

APPENDIX C

AIR QUALITY MEMORANDUM

City's emission reduction efforts should coordinate with the state strategies in order to accomplish emission reductions in an efficient and cost-effective manner.

The proposed Plan includes a baseline GHG emissions inventory and recommendations for GHG reduction strategies as a foundation for these efforts. An indicator of the success of these efforts will be a measured reduction in GHG emissions using the measures in the Plan. The Plan is another implementation tool of the General Plan that can be used to guide development in the City by focusing on attaining the various goals and policies of the General Plan as well as the GHG reduction goals.

The Plan achieves the purpose and goals described above by providing: an analysis of GHG emissions and sources attributable to the City; estimates on how those emissions are expected to increase; recommended policies and actions that can reduce GHG emissions to meet state, federal, and international targets.

Regional Air Quality Regulations and Standards

The SDAPCD is the local agency responsible for the administration and enforcement of air quality regulations for the San Diego Air Basin (SDAB), which includes all of San Diego County. The SDAPCD regulates most air pollutant sources, except for motor vehicles, marine vessels, aircraft, and agricultural equipment, which are regulated by the California Air Resources Board (ARB) or Environmental Protection Agency (EPA). State and local government projects, as well as projects proposed by the private sector, are subject to SDAPCD requirements if the sources are regulated by the SDAPCD. Additionally, the SDAPCD, along with the ARB, maintains and operates ambient air quality monitoring stations at numerous locations throughout San Diego County. These stations are used to measure and monitor ambient criteria and toxic air pollutant levels.

The San Diego Association of Governments (SANDAG) is the San Diego region's primary public planning, transportation, and research agency, providing the public forum for regional policy decisions about growth, transportation planning and construction, environmental management, housing, open space, energy, public safety, and binational topics. The SDAPCD and SANDAG are responsible for developing and implementing the clean air plan for attainment and maintenance of the Ambient Air Quality Standards (AAQS) in the SDAB. The San Diego County RAQS were initially adopted in 1991, and are updated on a triennial basis. The Regional Air Quality Strategy (RAQS) were updated in 1995, 1998, 2001, 2004, 2009, and most recently in December 2016 (County of San Diego 2016). The RAQS outline the SDAPCD's plans and control measures designed to attain the State air quality standards for O₃. The SDAPCD has also developed the SDAB's input to the State Implementation Plan (SIP), which is required under the Clean Air Act (CAA) for pollutants that are designated as being in nonattainment for national air quality standards for the SDAB.

The RAQS rely on information from the 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 establish 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

Table A shows that the Plan would decrease all criteria air pollutants emissions from baseline and thus would not exceed the corresponding SDAPCD daily emission thresholds for any criteria pollutants. Therefore, Plan-related long-term air quality impacts would be less than significant.

Table A: Regional Operational Emissions

Source	Pollutant Emissions, lbs/day					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Existing Land Use Emissions						
Energy	21.6	195.9	164.6	1.2	14.9	14.9
Mobile	1,278.3	3,711.0	6,974.2	12.9	764.1	215.0
Off-Road	729.4	2220.8	5293.5	18.3	145.0	- ¹
Total Existing Emissions	2,029.3	6,127.8	12,432.4	32.4	924.0	229.9
General Plan Emissions (2035)						
Energy	18.4	167.5	140.7	1.0	12.7	12.7
Mobile	965.5	4,638.5	5,569.5	16.3	1,329.6	361.9
Off-Road	605.8	283.6	5501.7	6.4	23.1	- ¹
Total General Plan (2035) Emissions	1,680.1	5,140.7	11,712.7	25.3	1,370.6	379.7
Changes in Emissions with the Sustainable Santee Action Plan (2035)						
Energy	-8.05	-73.17	-61.46	-0.44	-5.56	-5.56
Mobile	-343.66	-1,651.11	-1,982.51	-5.81	-473.28	-128.83
Off-Road	0.00	0.00	0.00	0.00	0.00	- ¹
Changes to Emissions Totals	-351.71	-1,724.28	-2,043.97	-6.25	-478.84	-134.40
SDAPCD Thresholds	75.0	250.0	550.0	250.0	100.0	55.0
Significant?	No	No	No	No	No	No

Source: Compiled by LSA (December 2018).

Note: ¹ Assume all particulate matter emissions from off-road equipment are PM₁₀.

CO = carbon monoxide

lbs/day = pounds per day

NO_x = nitrogen oxides

PM_{2.5} = particulate matter less than 2.5 microns in size

PM₁₀ = particulate matter less than 10 microns in size

ROG = reactive organic gas

SCAQMD = South Coast Air Quality Management District

SO_x = sulfur oxides

Air Quality Management Plan Consistency

The applicable air quality plans are the SIP and RAQS. As discussed above, the SIP includes strategies and tactics to be used to attain and maintain acceptable air quality in the SDAB. The RAQS is a separate document that contains a list of strategies to maintain acceptable air quality. Consistency with the RAQS is typically determined by two standards. The first standard is whether the proposed project would exceed assumptions contained in the RAQS. The second standard is whether the proposed project would increase the frequency or severity of existing air quality violations, contribute to new violations, or delay the timely attainment of air quality standards or interim reductions as specified in the RAQS.

The RAQS and SIP are intended to address cumulative impacts in the SDAB based on future growth predicted by SANDAG in the 2030 Regional Growth Forecast Update. SANDAG uses growth projections from the local jurisdictions' adopted General Plans; therefore, development consistent with the applicable General Plan would be generally consistent with the growth projections in the air quality plans.

ATTACHMENT A: CALEEMOD PRINTOUTS AND OFF-ROAD EMISSIONS CALCULATIONS

Santee CAP Baseline 2005 - San Diego County APCD Air District, Summer

Santee CAP Baseline 2005
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
User Defined Industrial	1.00	User Defined Unit	1.00	1.00	1

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2005
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	720.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - City of Santee

Construction Phase - no construction

Off-road Equipment -

Off-road Equipment -

Vehicle Trips - 165,566,539 VMT annually

Energy Use - residential + commercial energy usage

Water And Wastewater - assume indoor/outdoor half-half

Solid Waste - community solid waste generation

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblEnergyUse	NT24E	0.00	250,015,672.00
tblEnergyUse	NT24NG	0.00	729,633,485.00
tblLandUse	LandUseSquareFeet	0.00	1.00
tblLandUse	LotAcreage	0.00	1.00
tblLandUse	Population	0.00	1.00
tblSolidWaste	LandfillNoGasCapture	6.00	100.00
tblSolidWaste	SolidWasteGenerationRate	0.00	68,961.00
tblVehicleTrips	CC_TL	7.30	1.00
tblVehicleTrips	CC_TTP	0.00	33.00
tblVehicleTrips	CNW_TL	7.30	1.00
tblVehicleTrips	CNW_TTP	0.00	34.00
tblVehicleTrips	CW_TL	9.50	1.00
tblVehicleTrips	CW_TTP	0.00	33.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	0.00	968,986.92
tblVehicleTrips	SU_TR	0.00	968,986.92
tblVehicleTrips	WD_TR	0.00	968,986.92
tblWater	IndoorWaterUseRate	0.00	1,098,500.00
tblWater	OutdoorWaterUseRate	0.00	1,098,500.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

[illegible]

Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	1.0455	0.0000	0.0000	0.9619	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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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	0.0000	0.0000	0.0000	0.0000	0.0000	1.0455	0.0000	0.0000	0.9619	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	1.0455	0.0000	0.0000	0.9619	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

	ROG	NOx	CO	SO2	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	5.0000e-005	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.4000e-004
Energy	21.5578	195.9800	164.6232	1.1759		14.8945	14.8945		14.8945	14.8945		235,175.9823	235,175.9823	4.5075	4.3116	236,573.5156
Mobile	1,278.2954	3,711.0293	6,974.2339	12.8652	748.0529	16.0759	764.1288	199.9677	15.0640	215.0317		1,309,343.6353	1,309,343.6353	117.6865		1,312,285.7985
Total	1,299.8533	3,907.0093	7,138.8573	14.0411	748.0529	30.9704	779.0233	199.9677	29.9585	229.9262		1,544,519.6178	1,544,519.6178	122.1941	4.3116	1,548,859.3143

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	5.0000e-005	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.4000e-004
Energy	21.5578	195.9800	164.6232	1.1759		14.8945	14.8945		14.8945	14.8945		235,175.9823	235,175.9823	4.5075	4.3116	236,573.5156
Mobile	1,278.2954	3,711.0293	6,974.2339	12.8652	748.0529	16.0759	764.1288	199.9677	15.0640	215.0317		1,309,343.6353	1,309,343.6353	117.6865		1,312,285.7985
Total	1,299.8533	3,907.0093	7,138.8573	14.0411	748.0529	30.9704	779.0233	199.9677	29.9585	229.9262		1,544,519.6178	1,544,519.6178	122.1941	4.3116	1,548,859.3143
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	11/2/2017	11/1/2017	5	1	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41

Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

[illegible]

Unmitigated Construction Off-Site

[illegible]

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction Off-Site

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

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	1,278.2954	3,711.0293	6,974.2339	12.8652	748.0529	16.0759	764.1288	199.9677	15.0640	215.0317		1,309,343.6353	1,309,343.6353	117.6865		1,312,285.7985
Unmitigated	1,278.2954	3,711.0293	6,974.2339	12.8652	748.0529	16.0759	764.1288	199.9677	15.0640	215.0317		1,309,343.6353	1,309,343.6353	117.6865		1,312,285.7985

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	968,986.92	968,986.92	968,986.92	352,711,239	352,711,239
Total	968,986.92	968,986.92	968,986.92	352,711,239	352,711,239

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
User Defined Industrial	1.00	1.00	1.00	33.00	33.00	34.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.581689	0.044135	0.186694	0.113515	0.018244	0.005600	0.015197	0.022573	0.001888	0.002088	0.006279	0.000742	0.001357

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	21.5578	195.9800	164.6232	1.1759		14.8945	14.8945		14.8945	14.8945		235,175.9823	235,175.9823	4.5075	4.3116	236,573.5156
NaturalGas Unmitigated	21.5578	195.9800	164.6232	1.1759		14.8945	14.8945		14.8945	14.8945		235,175.9823	235,175.9823	4.5075	4.3116	236,573.5156

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	1.999e+006	21.5578	195.9800	164.6232	1.1759		14.8945	14.8945		14.8945	14.8945		235,175.9823	235,175.9823	4.5075	4.3116	236,573.5156
Total		21.5578	195.9800	164.6232	1.1759		14.8945	14.8945		14.8945	14.8945		235,175.9823	235,175.9823	4.5075	4.3116	236,573.5156

Mitigated

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

User Defined Industrial	1999	21.5578	195.9800	164.6232	1.1759		14.8945	14.8945		14.8945	14.8945		235,175.9823	235,175.9823	4.5075	4.3116	236,573.5156
Total		21.5578	195.9800	164.6232	1.1759		14.8945	14.8945		14.8945	14.8945		235,175.9823	235,175.9823	4.5075	4.3116	236,573.5156

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	5.0000e-005	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.4000e-004
Unmitigated	5.0000e-005	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.4000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-005	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.4000e-004

Total	5.0000e-005	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.4000e-004
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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	1.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-005	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.4000e-004
Total	5.0000e-005	0.0000	1.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.4000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Santee CAP 2035 - San Diego County APCD Air District, Summer

Santee CAP 2035
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
User Defined Industrial	1.00	User Defined Unit	1.00	1.00	1

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2035
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	720.49	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -
Land Use - City of Santee
Construction Phase - no construction
Off-road Equipment -
Off-road Equipment -
Vehicle Trips - 155,502,699 VMT annually
Energy Use - residential + commercial energy usage
Water And Wastewater - assume indoor/outdoor half-half
Solid Waste - community solid waste generation
Mobile Land Use Mitigation -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblEnergyUse	NT24E	0.00	311,867,476.00
tblEnergyUse	NT24NG	0.00	870,841,000.00
tblLandUse	LandUseSquareFeet	0.00	1.00
tblLandUse	LotAcreage	0.00	1.00
tblLandUse	Population	0.00	1.00
tblSolidWaste	LandfillNoGasCapture	6.00	100.00
tblSolidWaste	SolidWasteGenerationRate	0.00	54,985.00
tblVehicleTrips	CC_TL	7.30	1.00
tblVehicleTrips	CC_TTP	0.00	33.00
tblVehicleTrips	CNW_TL	7.30	1.00
tblVehicleTrips	CNW_TTP	0.00	34.00
tblVehicleTrips	CW_TL	9.50	1.00
tblVehicleTrips	CW_TTP	0.00	33.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	0.00	1,710,075.32
tblVehicleTrips	SU_TR	0.00	1,710,075.32
tblVehicleTrips	WD_TR	0.00	1,710,075.32
tblWater	IndoorWaterUseRate	0.00	1,065,174.23
tblWater	OutdoorWaterUseRate	0.00	1,065,174.23

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	0.0000	0.0000	0.0000	0.0000	0.0000	1.0455	0.0000	0.0000	0.9619	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	1.0455	0.0000	0.0000	0.9619	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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	0.0000	0.0000	0.0000	0.0000	0.0000	1.0455	0.0000	0.0000	0.9619	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	1.0455	0.0000	0.0000	0.9619	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

	ROG	NOx	CO	SO2	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	4.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	25.7299	233.9084	196.4831	1.4035		17.7770	17.7770		17.7770	17.7770		280,690.0886	280,690.0886	5.3799	5.1460	282,358.0895
Mobile	965.4541	4,638.4848	5,569.4717	16.3342	1,319.3884	10.1947	1,329.5832	352.4963	9.4396	361.9359		1,699,833.5027	1,699,833.5027	110.0911		1,702,585.7789
Total	991.1841	4,872.3933	5,765.9548	17.7377	1,319.3884	27.9718	1,347.3602	352.4963	27.2167	379.7130		1,980,523.5916	1,980,523.5916	115.4709	5.1460	1,984,943.8686

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	4.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	25.7299	233.9084	196.4831	1.4035		17.7770	17.7770		17.7770	17.7770		280,690.0886	280,690.0886	5.3799	5.1460	282,358.0895
Mobile	965.4541	4,638.4848	5,569.4717	16.3342	1,319.3884	10.1947	1,329.5832	352.4963	9.4396	361.9359		1,699,833.5027	1,699,833.5027	110.0911		1,702,585.7789
Total	991.1841	4,872.3933	5,765.9548	17.7377	1,319.3884	27.9718	1,347.3602	352.4963	27.2167	379.7130		1,980,523.5916	1,980,523.5916	115.4709	5.1460	1,984,943.8686

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	11/2/2017	11/1/2017	5	1	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Unmitigated Construction Off-Site

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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	965.4541	4,638.4848	5,569.4717	16.3342	1,319.3884	10.1947	1,329.5832	352.4963	9.4396	361.9359		1,699,833.5027	1,699,833.5027	110.0911		1,702,585.7789
Unmitigated	965.4541	4,638.4848	5,569.4717	16.3342	1,319.3884	10.1947	1,329.5832	352.4963	9.4396	361.9359		1,699,833.5027	1,699,833.5027	110.0911		1,702,585.7789

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	1,710,075.32	1,710,075.32	1710075.32	622,467,416	622,467,416
Total	1,710,075.32	1,710,075.32	1,710,075.32	622,467,416	622,467,416

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
User Defined Industrial	1.00	1.00	1.00	33.00	33.00	34.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.617626	0.036451	0.176904	0.096837	0.011340	0.005282	0.018425	0.026503	0.001944	0.001632	0.005548	0.000800	0.000709

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	25.7299	233.9084	196.4831	1.4035		17.7770	17.7770		17.7770	17.7770		280,690.0886	280,690.0886	5.3799	5.1460	282,358.0895
NaturalGas Unmitigated	25.7299	233.9084	196.4831	1.4035		17.7770	17.7770		17.7770	17.7770		280,690.0886	280,690.0886	5.3799	5.1460	282,358.0895

5.2 Energy by Land Use - NaturalGas
Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	2.38587e+006	25.7299	233.9084	196.4831	1.4035		17.7770	17.7770		17.7770	17.7770		280,690.0886	280,690.0886	5.3799	5.1460	282,358.0895
Total		25.7299	233.9084	196.4831	1.4035		17.7770	17.7770		17.7770	17.7770		280,690.0886	280,690.0886	5.3799	5.1460	282,358.0895

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					
User Defined Industrial	2385.87	25.7299	233.9084	196.4831	1.4035		17.7770	17.7770		17.7770	17.7770		280,690.0886	280,690.0886	5.3799	5.1460	282,358.0895
Total		25.7299	233.9084	196.4831	1.4035		17.7770	17.7770		17.7770	17.7770		280,690.0886	280,690.0886	5.3799	5.1460	282,358.0895

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	4.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	4.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	4.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

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	1.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	4.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Santee CAP 2035 - San Diego County APCD Air District, Summer

Santee CAP 2035 Reduction
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
User Defined Industrial	1.00	User Defined Unit	1.00	1.00	1

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2035
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - City of Santee

Construction Phase - no construction

Off-road Equipment -

Off-road Equipment -

Vehicle Trips - 155,502,699 VMT annually

Energy Use - residential + commercial energy usage

Water And Wastewater - assume indoor/outdoor half-half

Solid Waste - community solid waste generation

Mobile Land Use Mitigation -

Vehicle Emission Factors -
Vehicle Emission Factors -
Vehicle Emission Factors -
Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblEnergyUse	NT24E	0.00	160,482,407.00
tblEnergyUse	NT24NG	0.00	272,415,010.98
tblLandUse	LandUseSquareFeet	0.00	1.00
tblLandUse	LotAcreage	0.00	1.00
tblLandUse	Population	0.00	1.00
tblSolidWaste	LandfillNoGasCapture	6.00	100.00
tblSolidWaste	SolidWasteGenerationRate	0.00	34,074.00
tblVehicleTrips	CC_TL	7.30	1.00
tblVehicleTrips	CC_TTP	0.00	33.00
tblVehicleTrips	CNW_TL	7.30	1.00
tblVehicleTrips	CNW_TTP	0.00	34.00
tblVehicleTrips	CW_TL	9.50	1.00
tblVehicleTrips	CW_TTP	0.00	33.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	0.00	608,717.99
tblVehicleTrips	SU_TR	0.00	608,717.99
tblVehicleTrips	WD_TR	0.00	608,717.99
tblWater	IndoorWaterUseRate	0.00	610,997.72
tblWater	OutdoorWaterUseRate	0.00	610,997.72

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	0.0000	0.0000	0.0000	0.0000	0.0000	1.0455	0.0000	0.0000	0.9619	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	1.0455	0.0000	0.0000	0.9619	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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	0.0000	0.0000	0.0000	0.0000	0.0000	1.0455	0.0000	0.0000	0.9619	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	1.0455	0.0000	0.0000	0.9619	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

	ROG	NOx	CO	SO2	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	4.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	8.0488	73.1708	61.4635	0.4390		5.5610	5.5610		5.5610	5.5610		87,804.9995	87,804.9995	1.6829	1.6098	88,326.7807
Mobile	343.6628	1,651.1139	1,982.5078	5.8143	469.6492	3.6289	473.2781	125.4745	3.3601	128.8346		605,072.3152	605,072.3152	39.1880		606,052.0148
Total	351.7117	1,724.2848	2,043.9714	6.2534	469.6492	9.1899	478.8391	125.4745	8.9211	134.3956		692,877.3150	692,877.3150	40.8709	1.6098	694,378.7957

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	4.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	8.0488	73.1708	61.4635	0.4390		5.5610	5.5610		5.5610	5.5610		87,804.9995	87,804.9995	1.6829	1.6098	88,326.7807
Mobile	343.6628	1,651.1139	1,982.5078	5.8143	469.6492	3.6289	473.2781	125.4745	3.3601	128.8346		605,072.3152	605,072.3152	39.1880		606,052.0148
Total	351.7117	1,724.2848	2,043.9714	6.2534	469.6492	9.1899	478.8391	125.4745	8.9211	134.3956		692,877.3150	692,877.3150	40.8709	1.6098	694,378.7957

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	11/2/2017	11/1/2017	5	1	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Unmitigated Construction Off-Site

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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	343.6628	1,651.1139	1,982.5078	5.8143	469.6492	3.6289	473.2781	125.4745	3.3601	128.8346		605,072.3152	605,072.3152	39.1880		606,052.0148
Unmitigated	343.6628	1,651.1139	1,982.5078	5.8143	469.6492	3.6289	473.2781	125.4745	3.3601	128.8346		605,072.3152	605,072.3152	39.1880		606,052.0148

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	608,717.99	608,717.99	608,717.99	221,573,348	221,573,348
Total	608,717.99	608,717.99	608,717.99	221,573,348	221,573,348

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
User Defined Industrial	1.00	1.00	1.00	33.00	33.00	34.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.617626	0.036451	0.176904	0.096837	0.011340	0.005282	0.018425	0.026503	0.001944	0.001632	0.005548	0.000800	0.000709

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	8.0488	73.1708	61.4635	0.4390		5.5610	5.5610		5.5610	5.5610		87,804.9995	87,804.9995	1.6829	1.6098	88,326.7807
NaturalGas Unmitigated	8.0488	73.1708	61.4635	0.4390		5.5610	5.5610		5.5610	5.5610		87,804.9995	87,804.9995	1.6829	1.6098	88,326.7807

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	746342	8.0488	73.1708	61.4635	0.4390		5.5610	5.5610		5.5610	5.5610		87,804.9995	87,804.9995	1.6829	1.6098	88,326.7807
Total		8.0488	73.1708	61.4635	0.4390		5.5610	5.5610		5.5610	5.5610		87,804.9995	87,804.9995	1.6829	1.6098	88,326.7807

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	746.342	8.0488	73.1708	61.4635	0.4390		5.5610	5.5610		5.5610	5.5610		87,804.9995	87,804.9995	1.6829	1.6098	88,326.7807
Total		8.0488	73.1708	61.4635	0.4390		5.5610	5.5610		5.5610	5.5610		87,804.9995	87,804.9995	1.6829	1.6098	88,326.7807

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	4.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	4.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	4.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

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	1.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	4.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Off-Road Emissions Calculation

2005					
Row Labels	Sum of ROG Exhaust	Sum of CO Exhaust	Sum of NOX Exhaust	Sum of SO2 Exhaust	Sum of PM Exhaust
Agricultural Equipment	0.698015136	3.901402268	3.839654335	0.030327495	0.239373982
Construction and Mining Equipment	4.107122551	19.19051051	26.60024745	0.196483996	1.739109399
Industrial Equipment	0.812135794	15.53926774	4.889404317	0.020187259	0.162118416
Lawn and Garden Equipment	5.044850584	54.53294051	1.385800783	0.010412601	0.174546263
Light Commercial Equipment	1.724303059	32.672195	2.808193243	0.018175232	0.265649049
Recreational Equipment	3.914020613	13.97759233	0.152473997	0.055553613	0.059649366
Grand Total	16.30044774	139.8139084	39.67577412	0.331140196	2.640446475

Indicator (same order as above)	2005	2013 (for 2035)
% Ag jobs	0.00682243	0.00682243
% Building Permits	0.03460039	0.011359602
% Manufacturing Jobs	0.022222651	0.022222651
% Households	0.017540975	0.01784874
% Other Jobs	0.009683282	0.009682254
% Population weighted by income	0.024174042	0.018783872

2005					
	ROG	CO	NOx	SO2	PM
Agricultural Equipment	0.004762159	0.026617044	0.026195773	0.000206907	0.001633112
Construction and Mining Equipment	0.142108041	0.663999145	0.920378932	0.006798423	0.060173863
Industrial Equipment	0.01804781	0.345323725	0.108655526	0.000448614	0.003602701
Lawn and Garden Equipment	0.088491598	0.956560951	0.024308297	0.000182647	0.003061712
Light Commercial Equipment	0.016696912	0.316374068	0.027192526	0.000175996	0.002572355
Recreational Equipment	0.0946177	0.337894907	0.003685913	0.001342955	0.001441966
Total (tons/day)	0.364724222	2.646769841	1.110416967	0.009155543	0.072485709
Total (lbs/day)	729.4484432	5293.539682	2220.833934	18.3110859	144.9714179

2035

Sum of ROG Exhaust	Sum of CO Exhaust	Sum of NOX Exhaust	Sum of SO2 Exhaust	Sum of PM Exhaust
0.10818626	3.059375737	0.412095798	0.002267672	0.014150705
1.420286493	20.32530781	5.044916961	0.032111958	0.220172643
0.222576269	17.69549991	1.389166177	0.00344038	0.029789827
5.761877055	75.37778001	1.437059479	0.006010333	0.209905779
0.748766513	30.64712125	1.024197173	0.003750062	0.151524599
11.31490064	36.53358774	0.404868142	0.168468457	0.167081157
19.57659323	183.6386725	9.712303729	0.216048862	0.792624711

2035

ROG	CO	NOx	SO2	PM
0.000738093	0.020872377	0.002811495	1.5471E-05	9.65422E-05
0.01613389	0.230887416	0.057308251	0.000364779	0.002501074
0.004946235	0.39324092	0.030870955	7.64544E-05	0.000662009
0.102842248	1.345398428	0.025649702	0.000107277	0.003746554
0.007249748	0.296733221	0.009916537	3.63091E-05	0.0014671
0.212537646	0.686242239	0.007604991	0.00316449	0.003138431
0.34444786	2.973374601	0.134161931	0.00376478	0.011611709
688.8957194	5946.749201	268.3238626	7.529560686	23.22341872