservative estimate of risk. The residential exposure scenario assumes that an individual is present at the same location 24 hours per day, 350 days per year, for a 30-year period that includes childhood. Table 10 presents

the exposure factors used in this analysis to evaluate potential risks from the construction of the project.

Table 10 Risk Assessment Exposure Factors					
Risk Calculation Parameters	Breathing Rate/Body Weight. L/kg-day	Age Sensitivity Factor	Exposure Duration, years	Averaging Time, years	Fraction of Time at Home
Time Period of Exposure, years	High End BR/BW	ASF	ED	AT	FAH
3rd Trimester	361	10	0.25	70	0.85
0<2	1090	10	2	70	0.85
2<16	745	3	14	70	0.72
16<30	335	1	14	70	0.73
Cancer Potency Factors					
Diesel Particulate	1.10E+00(mg/kg-day) ⁻¹				

Source: OEHHA 2015

Risks are calculated on the basis of a 30-year exposure scenario as recommended by OEHHA. Because the risk calculation is based on 30 years (10950 days) of exposure for 24 hours per day, 350 days per year, the results of the analysis were scaled to account for exposure for the duration of each individual construction phase, as shown in the example calculation below.

Risk = Excess cancer risk for 30 years x [(2222 hours of construction/24 hours/day)/10950 days].

The total hours of construction was based on the total hours of equipment use calculated overall at the site, which totals 2222 hours.. The maximum concentration at an offsite receptor is 1.31454 µg/m³. The maximum concentration at any receptor was used to calculate risk based on on-site diesel particulate emissions. The risk predicted using this equation is then compared to a risk level of 10 in 1 million, which is the County’s significance threshold with implementation of Toxics-Best Available Control Technology (T-BACT). If the risk predicted using this equation is above 10 in 1 million, the risk would be above the County of San Diego’s significance threshold. Based on the above equation, the maximum excess cancer risk predicted at the nearest residential receptor

would be 7.59 in a million. This value is below the County of San Diego's significance threshold of 10 in 1 million with implementation of T-BACT.

In addition, the chronic hazard was calculated based on the potential for adverse non-cancer health effects associated with exposure to diesel particulate matter. It should be noted that cancer risks generally drive the potential risk assessment for diesel particulate matter. The reference exposure level (REL) for diesel particulate matter is $5 \mu\text{g}/\text{m}^3$. The hazard quotient is calculated by dividing the downwind concentration of diesel particulate matter by the REL. The chronic hazard quotient for construction of the Chinese Bible Church would therefore be 0.263, which is below the County's significance hazard threshold of 1.0.

T-BACT will include the following measure:

In accordance with County of San Diego Planning and Development Services requirements, the project will request the construction contractor to provide a construction fleet that uses any combination of diesel catalytic converters, diesel oxidation catalysts, diesel particulate filters and/or ARB certified Tier III or IV equipment. If construction fleets cannot meet this requirement, the applicant will use the best available fleet. It should be noted that even with the assumption that the construction fleet is represented by the average fleet for the years 2016 when the project is being constructed, the impact would not exceed the County's threshold of 10 in a million. The average fleet does include equipment that is rated to Tier II and Tier III; and as time progresses, more of the construction equipment in the fleet will meet more stringent standards.

The risk associated with exposure to diesel particulate from construction of the project is therefore not significant. Results of the risk evaluation and risk calculations are included in Appendix A.

In general, operational vehicular traffic may result in emissions of toxic air contaminants (TACs). Minor amounts of TACs are found in light-duty vehicle exhaust; however, the main source of on-road TACs is from diesel-powered heavy-duty trucks. Because the project is a multiple use religious assembly, with minimal amounts of truck traffic expected during operations, no risks to surrounding sensitive receptors would be anticipated from project operations.

4.4.3 Design Considerations

Because impacts to sensitive receptors from diesel particulate emissions would be less than significant, no additional design considerations are required.

4.4.4 Conclusions

Impacts to sensitive receptors would be less than significant.

4.5 Odor Impacts

4.5.1 Guidelines for the Determination of Significance

The project will result in a significant impact to air quality if:

The project which is not an agricultural, commercial or an industrial activity subject to SDAPCD standards, as a result of implementation, will either generate objectionable odors or place sensitive receptors next to existing objectionable odors, which will affect a considerable number of persons or the public.

4.5.2 Significance of Impacts Prior to Mitigation

Project construction could result in minor amounts of odor compounds associated with diesel heavy equipment exhaust. Because the construction equipment would be operating at various locations throughout the construction site, and because any operation that would occur in the vicinity of existing receptors would be temporary, impacts associated with odors during construction are therefore not considered significant.

During construction, diesel equipment operating at the site may generate some nuisance odors; however, due to the distance of sensitive receptors to the project site and the temporary nature of construction, odors associated with project construction would not be significant.

For operations, according to the SCAQMD CEQA Air Quality Handbook (SCAQMD 1993), land uses associated with odor complaints are agricultural operations, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding plants. The project is not in any of these categories, and is not proposing any of these uses. Furthermore, all sources within the SDAB are subject to Rule 51, Nuisance, which requires that a facility “shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property.” Rule 51 prohibits emissions of odors that would cause a nuisance. Multiple use religious assemblies must operate without violating applicable odor regulations. The project is not considered a source of objectionable odors from operations.

4.5.3 Design Considerations

Because the project would not generate objectionable odors or place sensitive receptors near existing odor sources that would affect a considerable number of persons or the public, no additional design considerations are required.

4.5.4 Conclusions

Due to the nature of the project as a multiple use religious assembly, the project is not identified as a specific source of nuisance odors. Odor impacts are therefore less than significant.

5.0 SUMMARY OF RECOMMENDED DESIGN FEATURES, IMPACTS, AND MITIGATION

In summary, the proposed project would result in emissions of air pollutants for both the construction phase and operational phase of the project. The air quality impact analysis evaluated the following air quality issues, and made the following conclusions:

The project will conflict with or obstruct the implementation of the San Diego Regional Air Quality Strategy (RAQS) and/or applicable portions of the State Implementation Plan (SIP).

The overall use of the site, including the school and off-peak activities, would be greater than what currently exists, but would generally be compatible with the other existing (and proposed) local schools, shopping center, urban core, and multi-family residential developments. The physical characteristics are compatible with existing uses. The project provides a civic use adjacent to the 4S Ranch Village, and would not increase VMT. The project is therefore consistent with the RAQS and SIP.

The project would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation.

The project will result in emissions that exceed 250 pounds per day of NO_x, or 75 pounds per day of VOCs.

The project will result in emissions of carbon monoxide that when totaled with the ambient concentrations will exceed a 1-hour concentration of 20 parts per million (ppm) or an 8-hour average of 9 ppm.

The project will result in emissions of PM_{2.5} that will exceed 55 pounds per day.

The project will result in emissions of PM₁₀ that exceed 100 pounds per day and increase the ambient PM₁₀ concentration by 5 micrograms per cubic meter (5.0 µg/m³) or greater at the maximum exposed individual.

Both construction and operational emissions were evaluated to address these impacts. During both construction and operations, the project would result in emissions that are less than the screening-

level thresholds for all criteria pollutants. To reduce the emissions to the extent feasible, fugitive dust control measures will be implemented during construction. Measures that are incorporated into the project description to reduce emissions associated with construction include the following:

- Application of water three times daily during grading on active grading sites
- Dust control during equipment loading and unloading
- Application of water three times daily to unpaved roads
- Reduce speeds to 15 mph on unpaved roads
- Use architectural coatings with a VOC content of 150 g/l or less

The project will request the construction contractor to provide a construction fleet that uses any combination of diesel catalytic converters, diesel oxidation catalysts, diesel particulate filters and/or ARB certified Tier III or IV equipment. If construction fleets cannot meet this requirement, the applicant will use the best available fleet.

These measures constitute best management practices for dust control, architectural coatings, diesel particulate, and construction equipment emissions.

Operational emissions would be associated with traffic accessing the project, and with area sources such as energy use and landscaping. Based on the evaluation of air emissions, the project emissions would not exceed the screening-level thresholds. Furthermore, emissions associated with traffic would decrease with time as older vehicles are phased out and more stringent emission standards are applied to new vehicles. Impacts will be less than significant.

The project will result in a cumulatively considerable net increase of any criteria pollutant for which the San Diego Air Basin is non-attainment under an applicable Federal or State Ambient Air Quality Standard (including emissions which exceed the SLTs for ozone precursors listed in Table 5 of the Guidelines).

Emissions of nonattainment pollutants PM₁₀, PM_{2.5}, NO_x, and VOCs would not exceed the screening-level thresholds for project construction. The emissions budget for 2015 in the SIP, as reported on the ARB's website, includes the following emissions for construction for the SDAB:

- Off-Road Equipment: 10.05 tons/day VOC, 11.79 tons/day NOx
- Construction Fugitive Dust: 28.67 tons/day PM₁₀, 2.87 tons/day PM_{2.5}

Emissions of nonattainment pollutants would be consistent with the construction emissions evaluated in the RAQS and SIP for construction projects and would not be cumulatively considerable. Emissions of PM₁₀ would be localized and would not result in a cumulatively considerable impact.

Operational emissions are below the screening-level thresholds and would not be cumulatively considerable.

The project will expose sensitive receptors to substantial pollutant concentrations.

As discussed in Section 4.4, the project would not expose sensitive receptors to substantial pollutant concentrations.

The project which is not an agricultural, commercial or an industrial activity subject to SDAPCD standards, as a result of implementation, will either generate objectionable odors or place sensitive receptors next to existing objectionable odors, which will affect a considerable number of persons or the public.

The project would not generate objectionable odors that would affect a considerable number of persons or the public. Odor impacts are less than significant.

6.0 REFERENCES

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- California Air Resources Board. 1998. Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant, Appendix III, Part A, Exposure Assessment
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- South Coast Air Quality Management District. 2002. Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions.
- South Coast Air Quality Management District. 2003. 2003 Air Quality Management Plan.
- USEPA. 2007. *The Plain English Guide to the Clean Air Act*.
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7.0 LIST OF PREPARERS AND PERSONS AND ORGANIZATIONS CONTACTED

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Appendix A

Emission Calculations

Santa Fe Valley Chinese Church
San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	64.63	1000sqft	9.03	64,625.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2016
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	622.74	CH4 Intensity (lb/MWhr)	0.026	N2O Intensity (lb/MWhr)	0.007

1.3 User Entered Comments & Non-Default Data

- Construction Phase - Adding demolition to Phase 1
- Grading - Mass site grading includes acres disturbed
- Demolition - Based on estimated square footage
- Off-road Equipment - Assuming demolition equipment used.
- Trips and VMT - Assuming no vendor trips for demolition of existing residence.
- Vehicle Trips - Based on site size for Phase I and traffic impact study
- Area Coating - Rule 67.0 coatings
- Energy Mitigation -
- Water Mitigation -
- Waste Mitigation -

Table Name	Column Name	Default Value	New Value
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tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	260
tblAreaCoating	Area_Nonresidential_Interior	96938	0
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	260	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	0
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tblConstructionPhase	NumDays	230.00	140.00
tblConstructionPhase	NumDays	20.00	55.00
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	20.00	11.00
tblConstructionPhase	PhaseEndDate	4/15/2016	4/17/2016
tblConstructionPhase	PhaseEndDate	2/29/2016	3/1/2016
tblConstructionPhase	PhaseEndDate	7/1/2015	6/15/2015
tblConstructionPhase	PhaseStartDate	4/16/2015	4/1/2015
tblGrading	AcresOfGrading	20.63	10.00
tblGrading	AcresOfGrading	9.38	10.00
tblLandUse	LandUseSquareFeet	64,630.00	64,625.00
tblLandUse	LotAcreage	1.48	9.03
tblOffRoadEquipment	HorsePower	226.00	208.00
tblOffRoadEquipment	HorsePower	89.00	149.00
tblOffRoadEquipment	HorsePower	174.00	162.00
tblOffRoadEquipment	HorsePower	174.00	162.00
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tblOffRoadEquipment	HorsePower	255.00	358.00

tblOffRoadEquipment	HorsePower	255.00	358.00
tblOffRoadEquipment	HorsePower	97.00	75.00
tblOffRoadEquipment	HorsePower	97.00	75.00
tblOffRoadEquipment	HorsePower	97.00	75.00
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tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Dozers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
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tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.026
tblProjectCharacteristics	CO2IntensityFactor	720.49	622.74
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.007
tblProjectCharacteristics	OperationalYear	2014	2016
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	18.00	8.00
tblTripsAndVMT	WorkerTripNumber	13.00	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	10.00

tblVehicleTrips	ST_TR	10.37	17.67
tblVehicleTrips	SU_TR	36.63	42.94
tblVehicleTrips	WD_TR	9.11	17.67

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					
2015	9.0848	96.2670	63.8443	0.0808	5.1512	5.0719	10.2231	2.5899	4.6971	7.2871	0.0000	8,387.9510	8,387.9510	2.3228	0.0000	18,436.7291
2016	20.8091	27.6673	21.0597	0.0329	0.2948	1.7011	1.9959	0.0797	1.6262	1.7059	0.0000	3,113.0570	3,113.0570	0.6354	0.0000	13,126.3996
Total	29.8939	123.9343	84.9039	0.1137	5.4460	6.7730	12.2190	2.6696	6.3234	8.9930	0.0000	11,501.0079	11,501.0079	2.9581	0.0000	11,563.1287

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					
2015	9.0848	96.2670	63.8443	0.0808	2.1127	5.0719	7.1846	1.0377	4.6971	5.7349	0.0000	8,387.9510	8,387.9510	2.3228	0.0000	18,436.7291
2016	20.8091	27.6673	21.0597	0.0329	0.2948	1.7011	1.9959	0.0797	1.6262	1.7059	0.0000	3,113.0569	3,113.0569	0.6354	0.0000	13,126.3996
Total	29.8939	123.9343	84.9039	0.1137	2.4075	6.7730	9.1805	1.1174	6.3234	7.4407	0.0000	11,501.0079	11,501.0079	2.9581	0.0000	11,563.1287

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	55.79	0.00	24.87	58.14	0.00	17.26	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	1.4903	6.0000e-005	6.7700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0141	0.0141	4.0000e-005		0.0150
Energy	0.0225	0.2047	0.1719	1.2300e-003		0.0156	0.0156		0.0156	0.0156		245.5854	245.5854	4.7100e-003	4.5000e-003	247.0800
Mobile	9.3074	17.2004	82.3237	0.1652	10.9839	0.2196	11.2034	2.9321	0.2019	3.1339		14,390.7504	14,390.7504	0.6237		14,403.8474
Total	10.8202	17.4051	82.5024	0.1664	10.9839	0.2352	11.2190	2.9321	0.2174	3.1495		14,636.3499	14,636.3499	0.6284	4.5000e-003	14,650.9424

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	1.4903	6.0000e-005	6.7700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0141	0.0141	4.0000e-005		0.0150
Energy	0.0203	0.1850	0.1554	1.1100e-003		0.0141	0.0141		0.0141	0.0141		221.9434	221.9434	4.2500e-003	4.0700e-003	223.2941
Mobile	9.3074	17.2004	82.3237	0.1652	10.9839	0.2196	11.2034	2.9321	0.2019	3.1339		14,390.7504	14,390.7504	0.6237		14,403.8474
Total	10.8181	17.3854	82.4858	0.1663	10.9839	0.2337	11.2175	2.9321	0.2159	3.1480		14,612.7079	14,612.7079	0.6280	4.0700e-003	14,627.1565

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.02	0.11	0.02	0.07	0.00	0.63	0.01	0.00	0.69	0.05	0.00	0.16	0.16	0.07	9.56	0.16

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2015	4/15/2015	5	11	
2	Mass Site Grading	Grading	4/1/2015	6/15/2015	5	55	
3	Fine Site Grading	Grading	6/16/2015	7/20/2015	5	25	
4	Trenching	Trenching	7/21/2015	8/3/2015	5	10	
5	Paving	Paving	8/4/2015	8/17/2015	5	10	
6	Building Construction	Building Construction	8/18/2015	3/1/2016	5	140	
7	Architectural Coating	Architectural Coating	3/2/2016	4/17/2016	5	33	

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: 96,938; Non-Residential Outdoor: 32,313 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mass Site Grading	Graders	1	6.00	162	0.61
Mass Site Grading	Off-Highway Trucks	1	8.00	250	0.57
Mass Site Grading	Rubber Tired Dozers	1	6.00	358	0.59
Mass Site Grading	Tractors/Loaders/Backhoes	1	7.00	75	0.55
Fine Site Grading	Graders	1	6.00	162	0.61
Fine Site Grading	Off-Highway Trucks	1	8.00	250	0.57
Fine Site Grading	Rubber Tired Dozers	1	6.00	358	0.59

Fine Site Grading	Tractors/Loaders/Backhoes	1	7.00	75	0.55
Trenching	Excavators	2	8.00	157	0.57
Trenching	Other General Industrial Equipment	1	8.00	150	0.51
Trenching	Tractors/Loaders/Backhoes	1	8.00	75	0.55
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	89	0.62
Paving	Paving Equipment	2	6.00	82	0.53
Paving	Rollers	1	7.00	84	0.56
Paving	Tractors/Loaders/Backhoes	1	7.00	75	0.55
Building Construction	Cranes	1	4.00	208	0.43
Building Construction	Forklifts	2	6.00	149	0.30
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	8.00	75	0.55
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Mass Site Grading	Excavators	1	8.00	162	0.38
Fine Site Grading	Excavators	1	8.00	162	0.38

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
Mass Site Grading	5	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Fine Site Grading	5	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	9	23.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	27.00	11.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHTD
Demolition	7	8.00	0.00	14.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHTD

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2718	0.0000	0.2718	0.0412	0.0000	0.0412			0.0000			0.0000
Off-Road	3.9380	40.6433	29.7999	0.0371		2.3068	2.3068		2.1533	2.1533		3,834.6085	3,834.6085	1.0315		3,856.2693
Total	3.9380	40.6433	29.7999	0.0371	0.2718	2.3068	2.5786	0.0412	2.1533	2.1944		3,834.6085	3,834.6085	1.0315		3,856.2693

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	0.0286	0.4157	0.2790	9.5000e-004	0.0222	6.4500e-003	0.0286	6.0700e-003	5.9400e-003	0.0120		97.0760	97.0760	7.9000e-004		97.0925
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	0.0307	0.0362	0.3955	8.3000e-004	0.0657	5.2000e-004	0.0662	0.0174	4.7000e-004	0.0179		72.0007	72.0007	3.7700e-003		72.0799

Total	0.0593	0.4519	0.6745	1.7800e-003	0.0879	6.9700e-003	0.0949	0.0235	6.4100e-003	0.0299		169.0767	169.0767	4.5600e-003		169.1724
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1060	0.0000	0.1060	0.0161	0.0000	0.0161			0.0000			0.0000
Off-Road	3.9380	40.6433	29.7999	0.0371		2.3068	2.3068		2.1533	2.1533	0.0000	3,834.6085	3,834.6085	1.0315		3,856.2693
Total	3.9380	40.6433	29.7999	0.0371	0.1060	2.3068	2.4128	0.0161	2.1533	2.1693	0.0000	3,834.6085	3,834.6085	1.0315		3,856.2693

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	0.0286	0.4157	0.2790	9.5000e-004	0.0222	6.4500e-003	0.0286	6.0700e-003	5.9400e-003	0.0120		97.0760	97.0760	7.9000e-004		97.0925
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	0.0307	0.0362	0.3955	8.3000e-004	0.0657	5.2000e-004	0.0662	0.0174	4.7000e-004	0.0179		72.0007	72.0007	3.7700e-003		72.0799
Total	0.0593	0.4519	0.6745	1.7800e-003	0.0879	6.9700e-003	0.0949	0.0235	6.4100e-003	0.0299		169.0767	169.0767	4.5600e-003		169.1724

3.3 Mass Site Grading - 2015

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					4.7094	0.0000	4.7094	2.5035	0.0000	2.5035			0.0000			0.0000
Off-Road	5.0492	55.1266	32.8754	0.0409		2.7575	2.7575		2.5369	2.5369		4,294.2650	4,294.2650	1.2820		4,321.1874
Total	5.0492	55.1266	32.8754	0.0409	4.7094	2.7575	7.4669	2.5035	2.5369	5.0404		4,294.2650	4,294.2650	1.2820		4,321.1874

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	0.0383	0.0452	0.4944	1.0400e-003	0.0822	6.4000e-004	0.0828	0.0218	5.9000e-004	0.0224		90.0008	90.0008	4.7200e-003		90.0999
Total	0.0383	0.0452	0.4944	1.0400e-003	0.0822	6.4000e-004	0.0828	0.0218	5.9000e-004	0.0224		90.0008	90.0008	4.7200e-003		90.0999

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					1.8367	0.0000	1.8367	0.9764	0.0000	0.9764			0.0000			0.0000
Off-Road	5.0492	55.1266	32.8754	0.0409		2.7575	2.7575		2.5369	2.5369	0.0000	4,294.2650	4,294.2650	1.2820		4,321.1874
Total	5.0492	55.1266	32.8754	0.0409	1.8367	2.7575	4.5941	0.9764	2.5369	3.5132	0.0000	4,294.2650	4,294.2650	1.2820		4,321.1874

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	0.0383	0.0452	0.4944	1.0400e-003	0.0822	6.4000e-004	0.0828	0.0218	5.9000e-004	0.0224		90.0008	90.0008	4.7200e-003		90.0999
Total	0.0383	0.0452	0.4944	1.0400e-003	0.0822	6.4000e-004	0.0828	0.0218	5.9000e-004	0.0224		90.0008	90.0008	4.7200e-003		90.0999

3.4 Fine Site Grading - 2015

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					4.9408	0.0000	4.9408	2.5285	0.0000	2.5285			0.0000			0.0000
Off-Road	5.0492	55.1266	32.8754	0.0409		2.7575	2.7575		2.5369	2.5369		4,294.2650	4,294.2650	1.2820		4,321.1874
Total	5.0492	55.1266	32.8754	0.0409	4.9408	2.7575	7.6982	2.5285	2.5369	5.0654		4,294.2650	4,294.2650	1.2820		4,321.1874

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	0.0383	0.0452	0.4944	1.0400e-003	0.0822	6.4000e-004	0.0828	0.0218	5.9000e-004	0.0224		90.0008	90.0008	4.7200e-003		90.0999
Total	0.0383	0.0452	0.4944	1.0400e-003	0.0822	6.4000e-004	0.0828	0.0218	5.9000e-004	0.0224		90.0008	90.0008	4.7200e-003		90.0999

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					1.9269	0.0000	1.9269	0.9861	0.0000	0.9861			0.0000			0.0000
Off-Road	5.0492	55.1266	32.8754	0.0409		2.7575	2.7575		2.5369	2.5369	0.0000	4,294.2650	4,294.2650	1.2820		4,321.1874
Total	5.0492	55.1266	32.8754	0.0409	1.9269	2.7575	4.6844	0.9861	2.5369	3.5230	0.0000	4,294.2650	4,294.2650	1.2820		4,321.1874

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
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Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	0.0383	0.0452	0.4944	1.0400e-003	0.0822	6.4000e-004	0.0828	0.0218	5.9000e-004	0.0224		90.0008	90.0008	4.7200e-003		90.0999
Total	0.0383	0.0452	0.4944	1.0400e-003	0.0822	6.4000e-004	0.0828	0.0218	5.9000e-004	0.0224		90.0008	90.0008	4.7200e-003		90.0999

3.5 Trenching - 2015

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	2.2931	25.3711	17.4477	0.0255		1.4035	1.4035		1.2912	1.2912		2,681.3081	2,681.3081	0.8005		2,698.1182
Total	2.2931	25.3711	17.4477	0.0255		1.4035	1.4035		1.2912	1.2912		2,681.3081	2,681.3081	0.8005		2,698.1182

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	0.0383	0.0452	0.4944	1.0400e-003	0.0822	6.4000e-004	0.0828	0.0218	5.9000e-004	0.0224		90.0008	90.0008	4.7200e-003		90.0999

Total	0.0383	0.0452	0.4944	1.0400e-003	0.0822	6.4000e-004	0.0828	0.0218	5.9000e-004	0.0224		90.0008	90.0008	4.7200e-003		90.0999
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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	2.2931	25.3711	17.4477	0.0255		1.4035	1.4035		1.2912	1.2912	0.0000	2,681.3081	2,681.3081	0.8005		2,698.1182
Total	2.2931	25.3711	17.4477	0.0255		1.4035	1.4035		1.2912	1.2912	0.0000	2,681.3081	2,681.3081	0.8005		2,698.1182

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	0.0383	0.0452	0.4944	1.0400e-003	0.0822	6.4000e-004	0.0828	0.0218	5.9000e-004	0.0224		90.0008	90.0008	4.7200e-003		90.0999
Total	0.0383	0.0452	0.4944	1.0400e-003	0.0822	6.4000e-004	0.0828	0.0218	5.9000e-004	0.0224		90.0008	90.0008	4.7200e-003		90.0999

3.6 Paving - 2015

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	2.3743	21.4100	13.7628	0.0186		1.6045	1.6045		1.4798	1.4798		1,877.4490	1,877.4490	0.5310		1,888.5997
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.3743	21.4100	13.7628	0.0186		1.6045	1.6045		1.4798	1.4798		1,877.4490	1,877.4490	0.5310		1,888.5997

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	0.0472	0.4363	0.4860	9.5000e-004	0.0266	7.1500e-003	0.0337	7.5700e-003	6.5700e-003	0.0142		96.5718	96.5718	8.4000e-004		96.5894
Worker	0.0882	0.1040	1.1372	2.3900e-003	0.1889	1.4800e-003	0.1904	0.0501	1.3600e-003	0.0515		207.0019	207.0019	0.0109		207.2298
Total	0.1354	0.5403	1.6231	3.3400e-003	0.2155	8.6300e-003	0.2241	0.0577	7.9300e-003	0.0656		303.5737	303.5737	0.0117		303.8192

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	2.3743	21.4100	13.7628	0.0186		1.6045	1.6045		1.4798	1.4798	0.0000	1,877.4489	1,877.4489	0.5310		1,888.5997
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.3743	21.4100	13.7628	0.0186		1.6045	1.6045		1.4798	1.4798	0.0000	1,877.4489	1,877.4489	0.5310		1,888.5997

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	0.0472	0.4363	0.4860	9.5000e-004	0.0266	7.1500e-003	0.0337	7.5700e-003	6.5700e-003	0.0142		96.5718	96.5718	8.4000e-004		96.5894
Worker	0.0882	0.1040	1.1372	2.3900e-003	0.1889	1.4800e-003	0.1904	0.0501	1.3600e-003	0.0515		207.0019	207.0019	0.0109		207.2298
Total	0.1354	0.5403	1.6231	3.3400e-003	0.2155	8.6300e-003	0.2241	0.0577	7.9300e-003	0.0656		303.5737	303.5737	0.0117		303.8192

3.7 Building Construction - 2015

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	4.1817	28.0392	18.9707	0.0274		1.8305	1.8305		1.7522	1.7522		2,630.8647	2,630.8647	0.6459		2,644.4277
Total	4.1817	28.0392	18.9707	0.0274		1.8305	1.8305		1.7522	1.7522		2,630.8647	2,630.8647	0.6459		2,644.4277

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	0.1299	1.1998	1.3364	2.6200e-003	0.0730	0.0197	0.0927	0.0208	0.0181	0.0389		265.5725	265.5725	2.3000e-003		265.6208
Worker	0.1035	0.1221	1.3349	2.8100e-003	0.2218	1.7400e-003	0.2235	0.0588	1.6000e-003	0.0604		243.0023	243.0023	0.0127		243.2698
Total	0.2334	1.3219	2.6713	5.4300e-003	0.2948	0.0214	0.3162	0.0797	0.0197	0.0993		508.5748	508.5748	0.0150		508.8905

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	4.1817	28.0392	18.9707	0.0274		1.8305	1.8305		1.7522	1.7522	0.0000	2,630.8647	2,630.8647	0.6459		2,644.4277
Total	4.1817	28.0392	18.9707	0.0274		1.8305	1.8305		1.7522	1.7522	0.0000	2,630.8647	2,630.8647	0.6459		2,644.4277

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
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Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1299	1.1998	1.3364	2.6200e-003	0.0730	0.0197	0.0927	0.0208	0.0181	0.0389	265.5725	265.5725	2.3000e-003	265.6208		
Worker	0.1035	0.1221	1.3349	2.8100e-003	0.2218	1.7400e-003	0.2235	0.0588	1.6000e-003	0.0604	243.0023	243.0023	0.0127	243.2698		
Total	0.2334	1.3219	2.6713	5.4300e-003	0.2948	0.0214	0.3162	0.0797	0.0197	0.0993	508.5748	508.5748	0.0150	508.8905		

3.7 Building Construction - 2016

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	3.8352	26.5141	18.6281	0.0274		1.6837	1.6837		1.6102	1.6102		2,616.1060	2,616.1060	0.6216		2,629.1593
Total	3.8352	26.5141	18.6281	0.0274		1.6837	1.6837		1.6102	1.6102		2,616.1060	2,616.1060	0.6216		2,629.1593

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	0.1147	1.0425	1.2237	2.6200e-003	0.0730	0.0158	0.0888	0.0208	0.0145	0.0353		262.4473	262.4473	2.0300e-003		262.4899
Worker	0.0944	0.1108	1.2079	2.8100e-003	0.2218	1.6600e-003	0.2235	0.0588	1.5300e-003	0.0604		234.5036	234.5036	0.0118		234.7504

Total	0.2091	1.1533	2.4316	5.4300e-003	0.2948	0.0174	0.3122	0.0797	0.0160	0.0957		496.9509	496.9509	0.0138		497.2403
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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	3.8352	26.5141	18.6281	0.0274		1.6837	1.6837		1.6102	1.6102	0.0000	2,616.1060	2,616.1060	0.6216		2,629.1593
Total	3.8352	26.5141	18.6281	0.0274		1.6837	1.6837		1.6102	1.6102	0.0000	2,616.1060	2,616.1060	0.6216		2,629.1593

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	0.1147	1.0425	1.2237	2.6200e-003	0.0730	0.0158	0.0888	0.0208	0.0145	0.0353		262.4473	262.4473	2.0300e-003		262.4899
Worker	0.0944	0.1108	1.2079	2.8100e-003	0.2218	1.6600e-003	0.2235	0.0588	1.5300e-003	0.0604		234.5036	234.5036	0.0118		234.7504
Total	0.2091	1.1533	2.4316	5.4300e-003	0.2948	0.0174	0.3122	0.0797	0.0160	0.0957		496.9509	496.9509	0.0138		497.2403

3.8 Architectural Coating - 2016

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					
Archit. Coating	20.4231					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	20.7916	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449

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	0.0175	0.0205	0.2237	5.2000e-004	0.0411	3.1000e-004	0.0414	0.0109	2.8000e-004	0.0112		43.4266	43.4266	2.1800e-003		43.4723
Total	0.0175	0.0205	0.2237	5.2000e-004	0.0411	3.1000e-004	0.0414	0.0109	2.8000e-004	0.0112		43.4266	43.4266	2.1800e-003		43.4723

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					

Archit. Coating	20.4231				0.0000	0.0000		0.0000	0.0000		0.0000				0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003	0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332		282.1449
Total	20.7916	2.3722	1.8839	2.9700e-003	0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332		282.1449

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	0.0175	0.0205	0.2237	5.2000e-004	0.0411	3.1000e-004	0.0414	0.0109	2.8000e-004	0.0112		43.4266	43.4266	2.1800e-003		43.4723
Total	0.0175	0.0205	0.2237	5.2000e-004	0.0411	3.1000e-004	0.0414	0.0109	2.8000e-004	0.0112		43.4266	43.4266	2.1800e-003		43.4723

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	9.3074	17.2004	82.3237	0.1652	10.9839	0.2196	11.2034	2.9321	0.2019	3.1339		14,390.7504	14,390.7504	0.6237		14,403.8474
Unmitigated	9.3074	17.2004	82.3237	0.1652	10.9839	0.2196	11.2034	2.9321	0.2019	3.1339		14,390.7504	14,390.7504	0.6237		14,403.8474

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Place of Worship	1,142.01	1,142.01	2775.21	2,572,805	2,572,805
Total	1,142.01	1,142.01	2,775.21	2,572,805	2,572,805

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Place of Worship	9.50	7.30	7.30	0.00	95.00	5.00	64	25	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.510118	0.073510	0.192396	0.133166	0.036737	0.005265	0.012605	0.021642	0.001847	0.002083	0.006548	0.000610	0.003471

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Category	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
	lb/day										lb/day					
NaturalGas Mitigated	0.0203	0.1850	0.1554	1.1100e-003		0.0141	0.0141		0.0141	0.0141		221.9434	221.9434	4.2500e-003	4.0700e-003	223.2941
NaturalGas Unmitigated	0.0225	0.2047	0.1719	1.2300e-003		0.0156	0.0156		0.0156	0.0156		245.5854	245.5854	4.7100e-003	4.5000e-003	247.0800

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas 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					
Place of Worship	2087.48	0.0225	0.2047	0.1719	1.2300e-003		0.0156	0.0156		0.0156	0.0156		245.5854	245.5854	4.7100e-003	4.5000e-003	247.0800
Total		0.0225	0.2047	0.1719	1.2300e-003		0.0156	0.0156		0.0156	0.0156		245.5854	245.5854	4.7100e-003	4.5000e-003	247.0800

Mitigated

	Natural Gas 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					
Place of Worship	1.88652	0.0203	0.1850	0.1554	1.1100e-003		0.0141	0.0141		0.0141	0.0141		221.9434	221.9434	4.2500e-003	4.0700e-003	223.2941
Total		0.0203	0.1850	0.1554	1.1100e-003		0.0141	0.0141		0.0141	0.0141		221.9434	221.9434	4.2500e-003	4.0700e-003	223.2941

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	1.4903	6.0000e-005	6.7700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005			0.0141	0.0141	4.0000e-005		0.0150
Unmitigated	1.4903	6.0000e-005	6.7700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005			0.0141	0.0141	4.0000e-005		0.0150

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						
Consumer Products	1.3830					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	
Landscaping	6.6000e-004	6.0000e-005	6.7700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005			0.0141	0.0141	4.0000e-005		0.0150
Architectural Coating	0.1067					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	
Total	1.4903	6.0000e-005	6.7700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005			0.0141	0.0141	4.0000e-005		0.0150

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					

Consumer Products	1.3830				0.0000	0.0000		0.0000	0.0000			0.0000		0.0000	
Landscaping	6.6000e-004	6.0000e-005	6.7700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0141	0.0141	4.0000e-005	0.0150
Architectural Coating	0.1067					0.0000	0.0000		0.0000	0.0000			0.0000		0.0000
Total	1.4903	6.0000e-005	6.7700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0141	0.0141	4.0000e-005	0.0150

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

- Institute Recycling and Composting Services

9.0 Operational Offroad

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

Santa Fe Valley Chinese Church
San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	12.93	1000sqft	3.00	12,925.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	622.74	CH4 Intensity (lb/MWhr)	0.026	N2O Intensity (lb/MWhr)	0.007

1.3 User Entered Comments & Non-Default Data

- Area Coating - Rule 67.0 coatings
- Construction Off-road Equipment Mitigation -
- Energy Mitigation -
- Water Mitigation -
- Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaCoating	Area_Nonresidential_Interior	19388	0
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	150	0

tblAreaMitigation	UseLowVOCPaintNonresidentialInterior	Value	250	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorVal	Value	250	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorVal	Value	250	0
tblConstructionPhase	NumDays		10.00	35.00
tblConstructionPhase	NumDays		220.00	140.00
tblConstructionPhase	NumDays		6.00	25.00
tblConstructionPhase	PhaseEndDate		7/20/2017	7/18/2017
tblGrading	AcresOfGrading		9.38	12.50
tblLandUse	LandUseSquareFeet		12,930.00	12,925.00
tblLandUse	LotAcreage		0.30	3.00
tblOffRoadEquipment	HorsePower		174.00	162.00
tblOffRoadEquipment	HorsePower		400.00	250.00
tblOffRoadEquipment	HorsePower		255.00	358.00
tblOffRoadEquipment	HorsePower		97.00	75.00
tblOffRoadEquipment	HorsePower		162.00	157.00
tblOffRoadEquipment	HorsePower		87.00	150.00
tblOffRoadEquipment	HorsePower		97.00	75.00
tblOffRoadEquipment	HorsePower		125.00	89.00
tblOffRoadEquipment	HorsePower		130.00	82.00
tblOffRoadEquipment	HorsePower		80.00	84.00
tblOffRoadEquipment	HorsePower		97.00	75.00
tblOffRoadEquipment	HorsePower		226.00	208.00
tblOffRoadEquipment	HorsePower		89.00	149.00
tblOffRoadEquipment	HorsePower		97.00	75.00
tblOffRoadEquipment	LoadFactor		0.41	0.61
tblOffRoadEquipment	LoadFactor		0.38	0.57
tblOffRoadEquipment	LoadFactor		0.40	0.59
tblOffRoadEquipment	LoadFactor		0.37	0.55
tblOffRoadEquipment	LoadFactor		0.38	0.57
tblOffRoadEquipment	LoadFactor		0.34	0.51

tblOffRoadEquipment	LoadFactor	0.37	0.55
tblOffRoadEquipment	LoadFactor	0.42	0.62
tblOffRoadEquipment	LoadFactor	0.36	0.53
tblOffRoadEquipment	LoadFactor	0.38	0.56
tblOffRoadEquipment	LoadFactor	0.37	0.55
tblOffRoadEquipment	LoadFactor	0.29	0.43
tblOffRoadEquipment	LoadFactor	0.20	0.30
tblOffRoadEquipment	LoadFactor	0.37	0.55
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.026
tblProjectCharacteristics	CO2IntensityFactor	720.49	622.74
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.007
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	2.00	11.00
tblTripsAndVMT	WorkerTripNumber	13.00	10.00

tblTripsAndVMT	WorkerTripNumber	5.00	27.00
tblTripsAndVMT	WorkerTripNumber	1.00	5.00

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					
2017	4.5995	48.5986	31.1032	0.0419	5.1290	2.4172	7.5462	2.5617	2.2238	4.7856	0.0000	4,264.1116	4,264.1116	1.2850	0.0000	4,291.0957
2018	4.1645	22.9075	19.7252	0.0328	0.2948	1.3134	1.6082	0.0797	1.2565	1.3362	0.0000	3,043.1269	3,043.1269	0.5895	0.0000	3,055.5056
Total	8.7639	71.5061	50.8284	0.0747	5.4238	3.7306	9.1544	2.6414	3.4804	6.1217	0.0000	7,307.2385	7,307.2385	1.8744	0.0000	7,346.6013

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					
2017	4.5995	48.5986	31.1032	0.0419	2.0504	2.4172	4.4676	1.0124	2.2238	3.2362	0.0000	4,264.1116	4,264.1116	1.2850	0.0000	4,291.0957
2018	4.1645	22.9075	19.7252	0.0328	0.2948	1.3134	1.6082	0.0797	1.2565	1.3362	0.0000	3,043.1269	3,043.1269	0.5895	0.0000	3,055.5056
Total	8.7639	71.5061	50.8284	0.0747	2.3452	3.7306	6.0758	1.0920	3.4804	4.5724	0.0000	7,307.2385	7,307.2385	1.8744	0.0000	7,346.6013

	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
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Percent Reduction	0.00	0.00	0.00	0.00	56.76	0.00	33.63	58.66	0.00	25.31	0.00	0.00	0.00	0.00	0.00	0.00
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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	0.2890	1.0000e-005	1.3400e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.8300e-003	2.8300e-003	1.0000e-005		2.9900e-003
Energy	4.5000e-003	0.0409	0.0344	2.5000e-004		3.1100e-003	3.1100e-003		3.1100e-003	3.1100e-003		49.1171	49.1171	9.4000e-004	9.0000e-004	49.4160
Mobile	1.3885	2.5038	12.0309	0.0282	1.8747	0.0338	1.9085	0.5004	0.0311	0.5316		2,303.0035	2,303.0035	0.0924		2,304.9429
Total	1.6821	2.5447	12.0667	0.0285	1.8747	0.0369	1.9116	0.5004	0.0342	0.5347		2,352.1234	2,352.1234	0.0933	9.0000e-004	2,354.3619

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	0.2890	1.0000e-005	1.3400e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.8300e-003	2.8300e-003	1.0000e-005		2.9900e-003
Energy	4.0700e-003	0.0370	0.0311	2.2000e-004		2.8100e-003	2.8100e-003		2.8100e-003	2.8100e-003		44.3887	44.3887	8.5000e-004	8.1000e-004	44.6588
Mobile	1.3885	2.5038	12.0309	0.0282	1.8747	0.0338	1.9085	0.5004	0.0311	0.5316		2,303.0035	2,303.0035	0.0924		2,304.9429
Total	1.6816	2.5408	12.0634	0.0284	1.8747	0.0366	1.9113	0.5004	0.0339	0.5344		2,347.3950	2,347.3950	0.0932	8.1000e-004	2,349.6047

	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
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Percent Reduction	0.03	0.15	0.03	0.11	0.00	0.81	0.02	0.00	0.88	0.06	0.00	0.20	0.20	0.10	10.00	0.20
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3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Fine Site Grading	Grading	6/16/2017	7/18/2017	5	25	
2	Trenching	Trenching	7/19/2017	8/1/2017	5	10	
3	Paving	Paving	8/2/2017	8/15/2017	5	10	
4	Building Construction	Building Construction	8/16/2017	2/27/2018	5	140	
5	Architectural Coating	Architectural Coating	2/28/2018	4/17/2018	5	35	

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: 19,388; Non-Residential Outdoor: 6,463 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mass Site Grading	Graders	1	6.00	162	0.61
Mass Site Grading	Off-Highway Trucks	1	8.00	250	0.57
Mass Site Grading	Rubber Tired Dozers	1	6.00	358	0.59
Mass Site Grading	Tractors/Loaders/Backhoes	1	7.00	75	0.55
Fine Site Grading	Graders	1	6.00	162	0.61
Fine Site Grading	Off-Highway Trucks	1	8.00	250	0.57
Fine Site Grading	Rubber Tired Dozers	1	6.00	358	0.59
Fine Site Grading	Tractors/Loaders/Backhoes	1	7.00	75	0.55
Trenching	Excavators	2	8.00	157	0.57
Trenching	Other General Industrial Equipment	1	8.00	150	0.51

Trenching	Tractors/Loaders/Backhoes	1	8.00	75	0.55
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	89	0.62
Paving	Paving Equipment	2	6.00	82	0.53
Paving	Rollers	1	7.00	84	0.56
Paving	Tractors/Loaders/Backhoes	1	7.00	75	0.55
Building Construction	Cranes	1	4.00	208	0.43
Building Construction	Forklifts	2	6.00	149	0.30
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	8.00	75	0.55
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Fine Site Grading	Excavators	1	8.00	162	0.38

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
Fine Site Grading	5	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	9	23.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	27.00	11.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Fine Site Grading - 2017

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					5.0468	0.0000	5.0468	2.5399	0.0000	2.5399			0.0000			0.0000
Off-Road	4.5677	48.5613	30.6986	0.0409		2.4166	2.4166		2.2233	2.2233		4,180.6099	4,180.6099	1.2809		4,207.5094
Total	4.5677	48.5613	30.6986	0.0409	5.0468	2.4166	7.4634	2.5399	2.2233	4.7632		4,180.6099	4,180.6099	1.2809		4,207.5094

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	0.0318	0.0373	0.4046	1.0400e-003	0.0822	6.0000e-004	0.0827	0.0218	5.5000e-004	0.0223		83.5017	83.5017	4.0300e-003		83.5863
Total	0.0318	0.0373	0.4046	1.0400e-003	0.0822	6.0000e-004	0.0827	0.0218	5.5000e-004	0.0223		83.5017	83.5017	4.0300e-003		83.5863

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					1.9683	0.0000	1.9683	0.9906	0.0000	0.9906			0.0000			0.0000
Off-Road	4.5677	48.5613	30.6986	0.0409		2.4166	2.4166		2.2233	2.2233	0.0000	4,180.6099	4,180.6099	1.2809		4,207.5094
Total	4.5677	48.5613	30.6986	0.0409	1.9683	2.4166	4.3849	0.9906	2.2233	3.2139	0.0000	4,180.6099	4,180.6099	1.2809		4,207.5094

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	0.0318	0.0373	0.4046	1.0400e-003	0.0822	6.0000e-004	0.0827	0.0218	5.5000e-004	0.0223		83.5017	83.5017	4.0300e-003		83.5863
Total	0.0318	0.0373	0.4046	1.0400e-003	0.0822	6.0000e-004	0.0827	0.0218	5.5000e-004	0.0223		83.5017	83.5017	4.0300e-003		83.5863

3.3 Trenching - 2017

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	2.0069	21.2940	17.2842	0.0255		1.1744	1.1744		1.0804	1.0804		2,611.4673	2,611.4673	0.8002		2,628.2704
Total	2.0069	21.2940	17.2842	0.0255		1.1744	1.1744		1.0804	1.0804		2,611.4673	2,611.4673	0.8002		2,628.2704

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	0.0318	0.0373	0.4046	1.0400e-003	0.0822	6.0000e-004	0.0827	0.0218	5.5000e-004	0.0223		83.5017	83.5017	4.0300e-003		83.5863
Total	0.0318	0.0373	0.4046	1.0400e-003	0.0822	6.0000e-004	0.0827	0.0218	5.5000e-004	0.0223		83.5017	83.5017	4.0300e-003		83.5863

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	2.0069	21.2940	17.2842	0.0255		1.1744	1.1744		1.0804	1.0804	0.0000	2,611.4673	2,611.4673	0.8002		2,628.2704
Total	2.0069	21.2940	17.2842	0.0255		1.1744	1.1744		1.0804	1.0804	0.0000	2,611.4673	2,611.4673	0.8002		2,628.2704

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
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Category	lb/day										lb/day					
	Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0318	0.0373	0.4046	1.0400e-003	0.0822	6.0000e-004	0.0827	0.0218	5.5000e-004	0.0223	83.5017	83.5017	4.0300e-003	83.5863		
Total	0.0318	0.0373	0.4046	1.0400e-003	0.0822	6.0000e-004	0.0827	0.0218	5.5000e-004	0.0223		83.5017	83.5017	4.0300e-003		83.5863

3.4 Paving - 2017

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	2.0956	18.9296	13.5307	0.0186		1.3803	1.3803		1.2734	1.2734		1,832.0764	1,832.0764	0.5306		1,843.2200
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.0956	18.9296	13.5307	0.0186		1.3803	1.3803		1.2734	1.2734		1,832.0764	1,832.0764	0.5306		1,843.2200

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	0.0383	0.3390	0.4177	9.5000e-004	0.0266	4.9800e-003	0.0315	7.5800e-003	4.5800e-003	0.0122		93.8232	93.8232	7.0000e-004		93.8378
Worker	0.0731	0.0858	0.9307	2.3900e-003	0.1889	1.3700e-003	0.1903	0.0501	1.2700e-003	0.0514		192.0540	192.0540	9.2600e-003		192.2485

Total	0.1113	0.4248	1.3483	3.3400e-003	0.2155	6.3500e-003	0.2218	0.0577	5.8500e-003	0.0635		285.8772	285.8772	9.9600e-003		286.0863
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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	2.0956	18.9296	13.5307	0.0186		1.3803	1.3803		1.2734	1.2734	0.0000	1,832.0764	1,832.0764	0.5306		1,843.2200
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.0956	18.9296	13.5307	0.0186		1.3803	1.3803		1.2734	1.2734	0.0000	1,832.0764	1,832.0764	0.5306		1,843.2200

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	0.0383	0.3390	0.4177	9.5000e-004	0.0266	4.9800e-003	0.0315	7.5800e-003	4.5800e-003	0.0122		93.8232	93.8232	7.0000e-004		93.8378
Worker	0.0731	0.0858	0.9307	2.3900e-003	0.1889	1.3700e-003	0.1903	0.0501	1.2700e-003	0.0514		192.0540	192.0540	9.2600e-003		192.2485
Total	0.1113	0.4248	1.3483	3.3400e-003	0.2155	6.3500e-003	0.2218	0.0577	5.8500e-003	0.0635		285.8772	285.8772	9.9600e-003		286.0863

3.5 Building Construction - 2017

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	3.4798	24.7751	18.2257	0.0274		1.5281	1.5281		1.4606	1.4606		2,594.4417	2,594.4417	0.5985		2,607.0096
Total	3.4798	24.7751	18.2257	0.0274		1.5281	1.5281		1.4606	1.4606		2,594.4417	2,594.4417	0.5985		2,607.0096

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	0.1052	0.9323	1.1486	2.6100e-003	0.0730	0.0137	0.0867	0.0208	0.0126	0.0334		258.0137	258.0137	1.9200e-003		258.0539
Worker	0.0858	0.1007	1.0925	2.8100e-003	0.2218	1.6100e-003	0.2234	0.0588	1.4900e-003	0.0603		225.4547	225.4547	0.0109		225.6830
Total	0.1910	1.0329	2.2411	5.4200e-003	0.2948	0.0153	0.3101	0.0797	0.0141	0.0937		483.4684	483.4684	0.0128		483.7369

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	3.4798	24.7751	18.2257	0.0274		1.5281	1.5281		1.4606	1.4606	0.0000	2,594.4417	2,594.4417	0.5985		2,607.0096
Total	3.4798	24.7751	18.2257	0.0274		1.5281	1.5281		1.4606	1.4606	0.0000	2,594.4417	2,594.4417	0.5985		2,607.0096

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	0.1052	0.9323	1.1486	2.6100e-003	0.0730	0.0137	0.0867	0.0208	0.0126	0.0334		258.0137	258.0137	1.9200e-003		258.0539
Worker	0.0858	0.1007	1.0925	2.8100e-003	0.2218	1.6100e-003	0.2234	0.0588	1.4900e-003	0.0603		225.4547	225.4547	0.0109		225.6830
Total	0.1910	1.0329	2.2411	5.4200e-003	0.2948	0.0153	0.3101	0.0797	0.0141	0.0937		483.4684	483.4684	0.0128		483.7369

3.5 Building Construction - 2018

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	3.0227	21.9735	17.6390	0.0274		1.2991	1.2991		1.2434	1.2434		2,572.5458	2,572.5458	0.5775		2,584.6726
Total	3.0227	21.9735	17.6390	0.0274		1.2991	1.2991		1.2434	1.2434		2,572.5458	2,572.5458	0.5775		2,584.6726

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	0.0990	0.8421	1.0945	2.6100e-003	0.0730	0.0127	0.0857	0.0208	0.0117	0.0325		253.5831	253.5831	1.8800e-003		253.6226
Worker	0.0782	0.0919	0.9917	2.8100e-003	0.2218	1.5800e-003	0.2234	0.0588	1.4600e-003	0.0603		216.9980	216.9980	0.0101		217.2103
Total	0.1772	0.9339	2.0862	5.4200e-003	0.2948	0.0143	0.3091	0.0797	0.0132	0.0928		470.5811	470.5811	0.0120		470.8329

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	3.0227	21.9735	17.6390	0.0274		1.2991	1.2991		1.2434	1.2434	0.0000	2,572.5458	2,572.5458	0.5775		2,584.6726
Total	3.0227	21.9735	17.6390	0.0274		1.2991	1.2991		1.2434	1.2434	0.0000	2,572.5458	2,572.5458	0.5775		2,584.6726

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
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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	0.0990	0.8421	1.0945	2.6100e-003	0.0730	0.0127	0.0857	0.0208	0.0117	0.0325	253.5831	253.5831	1.8800e-003	253.6226	
Worker	0.0782	0.0919	0.9917	2.8100e-003	0.2218	1.5800e-003	0.2234	0.0588	1.4600e-003	0.0603	216.9980	216.9980	0.0101	217.2103	
Total	0.1772	0.9339	2.0862	5.4200e-003	0.2948	0.0143	0.3091	0.0797	0.0132	0.0928		470.5811	470.5811	0.0120	470.8329

3.6 Architectural Coating - 2018

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					
Archit. Coating	3.8514					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	4.1500	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102

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	0.0145	0.0170	0.1837	5.2000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		40.1848	40.1848	1.8700e-003		40.2241

Total	0.0145	0.0170	0.1837	5.2000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		40.1848	40.1848	1.8700e-003		40.2241
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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						
Archit. Coating	3.8514					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267			282.0102
Total	4.1500	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267			282.0102

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	0.0145	0.0170	0.1837	5.2000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		40.1848	40.1848	1.8700e-003			40.2241
Total	0.0145	0.0170	0.1837	5.2000e-004	0.0411	2.9000e-004	0.0414	0.0109	2.7000e-004	0.0112		40.1848	40.1848	1.8700e-003			40.2241

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	1.3885	2.5038	12.0309	0.0282	1.8747	0.0338	1.9085	0.5004	0.0311	0.5316		2,303.0035	2,303.0035	0.0924		2,304.9429
Unmitigated	1.3885	2.5038	12.0309	0.0282	1.8747	0.0338	1.9085	0.5004	0.0311	0.5316		2,303.0035	2,303.0035	0.0924		2,304.9429

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Place of Worship	117.79	134.08	473.63	319,800	319,800
Total	117.79	134.08	473.63	319,800	319,800

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Place of Worship	9.50	7.30	7.30	0.00	95.00	5.00	64	25	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511818	0.073499	0.191840	0.131575	0.036332	0.005186	0.012677	0.022513	0.001864	0.002072	0.006564	0.000601	0.003458

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	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	4.0700e-003	0.0370	0.0311	2.2000e-004		2.8100e-003	2.8100e-003		2.8100e-003	2.8100e-003			44.3887	44.3887	8.5000e-004	8.1000e-004	44.6588
NaturalGas Unmitigated	4.5000e-003	0.0409	0.0344	2.5000e-004		3.1100e-003	3.1100e-003		3.1100e-003	3.1100e-003			49.1171	49.1171	9.4000e-004	9.0000e-004	49.4160

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						
Place of Worship	417.495	4.5000e-003	0.0409	0.0344	2.5000e-004		3.1100e-003	3.1100e-003		3.1100e-003	3.1100e-003			49.1171	49.1171	9.4000e-004	9.0000e-004	49.4160
Total		4.5000e-003	0.0409	0.0344	2.5000e-004		3.1100e-003	3.1100e-003		3.1100e-003	3.1100e-003			49.1171	49.1171	9.4000e-004	9.0000e-004	49.4160

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					

Place of Worship	0.377304	4.0700e-003	0.0370	0.0311	2.2000e-004		2.8100e-003	2.8100e-003		2.8100e-003	2.8100e-003		44.3887	44.3887	8.5000e-004	8.1000e-004	44.6588
Total		4.0700e-003	0.0370	0.0311	2.2000e-004		2.8100e-003	2.8100e-003		2.8100e-003	2.8100e-003		44.3887	44.3887	8.5000e-004	8.1000e-004	44.6588

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	0.2890	1.0000e-005	1.3400e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.8300e-003	2.8300e-003	1.0000e-005		2.9900e-003
Unmitigated	0.2890	1.0000e-005	1.3400e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.8300e-003	2.8300e-003	1.0000e-005		2.9900e-003

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	0.0123					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2766					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3000e-004	1.0000e-005	1.3400e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.8300e-003	2.8300e-003	1.0000e-005		2.9900e-003

Total	0.2890	1.0000e-005	1.3400e-003	0.0000		0.0000	0.0000		0.0000	0.0000		2.8300e-003	2.8300e-003	1.0000e-005		2.9900e-003
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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	0.0123					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Consumer Products	0.2766					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Landscaping	1.3000e-004	1.0000e-005	1.3400e-003	0.0000		0.0000	0.0000		0.0000	0.0000			2.8300e-003	2.8300e-003	1.0000e-005		2.9900e-003
Total	0.2890	1.0000e-005	1.3400e-003	0.0000		0.0000	0.0000		0.0000	0.0000			2.8300e-003	2.8300e-003	1.0000e-005		2.9900e-003

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

- Institute Recycling and Composting Services

9.0 Operational Offroad

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

5395 Santa Fe Valley Church - Mitigated
San Diego County APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	89.23	1000sqft	9.03	89,234.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	537.56	CH4 Intensity (lb/MWhr)	0.022	N2O Intensity (lb/MWhr)	0.005

1.3 User Entered Comments & Non-Default Data

- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Area Coating - Rule 67.0.1 coatings

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaMitigation	UseLowVOCPaintNonresidentialExterior	100	150
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	230.00	0.00
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	20.00	0.00

tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	PhaseEndDate	12/31/2015	12/31/2010
tblConstructionPhase	PhaseStartDate	1/1/2011	1/2/2011
tblConstructionPhase	PhaseStartDate	1/1/2011	1/2/2011
tblConstructionPhase	PhaseStartDate	1/1/2016	1/2/2011
tblConstructionPhase	PhaseStartDate	1/1/2011	1/2/2011
tblConstructionPhase	PhaseStartDate	1/1/2011	1/2/2011
tblConstructionPhase	PhaseStartDate	1/1/2011	1/2/2011
tblEnergyUse	T24E	1.48	1.16
tblEnergyUse	T24NG	4.54	3.78
tblLandUse	LandUseSquareFeet	89,230.00	89,234.00
tblLandUse	LotAcreage	2.05	9.03
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	720.49	537.56

tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	WorkerTripNumber	18.00	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	5.00
tblTripsAndVMT	WorkerTripNumber	15.00	10.00
tblTripsAndVMT	WorkerTripNumber	37.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	18.00
tblTripsAndVMT	WorkerTripNumber	7.00	0.00
tblVehicleTrips	ST_TR	10.37	31.10
tblVehicleTrips	SU_TR	36.63	31.10
tblVehicleTrips	WD_TR	9.11	10.24
tblWater	IndoorWaterUseRate	2,791,909.29	2,233,527.43
tblWaterMitigation	UseWaterEfficientIrrigationSystemPercentReduction	6.1	95

2.0 Emissions Summary

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

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	2.3921	9.0000e-005	9.2400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0195	0.0195	5.0000e-005		0.0207
Energy	0.0291	0.2644	0.2221	1.5900e-003		0.0201	0.0201		0.0201	0.0201		317.2445	317.2445	6.0800e-003	5.8200e-003	319.1752

Mobile	8.1356	14.6700	70.4913	0.1652	10.9841	0.1978	11.1819	2.9322	0.1823	3.1144		13,493.6809	13,493.6809	0.5411		13,505.0443
Total	10.5568	14.9345	70.7226	0.1668	10.9841	0.2179	11.2020	2.9322	0.2024	3.1346		13,810.9449	13,810.9449	0.5472	5.8200e-003	13,824.2401

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	2.3916	5.0000e-005	5.3400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005			0.0105	0.0105	2.0000e-005		0.0110
Energy	0.0291	0.2644	0.2221	1.5900e-003		0.0201	0.0201		0.0201	0.0201			317.2445	317.2445	6.0800e-003	5.8200e-003	319.1752
Mobile	8.1356	14.6700	70.4913	0.1652	10.9841	0.1978	11.1819	2.9322	0.1823	3.1144			13,493.6809	13,493.6809	0.5411		13,505.0443
Total	10.5563	14.9344	70.7187	0.1668	10.9841	0.2179	11.2020	2.9322	0.2024	3.1345			13,810.9359	13,810.9359	0.5472	5.8200e-003	13,824.2304

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2011	12/31/2010	5	0	
2	Site Preparation	Site Preparation	1/2/2011	12/31/2010	5	0	
3	Grading	Grading	1/2/2011	12/31/2010	5	0	
4	Building Construction	Building Construction	1/2/2011	12/31/2010	5	0	
5	Paving	Paving	1/2/2011	12/31/2010	5	0	

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: 133,851; Non-Residential Outdoor: 44,617 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	174	0.41
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition	Excavators	3	8.00	162	0.38
Grading	Excavators	1	8.00	162	0.38
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	8.00	130	0.36

Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	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
Demolition	7	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	5	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	0.00	15.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	9	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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					
Unmitigated	8.1356	14.6700	70.4913	0.1652	10.9841	0.1978	11.1819	2.9322	0.1823	3.1144		13,493.6809	13,493.6809	0.5411		13,505.0443
Mitigated	8.1356	14.6700	70.4913	0.1652	10.9841	0.1978	11.1819	2.9322	0.1823	3.1144		13,493.6809	13,493.6809	0.5411		13,505.0443

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Place of Worship	913.72	2,775.05	2775.05	2,704,127	2,704,127
Total	913.72	2,775.05	2,775.05	2,704,127	2,704,127

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Place of Worship	9.50	7.30	7.30	0.00	95.00	5.00	64	25	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511818	0.073499	0.191840	0.131575	0.036332	0.005186	0.012677	0.022513	0.001864	0.002072	0.006564	0.000601	0.003458

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

Category	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	
	lb/day										lb/day						
NaturalGas Mitigated	0.0291	0.2644	0.2221	1.5900e-003		0.0201	0.0201		0.0201	0.0201			317.2445	317.2445	6.0800e-003	5.8200e-003	319.1752
NaturalGas Unmitigated	0.0291	0.2644	0.2221	1.5900e-003		0.0201	0.0201		0.0201	0.0201			317.2445	317.2445	6.0800e-003	5.8200e-003	319.1752

5.2 Energy by Land Use - NaturalGas

Unmitigated

	Natural Gas 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						
Place of Worship	2696.58	0.0291	0.2644	0.2221	1.5900e-003		0.0201	0.0201		0.0201	0.0201			317.2445	317.2445	6.0800e-003	5.8200e-003	319.1752
Total		0.0291	0.2644	0.2221	1.5900e-003		0.0201	0.0201		0.0201	0.0201			317.2445	317.2445	6.0800e-003	5.8200e-003	319.1752

Mitigated

	Natural Gas 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						
Place of Worship	2.69658	0.0291	0.2644	0.2221	1.5900e-003		0.0201	0.0201		0.0201	0.0201			317.2445	317.2445	6.0800e-003	5.8200e-003	319.1752
Total		0.0291	0.2644	0.2221	1.5900e-003		0.0201	0.0201		0.0201	0.0201			317.2445	317.2445	6.0800e-003	5.8200e-003	319.1752

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Electric Lawnmower
- Use Electric Leafblower
- Use Electric Chainsaw

	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						
Unmitigated	2.3921	9.0000e-005	9.2400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005			0.0195	0.0195	5.0000e-005		0.0207
Mitigated	2.3916	5.0000e-005	5.3400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005			0.0105	0.0105	2.0000e-005		0.0110

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	0.4816					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Consumer Products	1.9096					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Landscaping	8.8000e-004	9.0000e-005	9.2400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005			0.0195	0.0195	5.0000e-005		0.0207
Total	2.3921	9.0000e-005	9.2400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005			0.0195	0.0195	5.0000e-005		0.0207

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	0.4816				0.0000	0.0000		0.0000	0.0000			0.0000		0.0000
Consumer Products	1.9096				0.0000	0.0000		0.0000	0.0000			0.0000		0.0000
Landscaping	3.7000e-004	5.0000e-005	5.3400e-003	0.0000	1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		0.0105	0.0105	2.0000e-005	0.0110
Total	2.3916	5.0000e-005	5.3400e-003	0.0000	1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		0.0105	0.0105	2.0000e-005	0.0110

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

5395 Santa Fe Valley Church - Mitigated
San Diego County APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	89.23	1000sqft	9.03	89,234.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	537.56	CH4 Intensity (lb/MWhr)	0.022	N2O Intensity (lb/MWhr)	0.005

1.3 User Entered Comments & Non-Default Data

- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Area Coating - Rule 67.0.1 coatings

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaMitigation	UseLowVOCPaintNonresidentialExterior	100	150
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	230.00	0.00
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	20.00	0.00

tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	PhaseEndDate	12/31/2015	12/31/2010
tblConstructionPhase	PhaseStartDate	1/1/2011	1/2/2011
tblConstructionPhase	PhaseStartDate	1/1/2011	1/2/2011
tblConstructionPhase	PhaseStartDate	1/1/2016	1/2/2011
tblConstructionPhase	PhaseStartDate	1/1/2011	1/2/2011
tblConstructionPhase	PhaseStartDate	1/1/2011	1/2/2011
tblConstructionPhase	PhaseStartDate	1/1/2011	1/2/2011
tblEnergyUse	T24E	1.48	1.16
tblEnergyUse	T24NG	4.54	3.78
tblLandUse	LandUseSquareFeet	89,230.00	89,234.00
tblLandUse	LotAcreage	2.05	9.03
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	720.49	537.56

tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	WorkerTripNumber	18.00	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	5.00
tblTripsAndVMT	WorkerTripNumber	15.00	10.00
tblTripsAndVMT	WorkerTripNumber	37.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	18.00
tblTripsAndVMT	WorkerTripNumber	7.00	0.00
tblVehicleTrips	ST_TR	10.37	31.10
tblVehicleTrips	SU_TR	36.63	31.10
tblVehicleTrips	WD_TR	9.11	10.24
tblWater	IndoorWaterUseRate	2,791,909.29	2,233,527.43
tblWaterMitigation	UseWaterEfficientIrrigationSystemPercentReduction	6.1	95

2.0 Emissions Summary

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

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	2.3921	9.0000e-005	9.2400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0195	0.0195	5.0000e-005		0.0207
Energy	0.0291	0.2644	0.2221	1.5900e-003		0.0201	0.0201		0.0201	0.0201		317.2445	317.2445	6.0800e-003	5.8200e-003	319.1752

Mobile	8.7301	15.5581	76.9474	0.1571	10.9841	0.1989	11.1830	2.9322	0.1833	3.1155		12,848.0830	12,848.0830	0.5417		12,859.4586
Total	11.1512	15.8226	77.1787	0.1587	10.9841	0.2190	11.2032	2.9322	0.2034	3.1356		13,165.3471	13,165.3471	0.5478	5.8200e-003	13,178.6544

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	2.3916	5.0000e-005	5.3400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005			0.0105	0.0105	2.0000e-005		0.0110
Energy	0.0291	0.2644	0.2221	1.5900e-003		0.0201	0.0201		0.0201	0.0201			317.2445	317.2445	6.0800e-003	5.8200e-003	319.1752
Mobile	8.7301	15.5581	76.9474	0.1571	10.9841	0.1989	11.1830	2.9322	0.1833	3.1155			12,848.0830	12,848.0830	0.5417		12,859.4586
Total	11.1507	15.8225	77.1748	0.1587	10.9841	0.2190	11.2031	2.9322	0.2034	3.1356			13,165.3380	13,165.3380	0.5478	5.8200e-003	13,178.6447

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2011	12/31/2010	5	0	
2	Site Preparation	Site Preparation	1/2/2011	12/31/2010	5	0	
3	Grading	Grading	1/2/2011	12/31/2010	5	0	
4	Building Construction	Building Construction	1/2/2011	12/31/2010	5	0	
5	Paving	Paving	1/2/2011	12/31/2010	5	0	

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: 133,851; Non-Residential Outdoor: 44,617 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	174	0.41
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition	Excavators	3	8.00	162	0.38
Grading	Excavators	1	8.00	162	0.38
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	8.00	130	0.36

Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	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
Demolition	7	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	5	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	0.00	15.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	9	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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					
Unmitigated	8.7301	15.5581	76.9474	0.1571	10.9841	0.1989	11.1830	2.9322	0.1833	3.1155		12,848.08	12,848.083	0.5417		12,859.458
Mitigated	8.7301	15.5581	76.9474	0.1571	10.9841	0.1989	11.1830	2.9322	0.1833	3.1155		30	0	0.5417		6

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Place of Worship	913.72	2,775.05	2775.05	2,704,127	2,704,127
Total	913.72	2,775.05	2,775.05	2,704,127	2,704,127

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Place of Worship	9.50	7.30	7.30	0.00	95.00	5.00	64	25	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511818	0.073499	0.191840	0.131575	0.036332	0.005186	0.012677	0.022513	0.001864	0.002072	0.006564	0.000601	0.003458

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

Category	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	
	lb/day										lb/day						
NaturalGas Mitigated	0.0291	0.2644	0.2221	1.5900e-003		0.0201	0.0201		0.0201	0.0201			317.2445	317.2445	6.0800e-003	5.8200e-003	319.1752
NaturalGas Unmitigated	0.0291	0.2644	0.2221	1.5900e-003		0.0201	0.0201		0.0201	0.0201			317.2445	317.2445	6.0800e-003	5.8200e-003	319.1752

5.2 Energy by Land Use - NaturalGas

Unmitigated

	Natural Gas 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						
Place of Worship	2696.58	0.0291	0.2644	0.2221	1.5900e-003		0.0201	0.0201		0.0201	0.0201			317.2445	317.2445	6.0800e-003	5.8200e-003	319.1752
Total		0.0291	0.2644	0.2221	1.5900e-003		0.0201	0.0201		0.0201	0.0201			317.2445	317.2445	6.0800e-003	5.8200e-003	319.1752

Mitigated

	Natural Gas 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						
Place of Worship	2.69658	0.0291	0.2644	0.2221	1.5900e-003		0.0201	0.0201		0.0201	0.0201			317.2445	317.2445	6.0800e-003	5.8200e-003	319.1752
Total		0.0291	0.2644	0.2221	1.5900e-003		0.0201	0.0201		0.0201	0.0201			317.2445	317.2445	6.0800e-003	5.8200e-003	319.1752

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Electric Lawnmower
- Use Electric Leafblower
- Use Electric Chainsaw

	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						
Unmitigated	2.3921	9.0000e-005	9.2400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005			0.0195	0.0195	5.0000e-005		0.0207
Mitigated	2.3916	5.0000e-005	5.3400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005			0.0105	0.0105	2.0000e-005		0.0110

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	0.4816					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	
Consumer Products	1.9096					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000	
Landscaping	8.8000e-004	9.0000e-005	9.2400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005			0.0195	0.0195	5.0000e-005		0.0207
Total	2.3921	9.0000e-005	9.2400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005			0.0195	0.0195	5.0000e-005		0.0207

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	0.4816				0.0000	0.0000		0.0000	0.0000			0.0000		0.0000
Consumer Products	1.9096				0.0000	0.0000		0.0000	0.0000			0.0000		0.0000
Landscaping	3.7000e-004	5.0000e-005	5.3400e-003	0.0000	1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		0.0105	0.0105	2.0000e-005	0.0110
Total	2.3916	5.0000e-005	5.3400e-003	0.0000	1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		0.0105	0.0105	2.0000e-005	0.0110

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

5395 Santa Fe Valley Church - Mitigated
San Diego County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Place of Worship	89.23	1000sqft	9.03	89,234.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	537.56	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Vehicle Emission Factors -
- Area Coating - Rule 67.0.1 coatings

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaMitigation	UseLowVOCPaintNonresidentialExterior	100	150
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	230.00	0.00
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	20.00	0.00

tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	PhaseEndDate	12/31/2015	12/31/2010
tblConstructionPhase	PhaseStartDate	1/1/2011	1/2/2011
tblConstructionPhase	PhaseStartDate	1/1/2011	1/2/2011
tblConstructionPhase	PhaseStartDate	1/1/2016	1/2/2011
tblConstructionPhase	PhaseStartDate	1/1/2011	1/2/2011
tblConstructionPhase	PhaseStartDate	1/1/2011	1/2/2011
tblConstructionPhase	PhaseStartDate	1/1/2011	1/2/2011
tblEnergyUse	T24E	1.48	1.16
tblEnergyUse	T24NG	4.54	3.78
tblLandUse	LandUseSquareFeet	89,230.00	89,234.00
tblLandUse	LotAcreage	2.05	9.03
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	720.49	537.56

tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2014	2018
tblTripsAndVMT	WorkerTripNumber	18.00	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	5.00
tblTripsAndVMT	WorkerTripNumber	15.00	10.00
tblTripsAndVMT	WorkerTripNumber	37.00	0.00
tblTripsAndVMT	WorkerTripNumber	23.00	18.00
tblTripsAndVMT	WorkerTripNumber	7.00	0.00
tblVehicleTrips	ST_TR	10.37	31.10
tblVehicleTrips	SU_TR	36.63	31.10
tblVehicleTrips	WD_TR	9.11	10.24
tblWater	IndoorWaterUseRate	2,791,909.29	2,233,527.43
tblWaterMitigation	UseWaterEfficientIrrigationSystemPercentReduction	6.1	95

2.0 Emissions Summary

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

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	0.4365	1.0000e-005	8.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5900e-003	1.5900e-003	0.0000	0.0000	1.6900e-003
Energy	5.3100e-003	0.0483	0.0405	2.9000e-004		3.6700e-003	3.6700e-003		3.6700e-003	3.6700e-003	0.0000	241.3846	241.3846	8.7400e-003	2.7200e-003	242.4111

Mobile	0.7714	1.4687	7.0294	0.0150	1.0169	0.0188	1.0356	0.2720	0.0173	0.2893	0.0000	1,112.8486	1,112.8486	0.0465	0.0000	1,113.8252
Waste						0.0000	0.0000		0.0000	0.0000	103.2432	0.0000	103.2432	6.1015	0.0000	231.3747
Water						0.0000	0.0000		0.0000	0.0000	0.7086	18.9210	19.6296	0.0736	1.8900e-003	21.7615
Total	1.2132	1.5170	7.0708	0.0153	1.0169	0.0224	1.0393	0.2720	0.0210	0.2929	103.9518	1,373.1558	1,477.1076	6.2303	4.6100e-003	1,609.3742

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	0.4364	0.0000	4.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.6000e-004	8.6000e-004	0.0000	0.0000	9.0000e-004
Energy	5.3100e-003	0.0483	0.0405	2.9000e-004		3.6700e-003	3.6700e-003		3.6700e-003	3.6700e-003	0.0000	239.4590	239.4590	8.6600e-003	2.7000e-003	240.4783
Mobile	0.7714	1.4687	7.0294	0.0150	1.0169	0.0188	1.0356	0.2720	0.0173	0.2893	0.0000	1,112.8486	1,112.8486	0.0465	0.0000	1,113.8252
Waste						0.0000	0.0000		0.0000	0.0000	77.4324	0.0000	77.4324	4.5761	0.0000	173.5311
Water						0.0000	0.0000		0.0000	0.0000	0.7086	7.6828	8.3914	0.0731	1.7900e-003	10.4804
Total	1.2131	1.5170	7.0704	0.0153	1.0169	0.0224	1.0393	0.2720	0.0210	0.2929	78.1410	1,359.9912	1,438.1323	4.7044	4.4900e-003	1,538.3158

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.83	0.96	2.64	24.49	2.60	4.42

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
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1	Demolition	Demolition	1/2/2011	12/31/2010	5	0
2	Site Preparation	Site Preparation	1/2/2011	12/31/2010	5	0
3	Grading	Grading	1/2/2011	12/31/2010	5	0
4	Building Construction	Building Construction	1/2/2011	12/31/2010	5	0
5	Paving	Paving	1/2/2011	12/31/2010	5	0
6	Architectural Coating	Architectural Coating	1/2/2011	12/31/2010	5	0

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: 133,851; Non-Residential Outdoor: 44,617 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	226	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	174	0.41
Paving	Pavers	1	7.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Grading	Rubber Tired Dozers	1	1.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Demolition	Excavators	3	8.00	162	0.38
Grading	Excavators	1	8.00	162	0.38
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	2	8.00	130	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Building Construction	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
Demolition	7	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	5	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	0.00	15.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	9	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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	0.7714	1.4687	7.0294	0.0150	1.0169	0.0188	1.0356	0.2720	0.0173	0.2893	0.0000	1,112.8486	1,112.8486	0.0465	0.0000	1,113.8252
Unmitigated	0.7714	1.4687	7.0294	0.0150	1.0169	0.0188	1.0356	0.2720	0.0173	0.2893	0.0000	1,112.8486	1,112.8486	0.0465	0.0000	1,113.8252

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Place of Worship	913.72	2,775.05	2775.05	2,704,127	2,704,127
Total	913.72	2,775.05	2,775.05	2,704,127	2,704,127

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Place of Worship	9.50	7.30	7.30	0.00	95.00	5.00	64	25	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511818	0.073499	0.191840	0.131575	0.036332	0.005186	0.012677	0.022513	0.001864	0.002072	0.006564	0.000601	0.003458

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install Energy Efficient Appliances

Category	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
	tons/yr										MT/yr					

NaturalGas Mitigated	5.3100e-003	0.0483	0.0405	2.9000e-004		3.6700e-003	3.6700e-003		3.6700e-003	3.6700e-003	0.0000	52.5234	52.5234	1.0100e-003	9.6000e-004	52.8430
NaturalGas Unmitigated	5.3100e-003	0.0483	0.0405	2.9000e-004		3.6700e-003	3.6700e-003		3.6700e-003	3.6700e-003	0.0000	52.5234	52.5234	1.0100e-003	9.6000e-004	52.8430
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	186.9356	186.9356	7.6500e-003	1.7400e-003	187.6353
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	188.8612	188.8612	7.7300e-003	1.7600e-003	189.5681

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					
Place of Worship	984251	5.3100e-003	0.0483	0.0405	2.9000e-004		3.6700e-003	3.6700e-003		3.6700e-003	3.6700e-003	0.0000	52.5234	52.5234	1.0100e-003	9.6000e-004	52.8430
Total		5.3100e-003	0.0483	0.0405	2.9000e-004		3.6700e-003	3.6700e-003		3.6700e-003	3.6700e-003	0.0000	52.5234	52.5234	1.0100e-003	9.6000e-004	52.8430

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					
Place of Worship	984251	5.3100e-003	0.0483	0.0405	2.9000e-004		3.6700e-003	3.6700e-003		3.6700e-003	3.6700e-003	0.0000	52.5234	52.5234	1.0100e-003	9.6000e-004	52.8430
Total		5.3100e-003	0.0483	0.0405	2.9000e-004		3.6700e-003	3.6700e-003		3.6700e-003	3.6700e-003	0.0000	52.5234	52.5234	1.0100e-003	9.6000e-004	52.8430

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Place of Worship	774551	188.8612	7.7300e-003	1.7600e-003	189.5681
Total		188.8612	7.7300e-003	1.7600e-003	189.5681

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Place of Worship	766654	186.9356	7.6500e-003	1.7400e-003	187.6353
Total		186.9356	7.6500e-003	1.7400e-003	187.6353

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

	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	0.4364	0.0000	4.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.6000e-004	8.6000e-004	0.0000	0.0000	9.0000e-004
Unmitigated	0.4365	1.0000e-005	8.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5900e-003	1.5900e-003	0.0000	0.0000	1.6900e-003

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	0.0879					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3485					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	8.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5900e-003	1.5900e-003	0.0000	0.0000	1.6900e-003
Total	0.4365	1.0000e-005	8.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5900e-003	1.5900e-003	0.0000	0.0000	1.6900e-003

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	0.0879				0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3485				0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	4.8000e-004	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	8.6000e-004	8.6000e-004	0.0000	0.0000	9.0000e-004
Total	0.4364	0.0000	4.8000e-004	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	8.6000e-004	8.6000e-004	0.0000	0.0000	9.0000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	19.6296	0.0736	1.8900e-003	21.7615
Mitigated	8.3914	0.0731	1.7900e-003	10.4804

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Place of Worship	2.23353 / 4.36683	19.6296	0.0736	1.8900e-003	21.7615
Total		19.6296	0.0736	1.8900e-003	21.7615

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Place of Worship	2.23353 / 0.218342	8.3914	0.0731	1.7900e-003	10.4804
Total		8.3914	0.0731	1.7900e-003	10.4804

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	77.4324	4.5761	0.0000	173.5311
Unmitigated	103.2432	6.1015	0.0000	231.3747

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Place of Worship	508.61	103.2432	6.1015	0.0000	231.3747
Total		103.2432	6.1015	0.0000	231.3747

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Place of Worship	381.457	77.4324	4.5761	0.0000	173.5311
Total		77.4324	4.5761	0.0000	173.5311

9.0 Operational Offroad

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

10.0 Vegetation

Appendix B
Risk Calculations

Table B-1
 Calculation of Construction Health Risks
 Santa Fe Valley Chinese Church

DPM Concentration ug/m3	Dose air 3rd trimester	Dose air 0-2	Dose air 2-16	Dose air 16- 30	Cancer Risk, Adjusted for duration of construction activities	Non- Cancer HI
1.31454	0.000455567	0.001375535	0.000940159	0.000422756	7.58706E-06	0.262908

**BEE-Line Software: BEEST Sui (Version 11.00) data input file
** Model: AERMOD.EXE Input File Creation Date: 8/7/2015 Time:
4:31:38 PM
NO ECHO

BEE-Line AERMOD "BEEST" Version ****

Input File - C:\BEEST\Chinese Church\Chinese Church Construction
Update.DTA

Output File - C:\BEEST\Chinese Church\Chinese Church Construction
Update.LST

Met File - d:\MetData\SANDAG\Escondido_2012_v14134.SFC

*** SETUP Finishes Successfully ***

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**MODELOPTs: RegDFAULT CONC ELEV

*** MODEL SETUP OPTIONS

SUMMARY ***

**Model Is Setup For Calculation of Average CONCentration Values.

-- DEPOSITION LOGIC --

**NO GAS DEPOSITION Data Provided.

**NO PARTICLE DEPOSITION Data Provided.

**Model Uses NO DRY DEPLETION. DRYDPLT = F

**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses RURAL Dispersion Only.

**Model Uses Regulatory DEFAULT Options:

1. Stack-tip Downwash.
2. Model Accounts for ELEVated Terrain Effects.
3. Use Calms Processing Routine.
4. Use Missing Data Processing Routine.
5. No Exponential Decay.

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: OTHER

**Model Calculates ANNUAL Averages Only

**This Run Includes: 74 Source(s); 1 Source Group(s); and
314 Receptor(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 14134

**Output Options Selected:

Model Outputs Tables of ANNUAL Averages by Receptor
Model Outputs External File(s) of High Values for Plotting
(PLOTFILE Keyword)
Model Outputs Separate Summary File of High Ranked Values
(SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for
Calm Hours

Missing Hours

m for

b for

Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 400.00 ;
Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC
; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 3.6 MB of RAM.

**Input Runstream File: Chinese Church Construction Update.DTA
**Output Print File: Chinese Church Construction Update.LST

**File for Summary of Results: C:\BEEEST\Chinese Church\Chinese Church
Construction Update.SUM

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**MODELOPTs: RegDFAULT CONC ELEV

*** VOLUME SOURCE DATA

INIT.	INIT.	NUMBER	EMISSION	RATE		BASE	RELEASE
SOURCE	SOURCE	URBAN	EMISSION	X	Y	ELEV.	HEIGHT
SY	SZ	SOURCE	SCALAR	VARY			
ID	CATS.		BY	(METERS)	(METERS)	(METERS)	(METERS)
(METERS)	(METERS)						
CONSTA1		0	0.69840E-04	488560.0	3653742.0	150.0	4.57
4.66	4.63	NO					
CONSTA2		0	0.69840E-04	488607.6	3653755.0	150.0	4.57
4.66	4.63	NO					
CONSTB1		0	0.41090E-03	488560.0	3653752.0	149.8	4.57
4.66	4.63	NO					
CONSTB2		0	0.41090E-03	488585.0	3653747.0	150.0	4.57
4.66	4.63	NO					
CONSTB3		0	0.41090E-03	488610.0	3653747.0	150.0	4.57
4.66	4.63	NO					
CONSTB4		0	0.41090E-03	488635.0	3653747.0	150.0	4.57
4.66	4.63	NO					
CONSTB5		0	0.41090E-03	488660.0	3653747.0	150.0	4.57
4.66	4.63	NO					
CONSTB6		0	0.41090E-03	488685.0	3653757.0	151.1	4.57
4.66	4.63	NO					
CONSTC1		0	0.46850E-04	488635.0	3653772.0	150.0	4.57
4.66	4.63	NO					
CONSTC2		0	0.46850E-04	488660.0	3653772.0	150.6	4.57
4.66	4.63	NO					
CONSTC3		0	0.46850E-04	488635.0	3653797.0	150.4	4.57
4.66	4.63	NO					
CONSTC4		0	0.46850E-04	488660.0	3653797.0	151.2	4.57
4.66	4.63	NO					
CONSTC5		0	0.46850E-04	488635.0	3653822.0	150.2	4.57
4.66	4.63	NO					
CONSTC6		0	0.46850E-04	488660.0	3653822.0	150.8	4.57
4.66	4.63	NO					
CONSTC7		0	0.46850E-04	488635.0	3653847.0	150.0	4.57
4.66	4.63	NO					
CONSTC8		0	0.46850E-04	488660.0	3653847.0	150.2	4.57
4.66	4.63	NO					

CONSTD1	0	0.27640E-04	488685.0	3653847.0	150.8	4.57
4.66	4.63	NO				
CONSTD2	0	0.27640E-04	488710.0	3653847.0	151.6	4.57
4.66	4.63	NO				
CONSTD3	0	0.27640E-04	488735.0	3653847.0	151.6	4.57
4.66	4.63	NO				
CONSTD4	0	0.27640E-04	488760.0	3653847.0	151.6	4.57
4.66	4.63	NO				
CONSTD5	0	0.27640E-04	488785.0	3653847.0	151.8	4.57
4.66	4.63	NO				
CONSTD6	0	0.27640E-04	488810.0	3653847.0	152.0	4.57
4.66	4.63	NO				
CONSTD7	0	0.27640E-04	488710.0	3653872.0	150.8	4.57
4.66	4.63	NO				
CONSTD8	0	0.27640E-04	488735.0	3653872.0	151.0	4.57
4.66	4.63	NO				
CONSTD9	0	0.27640E-04	488760.0	3653872.0	151.0	4.57
4.66	4.63	NO				
CONSTD10	0	0.27640E-04	488785.0	3653872.0	151.4	4.57
4.66	4.63	NO				
CONSTD11	0	0.27640E-04	488810.0	3653872.0	151.8	4.57
4.66	4.63	NO				
CONSTD12	0	0.27640E-04	488785.0	3653897.0	151.0	4.57
4.66	4.63	NO				
CONSTD13	0	0.27640E-04	488810.0	3653897.0	151.0	4.57
4.66	4.63	NO				
CONSTD14	0	0.27640E-04	488835.0	3653897.0	151.0	4.57
4.66	4.63	NO				
CONSTE1	0	0.38700E-04	488825.0	3653747.0	156.2	4.57
4.66	4.63	NO				
CONSTE2	0	0.38700E-04	488830.0	3653772.0	155.1	4.57
4.66	4.63	NO				
CONSTE3	0	0.38700E-04	488835.0	3653797.0	154.2	4.57
4.66	4.63	NO				
CONSTE4	0	0.38700E-04	488840.0	3653822.0	152.9	4.57
4.66	4.63	NO				
CONSTE5	0	0.38700E-04	488845.0	3653847.0	152.0	4.57
4.66	4.63	NO				
CONSTE6	0	0.38700E-04	488850.0	3653872.0	151.8	4.57
4.66	4.63	NO				
CONSTE7	0	0.38700E-04	488855.0	3653897.0	151.0	4.57
4.66	4.63	NO				
CONSTE8	0	0.38700E-04	488860.0	3653922.0	151.0	4.57
4.66	4.63	NO				
CONSTE9	0	0.38700E-04	488865.0	3653947.0	151.0	4.57
4.66	4.63	NO				
CONSTE10	0	0.38700E-04	488870.0	3653972.0	151.0	4.57
4.66	4.63	NO				

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**MODELOPTs: RegDFAULT CONC ELEV

*** VOLUME SOURCE DATA

INIT.	INIT.	NUMBER	EMISSION RATE			BASE	RELEASE
SOURCE	SOURCE	URBAN	(GRAMS/SEC)	X	Y	ELEV.	HEIGHT
SY	SZ	SOURCE	SCALAR VARY			(METERS)	(METERS)
ID	CATS.		BY	(METERS)	(METERS)	(METERS)	(METERS)
(METERS)	(METERS)						
CONSTF1		0	0.22560E-04	488685.0	3653747.0	150.4	4.57
4.66	4.63	NO					
CONSTF2		0	0.22560E-04	488710.0	3653747.0	152.1	4.57
4.66	4.63	NO					
CONSTF3		0	0.22560E-04	488735.0	3653747.0	155.5	4.57
4.66	4.63	NO					
CONSTF4		0	0.22560E-04	488760.0	3653747.0	158.1	4.57
4.66	4.63	NO					
CONSTF5		0	0.22560E-04	488785.0	3653747.0	158.4	4.57
4.66	4.63	NO					
CONSTF6		0	0.22560E-04	488810.0	3653747.0	157.2	4.57
4.66	4.63	NO					
CONSTF7		0	0.22560E-04	488685.0	3653772.0	152.0	4.57
4.66	4.63	NO					
CONSTF8		0	0.22560E-04	488760.0	3653772.0	157.5	4.57
4.66	4.63	NO					
CONSTF9		0	0.22560E-04	488785.0	3653772.0	157.2	4.57
4.66	4.63	NO					
CONSTF10		0	0.22560E-04	488810.0	3653772.0	155.9	4.57
4.66	4.63	NO					
CONSTG1		0	0.53470E-04	488710.0	3653772.0	153.0	4.57
4.66	4.63	NO					
CONSTG2		0	0.53470E-04	488735.0	3653772.0	155.6	4.57
4.66	4.63	NO					
CONSTG3		0	0.53470E-04	488685.0	3653797.0	152.2	4.57
4.66	4.63	NO					
CONSTG4		0	0.53470E-04	488710.0	3653797.0	153.0	4.57
4.66	4.63	NO					
CONSTG5		0	0.53470E-04	488735.0	3653797.0	153.8	4.57
4.66	4.63	NO					
CONSTG6		0	0.53470E-04	488760.0	3653797.0	154.8	4.57
4.66	4.63	NO					

CONSTG7		0	0.53470E-04	488685.0	3653822.0	151.7	4.57
4.66	4.63	NO					
CONSTG8		0	0.53470E-04	488710.0	3653822.0	152.5	4.57
4.66	4.63	NO					
CONSTG9		0	0.53470E-04	488735.0	3653822.0	152.5	4.57
4.66	4.63	NO					
CONSTG10		0	0.53470E-04	488760.0	3653822.0	152.8	4.57
4.66	4.63	NO					
CONSTG11		0	0.53470E-04	488785.0	3653822.0	152.9	4.57
4.66	4.63	NO					
CONSTG12		0	0.53470E-04	488810.0	3653822.0	152.9	4.57
4.66	4.63	NO					
CONSTH1		0	0.19040E-04	488835.0	3653747.0	156.0	4.57
4.66	4.63	NO					
CONSTH2		0	0.19040E-04	488840.0	3653772.0	154.8	4.57
4.66	4.63	NO					
CONSTH3		0	0.19040E-04	488845.0	3653797.0	154.1	4.57
4.66	4.63	NO					
CONSTH4		0	0.19040E-04	488850.0	3653822.0	152.9	4.57
4.66	4.63	NO					
CONSTH5		0	0.19040E-04	488855.0	3653847.0	152.0	4.57
4.66	4.63	NO					
CONSTH6		0	0.19040E-04	488860.0	3653872.0	151.8	4.57
4.66	4.63	NO					
CONSTH7		0	0.19040E-04	488865.0	3653897.0	151.2	4.57
4.66	4.63	NO					
CONSTH8		0	0.19040E-04	488870.0	3653922.0	151.1	4.57
4.66	4.63	NO					
CONSTH9		0	0.19040E-04	488875.0	3653947.0	151.0	4.57
4.66	4.63	NO					
CONSTH10		0	0.19040E-04	488880.0	3653972.0	151.0	4.57
4.66	4.63	NO					
CONSTI1		0	0.20590E-03	488785.0	3653797.0	154.9	4.57
4.66	4.63	NO					
CONSTI2		0	0.20590E-03	488810.0	3653797.0	154.5	4.57
4.66	4.63	NO					

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**MODELOPTs: RegDFAULT CONC ELEV

*** SOURCE IDs DEFINING SOURCE

GROUPS ***

SRCGROUP ID -----	SOURCE IDs -----
ALL CONSTB3	CONSTA1 , CONSTA2 , CONSTB1 , CONSTB2 , , CONSTB4 , CONSTB5 , CONSTB6 ,
CONSTC5	CONSTC1 , CONSTC2 , CONSTC3 , CONSTC4 , , CONSTC6 , CONSTC7 , CONSTC8 ,
CONSTD5	CONSTD1 , CONSTD2 , CONSTD3 , CONSTD4 , , CONSTD6 , CONSTD7 , CONSTD8 ,
CONSTD13	CONSTD9 , CONSTD10 , CONSTD11 , CONSTD12 , , CONSTD14 , CONSTE1 , CONSTE2 ,
CONSTE7	CONSTE3 , CONSTE4 , CONSTE5 , CONSTE6 , , CONSTE8 , CONSTE9 , CONSTE10 ,
CONSTF5	CONSTF1 , CONSTF2 , CONSTF3 , CONSTF4 , , CONSTF6 , CONSTF7 , CONSTF8 ,
CONSTG3	CONSTF9 , CONSTF10 , CONSTG1 , CONSTG2 , , CONSTG4 , CONSTG5 , CONSTG6 ,
CONSTG11	CONSTG7 , CONSTG8 , CONSTG9 , CONSTG10 , , CONSTG12 , CONSTH1 , CONSTH2 ,
CONSTH7	CONSTH3 , CONSTH4 , CONSTH5 , CONSTH6 , , CONSTH8 , CONSTH9 , CONSTH10 ,
	CONSTI1 , CONSTI2 ,

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**MODELOPTs: RegDFAULT CONC ELEV

*** DISCRETE CARTESIAN

RECEPTORS ***

(X-COORD, Y-COORD, ZELEV,

ZHILL, ZFLAG)

(METERS)

(488250.0, 3653450.0, 167.0, 167.0, 0.0);	(
488300.0, 3653450.0, 165.3, 165.3, 0.0);	(
(488350.0, 3653450.0, 162.1, 162.1, 0.0);	(
488400.0, 3653450.0, 158.6, 158.6, 0.0);	(
(488450.0, 3653450.0, 157.6, 157.6, 0.0);	(
488500.0, 3653450.0, 156.0, 156.0, 0.0);	(
(488550.0, 3653450.0, 155.9, 155.9, 0.0);	(
488600.0, 3653450.0, 154.9, 154.9, 0.0);	(
(488650.0, 3653450.0, 153.9, 153.9, 0.0);	(
488700.0, 3653450.0, 153.2, 153.2, 0.0);	(
(488750.0, 3653450.0, 152.0, 152.0, 0.0);	(
488800.0, 3653450.0, 152.0, 152.0, 0.0);	(
(488850.0, 3653450.0, 152.1, 359.0, 0.0);	(
488900.0, 3653450.0, 153.5, 360.0, 0.0);	(
(488950.0, 3653450.0, 156.0, 360.0, 0.0);	(
489000.0, 3653450.0, 157.1, 360.0, 0.0);	(
(489050.0, 3653450.0, 158.5, 360.0, 0.0);	(
489100.0, 3653450.0, 160.2, 360.0, 0.0);	(
(489150.0, 3653450.0, 161.9, 360.0, 0.0);	(
488250.0, 3653500.0, 166.2, 166.2, 0.0);	(
(488300.0, 3653500.0, 165.9, 165.9, 0.0);	(
488350.0, 3653500.0, 163.7, 163.7, 0.0);	(
(488400.0, 3653500.0, 158.9, 166.0, 0.0);	(
488450.0, 3653500.0, 156.7, 317.0, 0.0);	(
(488500.0, 3653500.0, 156.0, 317.0, 0.0);	(
488550.0, 3653500.0, 154.5, 317.0, 0.0);	(
(488600.0, 3653500.0, 153.7, 317.0, 0.0);	(
488650.0, 3653500.0, 153.0, 317.0, 0.0);	(
(488700.0, 3653500.0, 152.1, 317.0, 0.0);	(
488750.0, 3653500.0, 152.0, 317.0, 0.0);	(
(488800.0, 3653500.0, 152.0, 317.0, 0.0);	(
488850.0, 3653500.0, 153.5, 360.0, 0.0);	(
(488900.0, 3653500.0, 155.2, 360.0, 0.0);	(
488950.0, 3653500.0, 156.8, 360.0, 0.0);	(
(489000.0, 3653500.0, 158.5, 360.0, 0.0);	(
489050.0, 3653500.0, 160.2, 360.0, 0.0);	(
(489100.0, 3653500.0, 161.8, 360.0, 0.0);	(
489150.0, 3653500.0, 163.6, 360.0, 0.0);	(
(488250.0, 3653550.0, 166.0, 166.0, 0.0);	(
488300.0, 3653550.0, 166.0, 166.0, 0.0);	(

(488350.0, 3653550.0, 164.5, 166.0, 0.0); (

488400.0, 3653550.0, 158.6, 317.0, 0.0); (

(488450.0, 3653550.0, 156.2, 317.0, 0.0); (

488500.0, 3653550.0, 154.5, 336.0, 0.0); (

(488550.0, 3653550.0, 153.7, 336.0, 0.0); (

488600.0, 3653550.0, 152.8, 336.0, 0.0); (

(488650.0, 3653550.0, 152.0, 336.0, 0.0); (

488700.0, 3653550.0, 151.7, 317.0, 0.0); (

(488750.0, 3653550.0, 152.0, 317.0, 0.0); (

488800.0, 3653550.0, 152.5, 359.0, 0.0); (

(488850.0, 3653550.0, 155.2, 360.0, 0.0); (

488900.0, 3653550.0, 156.6, 360.0, 0.0); (

(488950.0, 3653550.0, 157.5, 360.0, 0.0); (

489000.0, 3653550.0, 159.5, 360.0, 0.0); (

(489050.0, 3653550.0, 161.8, 360.0, 0.0); (

489100.0, 3653550.0, 164.0, 360.0, 0.0); (

(489150.0, 3653550.0, 168.0, 360.0, 0.0); (

488250.0, 3653600.0, 164.7, 317.0, 0.0); (

(488300.0, 3653600.0, 163.0, 317.0, 0.0); (

488350.0, 3653600.0, 159.7, 337.0, 0.0); (

(488400.0, 3653600.0, 157.0, 337.0, 0.0); (

488450.0, 3653600.0, 154.5, 337.0, 0.0); (

(488500.0, 3653600.0, 153.8, 337.0, 0.0); (

488550.0, 3653600.0, 152.9, 337.0, 0.0); (

(488600.0, 3653600.0, 152.0, 337.0, 0.0); (

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**MODELOPTs: RegDFAULT CONC ELEV

*** DISCRETE CARTESIAN

RECEPTORS ***

(X-COORD, Y-COORD, ZELEV,

ZHILL, ZFLAG)

(METERS)

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**MODELOPTs: RegDFAULT CONC ELEV

*** DISCRETE CARTESIAN

RECEPTORS ***

(X-COORD, Y-COORD, ZELEV,

ZHILL, ZFLAG)

(METERS)

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**MODELOPTs: RegDFAULT CONC ELEV

*** DISCRETE CARTESIAN

RECEPTORS ***

(X-COORD, Y-COORD, ZELEV,

ZHILL, ZFLAG)

(METERS)

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12	01	01	1	15	79.3	0.291	1.390	0.005	1204.	377.	-27.6	0.48
1.10	0.24			1.78	260.		10.0	301.4	10.0			
12	01	01	1	16	24.5	0.162	0.951	0.005	1244.	167.	-15.4	0.51
1.10	0.34			0.89	292.		10.0	299.8	10.0			
12	01	01	1	17	-2.5	0.060	-9.000	-9.000	-999.	45.	7.5	0.51
1.10	0.61			0.89	282.		10.0	296.9	10.0			
12	01	01	1	18	-0.6	0.029	-9.000	-9.000	-999.	12.	3.4	0.47
1.10	1.00			0.44	10.		10.0	293.1	10.0			
12	01	01	1	19	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.49
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12	01	01	1	20	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47
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12	01	01	1	21	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47
1.10	1.00			0.44	61.		10.0	286.4	10.0			
12	01	01	1	22	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47
1.10	1.00			0.44	33.		10.0	285.4	10.0			
12	01	01	1	23	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47
1.10	1.00			0.44	50.		10.0	284.2	10.0			
12	01	01	1	24	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47
1.10	1.00			0.44	42.		10.0	283.1	10.0			

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
12	01	01	01	10.0	1	51.	0.44	282.6	30.0	-99.00	0.20

F indicates top of profile (=1) or below (=0)

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 *** 08/07/15
 *** AERMET - VERSION 14134 *** *** Health Risk Assessment
 *** 16:31:38

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**MODELOPTs: RegDFault CONC ELEV

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED
 OVER 1 YEARS FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): CONSTA1 ,
 CONSTA2 , CONSTB1 , CONSTB2 , CONSTB3 ,
 CONSTB4 , CONSTB5 , CONSTB6 , CONSTC1 ,
 CONSTC2 , CONSTC3 , CONSTC4 , CONSTC5 ,
 CONSTC6 , CONSTC7 , CONSTC8 , CONSTD1 ,
 CONSTD2 , CONSTD3 , CONSTD4 , CONSTD5 ,
 CONSTD6 , CONSTD7 , CONSTD8 , CONSTD9 ,
 CONSTD10 , CONSTD11 , CONSTD12 , . . . ,

*** DISCRETE CARTESIAN

RECEPTOR POINTS ***

X-COORD (M)		Y-COORD (M)	CONC	X-COORD
(M)	Y-COORD (M)	CONC		
488250.00	3653450.00	0.04851		
488300.00	3653450.00	0.06182		
488350.00	3653450.00	0.09024		
488400.00	3653450.00	0.12723		
488450.00	3653450.00	0.14728		
488500.00	3653450.00	0.17594		
488550.00	3653450.00	0.18814		
488600.00	3653450.00	0.21435		
488650.00	3653450.00	0.22354		
488700.00	3653450.00	0.22324		
488750.00	3653450.00	0.21649		
488800.00	3653450.00	0.20535		
488850.00	3653450.00	0.19134		
488900.00	3653450.00	0.17642		
488950.00	3653450.00	0.14935		
489000.00	3653450.00	0.13025		
489050.00	3653450.00	0.11218		
489100.00	3653450.00	0.09387		
489150.00	3653450.00	0.07761		
488250.00	3653500.00	0.05892		
488300.00	3653500.00	0.06407		
488350.00	3653500.00	0.08587		
488400.00	3653500.00	0.13924		
488450.00	3653500.00	0.17889		

** CONC OF OTHER IN
**

MICROGRAMS/M**3

	488500.00	3653500.00	0.20716
488550.00	3653500.00	0.25272	
	488600.00	3653500.00	0.27073
488650.00	3653500.00	0.27893	
	488700.00	3653500.00	0.27628
488750.00	3653500.00	0.26468	
	488800.00	3653500.00	0.24738
488850.00	3653500.00	0.22712	
	488900.00	3653500.00	0.19570
488950.00	3653500.00	0.16525	
	489000.00	3653500.00	0.13823
489050.00	3653500.00	0.11317	
	489100.00	3653500.00	0.09230
489150.00	3653500.00	0.07363	
	488250.00	3653550.00	0.06781
488300.00	3653550.00	0.07040	
	488350.00	3653550.00	0.08621
488400.00	3653550.00	0.16377	
	488450.00	3653550.00	0.21784
488500.00	3653550.00	0.28435	
	488550.00	3653550.00	0.32248
488600.00	3653550.00	0.35076	
	488650.00	3653550.00	0.36126
488700.00	3653550.00	0.35336	
	488750.00	3653550.00	0.33300
488800.00	3653550.00	0.30525	
	488850.00	3653550.00	0.25930
488900.00	3653550.00	0.21817	
	488950.00	3653550.00	0.18693
489000.00	3653550.00	0.14828	
	489050.00	3653550.00	0.11174
489100.00	3653550.00	0.08389	
	489150.00	3653550.00	0.04806
488250.00	3653600.00	0.07975	
	488300.00	3653600.00	0.10412
488350.00	3653600.00	0.15565	
	488400.00	3653600.00	0.21249
488450.00	3653600.00	0.29835	
	488500.00	3653600.00	0.36204
488550.00	3653600.00	0.42915	
	488600.00	3653600.00	0.47852
488650.00	3653600.00	0.49205	
	488700.00	3653600.00	0.47184
488750.00	3653600.00	0.43403	
	488800.00	3653600.00	0.38443
488850.00	3653600.00	0.28689	
	488900.00	3653600.00	0.23159
488950.00	3653600.00	0.18837	
	489000.00	3653600.00	0.15420
489050.00	3653600.00	0.10656	
	489100.00	3653600.00	0.05338
489150.00	3653600.00	0.02433	
	488250.00	3653650.00	0.12394
488300.00	3653650.00	0.15711	

	488350.00	3653650.00	0.21067
488400.00	3653650.00	0.28455	

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**MODELOPTs: RegDFault CONC ELEV

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED
 OVER 1 YEARS FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): CONSTA1 ,
 CONSTA2 , CONSTB1 , CONSTB2 , CONSTB3 ,
 CONSTB4 , CONSTB5 , CONSTB6 , CONSTC1 ,
 CONSTC2 , CONSTC3 , CONSTC4 , CONSTC5 ,
 CONSTC6 , CONSTC7 , CONSTC8 , CONSTD1 ,
 CONSTD2 , CONSTD3 , CONSTD4 , CONSTD5 ,
 CONSTD6 , CONSTD7 , CONSTD8 , CONSTD9 ,
 CONSTD10 , CONSTD11 , CONSTD12 , . . . ,

*** DISCRETE CARTESIAN

RECEPTOR POINTS ***

MICROGRAMS/M**3		** CONC OF OTHER IN	
		**	
X-COORD (M)	Y-COORD (M)	CONC	X-COORD
(M)	(M)	CONC	
488450.00	3653650.00	0.36594	
488500.00	3653650.00	0.47766	
488550.00	3653650.00	0.61043	
488600.00	3653650.00	0.71440	
488650.00	3653650.00	0.73602	
488700.00	3653650.00	0.67714	
488750.00	3653650.00	0.58955	
488800.00	3653650.00	0.42225	
488850.00	3653650.00	0.35812	
488900.00	3653650.00	0.30271	
488950.00	3653650.00	0.25017	
489000.00	3653650.00	0.16813	
489050.00	3653650.00	0.09891	
489100.00	3653650.00	0.03884	
489150.00	3653650.00	0.02035	
488250.00	3653700.00	0.16182	
488300.00	3653700.00	0.19749	
488350.00	3653700.00	0.25022	
488400.00	3653700.00	0.31917	
488450.00	3653700.00	0.42953	
488500.00	3653700.00	0.62974	
488550.00	3653700.00	0.99014	
488600.00	3653700.00	1.30050	
488650.00	3653700.00	1.31454	

	488700.00	3653700.00	1.09702
488750.00	3653700.00	0.76446	
	488800.00	3653700.00	0.60078
488850.00	3653700.00	0.53220	
	488900.00	3653700.00	0.40883
488950.00	3653700.00	0.30661	
	489000.00	3653700.00	0.19671
489050.00	3653700.00	0.10402	
	489100.00	3653700.00	0.04854
489150.00	3653700.00	0.02276	
	488250.00	3653750.00	0.17390
488300.00	3653750.00	0.20917	
	488350.00	3653750.00	0.25543
488400.00	3653750.00	0.31027	
	488450.00	3653750.00	0.41359
488500.00	3653750.00	0.69676	
	488900.00	3653750.00	0.52704
488950.00	3653750.00	0.36371	
	489000.00	3653750.00	0.24988
489050.00	3653750.00	0.14232	
	489100.00	3653750.00	0.07951
489150.00	3653750.00	0.04537	
	488250.00	3653800.00	0.16816
488300.00	3653800.00	0.19477	
	488350.00	3653800.00	0.23009
488400.00	3653800.00	0.28430	
	488450.00	3653800.00	0.37981
488500.00	3653800.00	0.56074	
	488900.00	3653800.00	0.60577
488950.00	3653800.00	0.41635	
	489000.00	3653800.00	0.28922
489050.00	3653800.00	0.21059	
	489100.00	3653800.00	0.14781
489150.00	3653800.00	0.09294	
	488250.00	3653850.00	0.15414
488300.00	3653850.00	0.17733	
	488350.00	3653850.00	0.21107
488400.00	3653850.00	0.26561	
	488450.00	3653850.00	0.34145
488500.00	3653850.00	0.45680	
	488550.00	3653850.00	0.63453
488900.00	3653850.00	0.60730	
	488950.00	3653850.00	0.41574
489000.00	3653850.00	0.31208	
	489050.00	3653850.00	0.23650
489100.00	3653850.00	0.19000	
	489150.00	3653850.00	0.14382
488250.00	3653900.00	0.14103	
	488300.00	3653900.00	0.16448
488350.00	3653900.00	0.19464	
	488400.00	3653900.00	0.23748
488450.00	3653900.00	0.29208	
	488500.00	3653900.00	0.35183
488550.00	3653900.00	0.45643	

	488600.00	3653900.00	0.57282
488650.00	3653900.00	0.68723	

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**MODELOPTs: RegDFault CONC ELEV

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED
 OVER 1 YEARS FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): CONSTA1 ,
 CONSTA2 , CONSTB1 , CONSTB2 , CONSTB3 ,
 CONSTB4 , CONSTB5 , CONSTB6 , CONSTC1 ,
 CONSTC2 , CONSTC3 , CONSTC4 , CONSTC5 ,
 CONSTC6 , CONSTC7 , CONSTC8 , CONSTD1 ,
 CONSTD2 , CONSTD3 , CONSTD4 , CONSTD5 ,
 CONSTD6 , CONSTD7 , CONSTD8 , CONSTD9 ,
 CONSTD10 , CONSTD11 , CONSTD12 , . . . ,

*** DISCRETE CARTESIAN

RECEPTOR POINTS ***

X-COORD (M)		Y-COORD (M)	CONC	X-COORD
(M)	Y-COORD (M)	CONC		
488950.00	3653900.00	0.38953		
489000.00	3653900.00	0.29528		
489050.00	3653900.00	0.23534		
489100.00	3653900.00	0.18857		
489150.00	3653900.00	0.15390		
488250.00	3653950.00	0.13011		
488300.00	3653950.00	0.15231		
488350.00	3653950.00	0.17679		
488400.00	3653950.00	0.20706		
488450.00	3653950.00	0.24584		
488500.00	3653950.00	0.29355		
488550.00	3653950.00	0.35427		
488600.00	3653950.00	0.42060		
488650.00	3653950.00	0.46309		
488700.00	3653950.00	0.50692		
488750.00	3653950.00	0.52672		
488800.00	3653950.00	0.53704		
488950.00	3653950.00	0.34664		
489000.00	3653950.00	0.26877		
489050.00	3653950.00	0.21662		
489100.00	3653950.00	0.18073		
489150.00	3653950.00	0.15086		
488250.00	3654000.00	0.12058		
488300.00	3654000.00	0.14030		

** CONC OF OTHER IN
**

MICROGRAMS/M**3

	488350.00	3654000.00	0.16123
488400.00	3654000.00	0.18985	
	488450.00	3654000.00	0.21776
488500.00	3654000.00	0.25671	
	488550.00	3654000.00	0.29313
488600.00	3654000.00	0.33145	
	488650.00	3654000.00	0.35670
488700.00	3654000.00	0.38034	
	488750.00	3654000.00	0.38742
488800.00	3654000.00	0.38895	
	488850.00	3654000.00	0.40743
488950.00	3654000.00	0.28873	
	489000.00	3654000.00	0.23573
489050.00	3654000.00	0.19620	
	489100.00	3654000.00	0.16775
489150.00	3654000.00	0.14359	
	488250.00	3654050.00	0.11188
488300.00	3654050.00	0.12906	
	488350.00	3654050.00	0.15099
488400.00	3654050.00	0.17383	
	488450.00	3654050.00	0.19770
488500.00	3654050.00	0.22052	
	488550.00	3654050.00	0.24999
488600.00	3654050.00	0.27077	
	488650.00	3654050.00	0.28687
488700.00	3654050.00	0.29666	
	488750.00	3654050.00	0.30591
488800.00	3654050.00	0.29655	
	488850.00	3654050.00	0.29026
488900.00	3654050.00	0.26706	
	488950.00	3654050.00	0.23492
489000.00	3654050.00	0.20211	
	489050.00	3654050.00	0.17494
489100.00	3654050.00	0.15179	
	489150.00	3654050.00	0.13279
488250.00	3654100.00	0.10710	
	488300.00	3654100.00	0.12373
488350.00	3654100.00	0.14175	
	488400.00	3654100.00	0.15813
488450.00	3654100.00	0.17542	
	488500.00	3654100.00	0.19420
488550.00	3654100.00	0.21068	
	488600.00	3654100.00	0.22558
488650.00	3654100.00	0.23729	
	488700.00	3654100.00	0.24383
488750.00	3654100.00	0.24488	
	488800.00	3654100.00	0.23972
488850.00	3654100.00	0.22976	
	488900.00	3654100.00	0.21358
488950.00	3654100.00	0.19510	
	489000.00	3654100.00	0.17399
489050.00	3654100.00	0.15468	
	489100.00	3654100.00	0.13710
489150.00	3654100.00	0.12155	

	488250.00	3654150.00	0.10521
488300.00	3654150.00	0.11812	

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 *** 08/07/15
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**MODELOPTs: RegDFault CONC ELEV

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED
 OVER 1 YEARS FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): CONSTA1 ,
 CONSTA2 , CONSTB1 , CONSTB2 , CONSTB3 ,
 CONSTB4 , CONSTB5 , CONSTB6 , CONSTC1 ,
 CONSTC2 , CONSTC3 , CONSTC4 , CONSTC5 ,
 CONSTC6 , CONSTC7 , CONSTC8 , CONSTD1 ,
 CONSTD2 , CONSTD3 , CONSTD4 , CONSTD5 ,
 CONSTD6 , CONSTD7 , CONSTD8 , CONSTD9 ,
 CONSTD10 , CONSTD11 , CONSTD12 , . . . ,

*** DISCRETE CARTESIAN

RECEPTOR POINTS ***

X-COORD (M)		Y-COORD (M)	CONC	X-COORD
(M)	Y-COORD (M)	CONC		
488350.00	3654150.00	0.13020		
488400.00	3654150.00	0.14240		
488450.00	3654150.00	0.15476		
488500.00	3654150.00	0.16766		
488550.00	3654150.00	0.17932		
488600.00	3654150.00	0.18916		
488650.00	3654150.00	0.19607		
488700.00	3654150.00	0.20061		
488750.00	3654150.00	0.20129		
488800.00	3654150.00	0.19784		
488850.00	3654150.00	0.19035		
488900.00	3654150.00	0.17895		
488950.00	3654150.00	0.16542		
489000.00	3654150.00	0.15095		
489050.00	3654150.00	0.13687		
489100.00	3654150.00	0.12386		
489150.00	3654150.00	0.11171		
488250.00	3654200.00	0.09869		
488300.00	3654200.00	0.10772		
488350.00	3654200.00	0.11621		
488400.00	3654200.00	0.12639		
488450.00	3654200.00	0.13605		
488500.00	3654200.00	0.14535		
488550.00	3654200.00	0.15300		

** CONC OF OTHER IN
**

MICROGRAMS/M**3

	488600.00	3654200.00	0.14881
488650.00	3654200.00	0.14696	
	488700.00	3654200.00	0.14986
488750.00	3654200.00	0.16536	
	488800.00	3654200.00	0.16457
488850.00	3654200.00	0.15935	
	488900.00	3654200.00	0.15230
488950.00	3654200.00	0.14258	
	489000.00	3654200.00	0.13213
489050.00	3654200.00	0.12160	
	489100.00	3654200.00	0.11146
489150.00	3654200.00	0.10209	
	488250.00	3654250.00	0.09082
488300.00	3654250.00	0.09733	
	488350.00	3654250.00	0.10405
488400.00	3654250.00	0.11203	
	488450.00	3654250.00	0.12032
488500.00	3654250.00	0.12723	
	488550.00	3654250.00	0.12596
488600.00	3654250.00	0.10488	
	488650.00	3654250.00	0.10089
488700.00	3654250.00	0.10837	
	488750.00	3654250.00	0.11810
488800.00	3654250.00	0.12354	
	488850.00	3654250.00	0.12691
488900.00	3654250.00	0.13017	
	488950.00	3654250.00	0.12425
489000.00	3654250.00	0.11684	
	489050.00	3654250.00	0.10880
489100.00	3654250.00	0.10074	
	489150.00	3654250.00	0.09320
488250.00	3654300.00	0.07779	
	488300.00	3654300.00	0.08188
488350.00	3654300.00	0.08289	
	488400.00	3654300.00	0.08754
488450.00	3654300.00	0.09934	
	488500.00	3654300.00	0.11006
488550.00	3654300.00	0.10210	
	488600.00	3654300.00	0.08939
488650.00	3654300.00	0.07344	
	488700.00	3654300.00	0.08092
488750.00	3654300.00	0.08910	
	488800.00	3654300.00	0.08880
488850.00	3654300.00	0.09776	
	488900.00	3654300.00	0.10271
488950.00	3654300.00	0.10554	
	489000.00	3654300.00	0.10329
489050.00	3654300.00	0.09767	
	489100.00	3654300.00	0.09132
489150.00	3654300.00	0.08536	

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**MODELOPTs: RegDFault CONC ELEV

*** THE SUMMARY OF MAXIMUM ANNUAL
 RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF OTHER IN MICROGRAMS/M**3

**

NETWORK GROUP ID YR, ZELEV, ZHILL, ZFLAG)	AVERAGE CONC OF TYPE	RECEPTOR (XR, GRID-ID
ALL	1ST HIGHEST VALUE IS	1.31454 AT (488650.00, 3653700.00,
150.03,	337.00, 0.00) DC	
	2ND HIGHEST VALUE IS	1.30050 AT (488600.00, 3653700.00,
150.34,	337.00, 0.00) DC	
	3RD HIGHEST VALUE IS	1.09702 AT (488700.00, 3653700.00,
151.69,	337.00, 0.00) DC	
	4TH HIGHEST VALUE IS	0.99014 AT (488550.00, 3653700.00,
150.70,	337.00, 0.00) DC	
	5TH HIGHEST VALUE IS	0.76446 AT (488750.00, 3653700.00,
156.20,	337.00, 0.00) DC	
	6TH HIGHEST VALUE IS	0.73602 AT (488650.00, 3653650.00,
151.00,	337.00, 0.00) DC	
	7TH HIGHEST VALUE IS	0.71440 AT (488600.00, 3653650.00,
151.71,	337.00, 0.00) DC	
	8TH HIGHEST VALUE IS	0.69676 AT (488500.00, 3653750.00,
148.74,	337.00, 0.00) DC	
	9TH HIGHEST VALUE IS	0.68723 AT (488650.00, 3653900.00,
149.87,	337.00, 0.00) DC	
	10TH HIGHEST VALUE IS	0.67714 AT (488700.00, 3653650.00,
151.00,	337.00, 0.00) DC	

*** RECEPTOR TYPES: GC = GRIDCART
 GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR

*** AERMOD - VERSION 14134 *** *** Santa Fe Valley Chinese Church
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**MODELOPTs: RegDEFAULT CONC ELEV

*** Message Summary : AERMOD Model Execution ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 984 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 845 Calm Hours Identified

A Total of 139 Missing Hours Identified (1.58 Percent)

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****
*** NONE ***

*** AERMOD Finishes Successfully ***
