

Attachment 1: CalEEMod Construction and Operational Emissions Output

237 Industrial - Option 1 - Santa Clara County, Annual

237 Industrial - Option 1
Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1,200.00	1000sqft	66.50	1,200,000.00	0
Parking Lot	2,621.00	Space	0.00	1,048,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4	Operational Year	2020		
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

- Project Characteristics - Using PG&E 2020 Emission rate
- Land Use - all acreage assigned to light industrial use
- Construction Phase - Based on provided schedule and equipment list
- Off-road Equipment - Based on provided equipment list
- Off-road Equipment - Based on provided construction list
- Off-road Equipment - Based on provided equipment list
- Off-road Equipment - Based on provided equipment list - used Dozer as compactor

Off-road Equipment - Based on provided equipment list

Off-road Equipment - Based on provided equipment list - added Rollers and Pavers (default)

Off-road Equipment - Based on provided equipment list

Off-road Equipment - Based on provided equipment list

Trips and VMT - Added 3100 RT cement and 750 RT asphalt at vendor distances

Demolition - Based on provided equipment list - very little demolition

Grading - Based on acreage graded default with default equipment from CalEEMod

Vehicle Trips - Used default, which is same as

Road Dust - calculated Santa Clara County silt loading per CARB data

Energy Use - default values

Water And Wastewater - no septic

Stationary Sources - Emergency Generators and Fire Pumps - 50 kW generator = 67 hp - tested <50hrs/year

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	75.00	160.00
tblConstructionPhase	NumDays	1,110.00	160.00
tblConstructionPhase	NumDays	70.00	5.00
tblConstructionPhase	NumDays	110.00	20.00
tblConstructionPhase	NumDays	75.00	20.00
tblGrading	AcresOfGrading	0.00	275.00
tblGrading	AcresOfGrading	40.00	0.00
tblGrading	MaterialExported	0.00	1,200.00
tblGrading	MaterialImported	0.00	500.00
tblLandUse	LotAcreage	27.55	66.50
tblLandUse	LotAcreage	23.59	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	2.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblProjectCharacteristics	OperationalYear	2018	2020
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	67.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.50
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	7.30
tblTripsAndVMT	HaulingTripLength	20.00	7.30
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	213.00	212.00
tblTripsAndVMT	HaulingTripNumber	0.00	6,200.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,500.00
tblTripsAndVMT	WorkerTripNumber	5.00	15.00
tblWater	AerobicPercent	87.46	97.00
tblWater	AerobicPercent	87.46	97.00

tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	3.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	3.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.6508	6.5846	4.5399	0.0171	1.0661	0.1319	1.1981	0.2992	0.1239	0.4231	0.0000	1,597.3162	1,597.3162	0.1128	0.0000	1,600.1365
2019	6.5850	0.6580	0.9284	2.4100e-003	0.1603	0.0228	0.1831	0.0425	0.0212	0.0637	0.0000	219.7935	219.7935	0.0216	0.0000	220.3326
Maximum	6.5850	6.5846	4.5399	0.0171	1.0661	0.1319	1.1981	0.2992	0.1239	0.4231	0.0000	1,597.3162	1,597.3162	0.1128	0.0000	1,600.1365

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2018	3-31-2018	1.2406	1.2406
2	4-1-2018	6-30-2018	1.0931	1.0931
3	7-1-2018	9-30-2018	2.4285	2.4285
4	10-1-2018	12-31-2018	2.4846	2.4846
5	1-1-2019	3-31-2019	2.1479	2.1479
6	4-1-2019	6-30-2019	2.7722	2.7722
7	7-1-2019	9-30-2019	2.2848	2.2848

		Highest	2.7722	2.7722
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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	tons/yr										MT/yr					
Area	5.4053	3.3000e-004	0.0353	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.0683	0.0683	1.8000e-004	0.0000	0.0729
Energy	0.1713	1.5577	1.3084	9.3500e-003		0.1184	0.1184		0.1184	0.1184	0.0000	3,146.1460	3,146.1460	0.1776	0.0611	3,168.7916
Mobile	1.8733	8.2431	23.9447	0.0779	6.8582	0.0774	6.9356	1.8360	0.0726	1.9086	0.0000	7,118.5253	7,118.5253	0.2470	0.0000	7,124.7009
Stationary	2.7500e-003	8.9600e-003	9.9700e-003	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	1.2757	1.2757	1.8000e-004	0.0000	1.2801
Waste						0.0000	0.0000		0.0000	0.0000	302.0506	0.0000	302.0506	17.8507	0.0000	748.3175
Water						0.0000	0.0000		0.0000	0.0000	98.1799	197.5169	295.6968	3.3830	0.2176	445.1147
Total	7.4527	9.8100	25.2984	0.0872	6.8582	0.1963	7.0546	1.8360	0.1915	2.0275	400.2305	10,463.5322	10,863.7626	21.6586	0.2787	11,488.2777

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days	Num Days	Phase Description
1	Demolition	Demolition	1/1/2018	1/5/2018	5	5	1 week duration
2	Site Preparation	Site Preparation	1/6/2018	3/2/2018	5	40	8 weeks
3	Grading	Grading	3/3/2018	3/30/2018	5	20	4 weeks
4	utilities/trenching	Trenching	3/31/2018	5/25/2018	5	40	2 months
5	Exterior Building Construction	Building Construction	5/26/2018	1/4/2019	5	160	4 months
6	Paving	Paving	1/5/2019	2/1/2019	5	20	1 month assumed overlap

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 275

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,800,000; Non-Residential Outdoor: 600,000; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
	Excavators	1	2.00	158	0.38
	Rubber Tired Loaders	1	2.00	203	0.36
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Graders	2	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Rubber Tired Loaders	2	8.00	203	0.36
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Loaders	2	8.00	203	0.36
Grading	Scrapers	0	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
utilities/trenching	Rubber Tired Loaders	1	5.00	203	0.36
utilities/trenching	Tractors/Loaders/Backhoes	2	5.00	97	0.37
Exterior Building Construction	Cranes	2	2.00	231	0.29
Exterior Building Construction	Forklifts	2	5.00	89	0.20
Exterior Building Construction	Generator Sets	0	8.00	84	0.74
Exterior Building Construction	Pumps	2	3.00	84	0.74

Exterior Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Exterior Building Construction	Welders	0	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	1	4.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Skid Steer Loaders	2	4.00	65	0.37
Interior Building Construction	Aerial Lifts	4	3.00	63	0.31
Interior Building Construction	Air Compressors	0	6.00	78	0.48
Interior Building Construction	Forklifts	2	4.00	89	0.20
Interior Building Construction	Welders	2	1.00	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	2	15.00	0.00	2.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	212.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
utilities/trenching	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Exterior Building Construction	6	944.00	369.00	6,200.00	10.80	7.30	7.30	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	1,500.00	10.80	7.30	7.30	LD_Mix	HDT_Mix	HHDT
Interior Building Construction	8	189.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 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
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Category	tons/yr										MT/yr					
Fugitive Dust					1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6400e-003	0.0391	0.0191	3.0000e-005		1.9000e-003	1.9000e-003		1.7500e-003	1.7500e-003	0.0000	3.1292	3.1292	9.7000e-004	0.0000	3.1536
Total	3.6400e-003	0.0391	0.0191	3.0000e-005	1.0000e-005	1.9000e-003	1.9100e-003	0.0000	1.7500e-003	1.7500e-003	0.0000	3.1292	3.1292	9.7000e-004	0.0000	3.1536

3.3 Site Preparation - 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	tons/yr										MT/yr					
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
Off-Road	0.0486	0.6033	0.2395	6.4000e-004		0.0239	0.0239		0.0220	0.0220	0.0000	58.4798	58.4798	0.0182	0.0000	58.9349
Total	0.0486	0.6033	0.2395	6.4000e-004	0.0000	0.0239	0.0239	0.0000	0.0220	0.0220	0.0000	58.4798	58.4798	0.0182	0.0000	58.9349

Unmitigated Construction Off-Site

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

Worker	1.2100e-003	9.3000e-004	9.4600e-003	2.0000e-005	2.3800e-003	2.0000e-005	2.4000e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	2.1708	2.1708	7.0000e-005	0.0000	2.1724
Total	1.2100e-003	9.3000e-004	9.4600e-003	2.0000e-005	2.3800e-003	2.0000e-005	2.4000e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	2.1708	2.1708	7.0000e-005	0.0000	2.1724

3.4 Grading - 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	tons/yr										MT/yr					
Fugitive Dust					0.2664	0.0000	0.2664	0.0820	0.0000	0.0820	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0430	0.4722	0.2345	4.6000e-004		0.0226	0.0226		0.0208	0.0208	0.0000	42.1187	42.1187	0.0131	0.0000	42.4465
Total	0.0430	0.4722	0.2345	4.6000e-004	0.2664	0.0226	0.2889	0.0820	0.0208	0.1027	0.0000	42.1187	42.1187	0.0131	0.0000	42.4465

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0100e-003	0.0348	6.7600e-003	9.0000e-005	1.8000e-003	1.4000e-004	1.9400e-003	4.9000e-004	1.3000e-004	6.3000e-004	0.0000	8.2499	8.2499	3.9000e-004	0.0000	8.2597
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	8.1000e-004	6.2000e-004	6.3100e-003	2.0000e-005	1.5900e-003	1.0000e-005	1.6000e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.4472	1.4472	4.0000e-005	0.0000	1.4483
Total	1.8200e-003	0.0354	0.0131	1.1000e-004	3.3900e-003	1.5000e-004	3.5400e-003	9.1000e-004	1.4000e-004	1.0600e-003	0.0000	9.6971	9.6971	4.3000e-004	0.0000	9.7079

3.5 utilities/trenching - 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	tons/yr										MT/yr					
Off-Road	0.0120	0.1323	0.0801	1.6000e-004		6.9100e-003	6.9100e-003		6.3600e-003	6.3600e-003	0.0000	14.2248	14.2248	4.4300e-003	0.0000	14.3355
Total	0.0120	0.1323	0.0801	1.6000e-004		6.9100e-003	6.9100e-003		6.3600e-003	6.3600e-003	0.0000	14.2248	14.2248	4.4300e-003	0.0000	14.3355

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	4.9000e-004	5.0500e-003	1.0000e-005	1.2700e-003	1.0000e-005	1.2800e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.1578	1.1578	3.0000e-005	0.0000	1.1586
Total	6.4000e-004	4.9000e-004	5.0500e-003	1.0000e-005	1.2700e-003	1.0000e-005	1.2800e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.1578	1.1578	3.0000e-005	0.0000	1.1586

3.6 Exterior 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	tons/yr										MT/yr					
Off-Road	0.0707	0.6638	0.4391	7.6000e-004		0.0399	0.0399		0.0380	0.0380	0.0000	67.2089	67.2089	0.0131	0.0000	67.5372
Total	0.0707	0.6638	0.4391	7.6000e-004		0.0399	0.0399		0.0380	0.0380	0.0000	67.2089	67.2089	0.0131	0.0000	67.5372

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0149	0.5512	0.1033	1.0800e-003	0.0191	1.6200e-003	0.0207	5.2400e-003	1.5500e-003	6.7900e-003	0.0000	104.1748	104.1748	6.9000e-003	0.0000	104.3473
Vendor	0.1576	3.8578	1.0735	7.9600e-003	0.1893	0.0310	0.2203	0.0547	0.0296	0.0844	0.0000	761.8073	761.8073	0.0395	0.0000	762.7953
Worker	0.2964	0.2277	2.3220	5.9000e-003	0.5840	3.9300e-003	0.5879	0.1553	3.6200e-003	0.1589	0.0000	532.7978	532.7978	0.0160	0.0000	533.1978
Total	0.4690	4.6367	3.4988	0.0149	0.7924	0.0365	0.8289	0.2153	0.0348	0.2501	0.0000	1,398.7799	1,398.7799	0.0624	0.0000	1,400.3403

3.6 Exterior Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6100e-003	0.0153	0.0110	2.0000e-005		8.9000e-004	8.9000e-004		8.5000e-004	8.5000e-004	0.0000	1.7092	1.7092	3.3000e-004	0.0000	1.7174

Total	1.6100e-003	0.0153	0.0110	2.0000e-005		8.9000e-004	8.9000e-004		8.5000e-004	8.5000e-004	0.0000	1.7092	1.7092	3.3000e-004	0.0000	1.7174
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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.6000e-004	0.0136	2.5100e-003	3.0000e-005	0.0145	4.0000e-005	0.0145	3.5700e-003	4.0000e-005	3.6100e-003	0.0000	2.6515	2.6515	1.7000e-004	0.0000	2.6558
Vendor	3.6200e-003	0.0932	0.0250	2.0000e-004	4.8500e-003	6.7000e-004	5.5200e-003	1.4000e-003	6.4000e-004	2.0400e-003	0.0000	19.4132	19.4132	9.6000e-004	0.0000	19.4373
Worker	6.8600e-003	5.1100e-003	0.0527	1.5000e-004	0.0150	1.0000e-004	0.0151	3.9800e-003	9.0000e-005	4.0700e-003	0.0000	13.2553	13.2553	3.6000e-004	0.0000	13.2644
Total	0.0108	0.1119	0.0803	3.8000e-004	0.0343	8.1000e-004	0.0351	8.9500e-003	7.7000e-004	9.7200e-003	0.0000	35.3200	35.3200	1.4900e-003	0.0000	35.3574

3.7 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0122	0.1299	0.1227	1.9000e-004		7.0800e-003	7.0800e-003		6.5200e-003	6.5200e-003	0.0000	16.8431	16.8431	5.3300e-003	0.0000	16.9764
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0122	0.1299	0.1227	1.9000e-004		7.0800e-003	7.0800e-003		6.5200e-003	6.5200e-003	0.0000	16.8431	16.8431	5.3300e-003	0.0000	16.9764

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.4800e-003	0.1311	0.0243	2.7000e-004	4.6500e-003	3.7000e-004	5.0200e-003	1.2800e-003	3.5000e-004	1.6300e-003	0.0000	25.6594	25.6594	1.6600e-003	0.0000	25.7008
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	6.5000e-004	4.9000e-004	5.0300e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2638	1.2638	3.0000e-005	0.0000	1.2646
Total	4.1300e-003	0.1316	0.0293	2.8000e-004	6.0800e-003	3.8000e-004	6.4600e-003	1.6600e-003	3.6000e-004	2.0200e-003	0.0000	26.9231	26.9231	1.6900e-003	0.0000	26.9654

3.8 Interior Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	6.4759					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0254	0.2285	0.2628	3.7000e-004		0.0129	0.0129		0.0120	0.0120	0.0000	32.8430	32.8430	9.8300e-003	0.0000	33.0888
Total	6.5013	0.2285	0.2628	3.7000e-004		0.0129	0.0129		0.0120	0.0120	0.0000	32.8430	32.8430	9.8300e-003	0.0000	33.0888

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
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Category	tons/yr										MT/yr					
	Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0549	0.0409	0.4224	1.1700e-003	0.1199	7.9000e-004	0.1207	0.0319	7.3000e-004	0.0326	0.0000	106.1550	106.1550	2.8900e-003	0.0000	106.2273
Total	0.0549	0.0409	0.4224	1.1700e-003	0.1199	7.9000e-004	0.1207	0.0319	7.3000e-004	0.0326	0.0000	106.1550	106.1550	2.8900e-003	0.0000	106.2273

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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					
Mitigated	1.8733	8.2431	23.9447	0.0779	6.8582	0.0774	6.9356	1.8360	0.0726	1.9086	0.0000	7,118.5253	7,118.5253	0.2470	0.0000	7,124.7009
Unmitigated	1.8733	8.2431	23.9447	0.0779	6.8582	0.0774	6.9356	1.8360	0.0726	1.9086	0.0000	7,118.5253	7,118.5253	0.2470	0.0000	7,124.7009

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	8,364.00	1,584.00	816.00	18,442,969	18,442,969
Parking Lot	0.00	0.00	0.00		
Total	8,364.00	1,584.00	816.00	18,442,969	18,442,969

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

General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Parking Lot	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,450.4576	1,450.4576	0.1451	0.0300	1,463.0266
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,450.4576	1,450.4576	0.1451	0.0300	1,463.0266
NaturalGas Mitigated	0.1713	1.5577	1.3084	9.3500e-003		0.1184	0.1184		0.1184	0.1184	0.0000	1,695.6884	1,695.6884	0.0325	0.0311	1,705.7650
NaturalGas Unmitigated	0.1713	1.5577	1.3084	9.3500e-003		0.1184	0.1184		0.1184	0.1184	0.0000	1,695.6884	1,695.6884	0.0325	0.0311	1,705.7650

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
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Mitigated	5.4053	3.3000e-004	0.0353	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.0683	0.0683	1.8000e-004	0.0000	0.0729
Unmitigated	5.4053	3.3000e-004	0.0353	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.0683	0.0683	1.8000e-004	0.0000	0.0729

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	0.6476					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.7544					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.3200e-003	3.3000e-004	0.0353	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.0683	0.0683	1.8000e-004	0.0000	0.0729
Total	5.4053	3.3000e-004	0.0353	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	0.0683	0.0683	1.8000e-004	0.0000	0.0729

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	295.6968	3.3830	0.2176	445.1147

Unmitigated	295.6968	3.3830	0.2176	445.1147
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7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	277.5 / 0	295.6968	3.3830	0.2176	445.1147
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		295.6968	3.3830	0.2176	445.1147

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	302.0506	17.8507	0.0000	748.3175
Unmitigated	302.0506	17.8507	0.0000	748.3175

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	1488	302.0506	17.8507	0.0000	748.3175
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		302.0506	17.8507	0.0000	748.3175

9.0 Operational Offroad

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0.5	50	67	0.73	Diesel

10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (50 - 75 HP)	2.7500e-003	8.9600e-003	9.9700e-003	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	1.2757	1.2757	1.8000e-004	0.0000	1.2801

Total	2.7500e-003	8.9600e-003	9.9700e-003	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	1.2757	1.2757	1.8000e-004	0.0000	1.2801
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237 Industrial - Option 2 Data Center - Santa Clara County, Annual

**237 Industrial - Option 2 Data Center
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Industrial Park	436.88	1000sqft	26.50	436,880.00	0
Parking Lot	151.00	Space	0.00	60,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Using PG&E 2020 Emission rate
 Land Use - Data center represented by "Industrial Park" Substation use not available. Parking = 151 for data center
 Construction Phase - No construction plans available
 Off-road Equipment - Based on provided equipment list
 Off-road Equipment -
 Off-road Equipment - Based on provided equipment list
 Off-road Equipment - Based on provided equipment list - used Dozer as compactor
 Off-road Equipment - Based on provided equipment list
 Off-road Equipment - Based on provided equipment list - added Rollers and Pavers (default)
 Off-road Equipment - Based on provided equipment list
 Trips and VMT - similar concrete and asphalt as Option 1
 Demolition -
 Grading -
 Vehicle Trips - Used provided trip rates
 Road Dust - calculated Santa Clara County silt loading per CARB data
 Energy Use - Based on 50 MW peak demand and scaled by 85% for annual conditions = 372,300 MW/year or 852 kwhr/sf/year
 Water And Wastewater - based on peak day of 1.47 mgd - assumed to be outdoor since treatment not required. 85% scaled for annual
 Construction Off-road Equipment Mitigation -
 Stationary Sources - Emergency Generators and Fire Pumps - 50 kw standby generator

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblEnergyUse	LightingElect	3.98	0.00
tblEnergyUse	NT24E	7.84	852.00
tblEnergyUse	T24E	6.40	0.00
tblLandUse	LotAcreage	10.03	26.50
tblLandUse	LotAcreage	1.36	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblProjectCharacteristics	OperationalYear	2018	2020
tblRoadDust	RoadSiltLoading	0.1	0.05
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07

tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	67.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	1.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	212.00
tblTripsAndVMT	HaulingTripNumber	0.00	6,200.00
tblVehicleTrips	ST_TR	2.49	0.99
tblVehicleTrips	SU_TR	0.73	0.99
tblVehicleTrips	WD_TR	6.83	0.99
tblWater	AerobicPercent	87.46	97.00
tblWater	AerobicPercent	87.46	97.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	3.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	3.00
tblWater	OutdoorWaterUseRate	0.00	456,067,500.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

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	1.9397	5.0000e-005	5.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Energy	0.0388	0.3523	0.2959	2.1100e-003		0.0268	0.0268		0.0268	0.0268	0.0000	49,353.2157	49,353.2157	4.9043	1.0202	49,779.8425
Mobile	0.1231	0.5278	1.5104	4.8200e-003	0.2533	4.8100e-003	0.2581	0.0716	4.5100e-003	0.0761	0.0000	440.3556	440.3556	0.0156	0.0000	440.7453
Stationary	2.7500e-003	8.9600e-003	9.9700e-003	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	1.2757	1.2757	1.8000e-004	0.0000	1.2801
Waste						0.0000	0.0000		0.0000	0.0000	109.9663	0.0000	109.9663	6.4988	0.0000	272.4368
Water						0.0000	0.0000		0.0000	0.0000	35.7440	281.8811	317.6251	1.2526	0.0836	373.8427
Total	2.1044	0.8891	1.8217	6.9400e-003	0.2533	0.0320	0.2853	0.0716	0.0317	0.1033	145.7103	50,076.7385	50,222.4488	12.6716	1.1038	50,868.1587

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	1.9397	5.0000e-005	5.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Energy	0.0388	0.3523	0.2959	2.1100e-003		0.0268	0.0268		0.0268	0.0268	0.0000	49,353.2157	49,353.2157	4.9043	1.0202	49,779.8425
Mobile	0.1231	0.5278	1.5104	4.8200e-003	0.2533	4.8100e-003	0.2581	0.0716	4.5100e-003	0.0761	0.0000	440.3556	440.3556	0.0156	0.0000	440.7453
Stationary	2.7500e-003	8.9600e-003	9.9700e-003	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	1.2757	1.2757	1.8000e-004	0.0000	1.2801

Waste						0.0000	0.0000		0.0000	0.0000	109.9663	0.0000	109.9663	6.4988	0.0000	272.4368
Water						0.0000	0.0000		0.0000	0.0000	35.7440	281.8811	317.6251	1.2526	0.0836	373.8427
Total	2.1044	0.8891	1.8217	6.9400e-003	0.2533	0.0320	0.2853	0.0716	0.0317	0.1033	145.7103	50,076.7385	50,222.4488	12.6716	1.1038	50,868.1587

	ROG	NOx	CO	SO2	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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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					
Mitigated	0.1231	0.5278	1.5104	4.8200e-003	0.2533	4.8100e-003	0.2581	0.0716	4.5100e-003	0.0761	0.0000	440.3556	440.3556	0.0156	0.0000	440.7453
Unmitigated	0.1231	0.5278	1.5104	4.8200e-003	0.2533	4.8100e-003	0.2581	0.0716	4.5100e-003	0.0761	0.0000	440.3556	440.3556	0.0156	0.0000	440.7453

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Industrial Park	432.51	432.51	432.51	1,133,970	1,133,970
Parking Lot	0.00	0.00	0.00		
Total	432.51	432.51	432.51	1,133,970	1,133,970

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
Industrial Park	9.50	7.30	7.30	59.00	28.00	13.00	79	19	2
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Industrial Park	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785
Parking Lot	0.604810	0.038204	0.185149	0.108513	0.015498	0.004981	0.012268	0.020156	0.002083	0.001571	0.005363	0.000620	0.000785

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

Category	tons/yr										MT/yr					
Electricity Mitigated					0.0000	0.0000			0.0000	0.0000	0.0000	48,969.7073	48,969.7073	4.8970	1.0132	49,394.0551
Electricity Unmitigated					0.0000	0.0000			0.0000	0.0000	0.0000	48,969.7073	48,969.7073	4.8970	1.0132	49,394.0551
NaturalGas Mitigated	0.0388	0.3523	0.2959	2.1100e-003	0.0268	0.0268			0.0268	0.0268	0.0000	383.5084	383.5084	7.3500e-003	7.0300e-003	385.7874
NaturalGas Unmitigated	0.0388	0.3523	0.2959	2.1100e-003	0.0268	0.0268			0.0268	0.0268	0.0000	383.5084	383.5084	7.3500e-003	7.0300e-003	385.7874

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					
Industrial Park	7.18668e+006	0.0388	0.3523	0.2959	2.1100e-003		0.0268	0.0268		0.0268	0.0268	0.0000	383.5084	383.5084	7.3500e-003	7.0300e-003	385.7874
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0388	0.3523	0.2959	2.1100e-003		0.0268	0.0268		0.0268	0.0268	0.0000	383.5084	383.5084	7.3500e-003	7.0300e-003	385.7874

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					
Industrial Park	7.18668e+006	0.0388	0.3523	0.2959	2.1100e-003		0.0268	0.0268		0.0268	0.0268	0.0000	383.5084	383.5084	7.3500e-003	7.0300e-003	385.7874
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0388	0.3523	0.2959	2.1100e-003		0.0268	0.0268		0.0268	0.0268	0.0000	383.5084	383.5084	7.3500e-003	7.0300e-003	385.7874

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Industrial Park	3.72222e+008	48,962.7156	4.8963	1.0130	49,387.0028
Parking Lot	53152	6.9917	7.0000e-004	1.4000e-004	7.0523
Total		48,969.7073	4.8970	1.0132	49,394.0551

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			

Industrial Park	3.72222e+008	48,962.7156	4.8963	1.0130	49,387.0028
Parking Lot	53152	6.9917	7.0000e-004	1.4000e-004	7.0523
Total		48,969.7073	4.8970	1.0132	49,394.0551

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.9397	5.0000e-005	5.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Unmitigated	1.9397	5.0000e-005	5.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112

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	0.2291					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.7101					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.1000e-004	5.0000e-005	5.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Total	1.9397	5.0000e-005	5.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112

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	0.2291					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.7101					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.1000e-004	5.0000e-005	5.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112
Total	1.9397	5.0000e-005	5.4400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0105	0.0105	3.0000e-005	0.0000	0.0112

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	317.6251	1.2526	0.0836	373.8427
Unmitigated	317.6251	1.2526	0.0836	373.8427

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	101.028 / 456.068	317.6251	1.2526	0.0836	373.8427
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		317.6251	1.2526	0.0836	373.8427

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Industrial Park	101.028 / 456.068	317.6251	1.2526	0.0836	373.8427
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		317.6251	1.2526	0.0836	373.8427

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	109.9663	6.4988	0.0000	272.4368
Unmitigated	109.9663	6.4988	0.0000	272.4368

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	541.73	109.9663	6.4988	0.0000	272.4368
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		109.9663	6.4988	0.0000	272.4368

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Industrial Park	541.73	109.9663	6.4988	0.0000	272.4368
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		109.9663	6.4988	0.0000	272.4368

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
Emergency Generator	1	1	50	67	0.73	Diesel

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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10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (60-75 HP)	2.7500e-003	8.9600e-003	9.9700e-003	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	1.2757	1.2757	1.8000e-004	0.0000	1.2801
Total	2.7500e-003	8.9600e-003	9.9700e-003	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	1.2757	1.2757	1.8000e-004	0.0000	1.2801

237 Industrial - Option 2 Light Industrial uses - Santa Clara County, Annual

**237 Industrial - Option 2 Light Industrial uses
Santa Clara County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	728.00	1000sqft	40.00	728,000.00	0
Parking Lot	1,628.00	Space	0.00	651,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	58
Climate Zone	4	Operational Year		2020	
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Using PG&E 2020 Emission rate
 Land Use - Parking = Option 1 Parking of 2,621 spaces * (728ksf/1,200ksf) = 1,628 spaces. All acreage assigned to buildings
 Construction Phase - No construction plans available
 Off-road Equipment - Based on provided equipment list
 Off-road Equipment -
 Off-road Equipment - Based on provided equipment list
 Off-road Equipment - Based on provided equipment list - used Dozer as compactor
 Off-road Equipment - Based on provided equipment list
 Off-road Equipment - Based on provided equipment list - added Rollers and Pavers (default)
 Off-road Equipment - Based on provided equipment list
 Trips and VMT - assume concrete and asphalt part of vendor trips
 Demolition -
 Grading -
 Vehicle Trips - Provided trip rates same as CalEEMod default
 Road Dust - calculated Santa Clara County silt loading per CARB data
 Energy Use -
 Water And Wastewater - no septic
 Construction Off-road Equipment Mitigation -
 Stationary Sources - Emergency Generators and Fire Pumps - 50 kw standby generator

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblLandUse	LotAcreage	16.71	40.00
tblLandUse	LotAcreage	14.65	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblProjectCharacteristics	OperationalYear	2018	2020
tblRoadDust	RoadSiltLoading	0.1	0.05
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	67.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	1.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00

tbITripsAndVMT	HaulingTripNumber	0.00	2.00
tbITripsAndVMT	HaulingTripNumber	0.00	212.00

2.0 Emissions Summary

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	3.2805	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0421	0.0421	1.1000e-004	0.0000	0.0449
Energy	0.1040	0.9450	0.7938	5.6700e-003		0.0718	0.0718		0.0718	0.0718	0.0000	1,910.4180	1,910.4180	0.1079	0.0371	1,924.1716
Mobile	1.1365	5.0008	14.5264	0.0472	2.4993	0.0470	2.5463	0.7060	0.0441	0.7501	0.0000	4,318.5720	4,318.5720	0.1499	0.0000	4,322.3186
Stationary	2.7500e-003	8.9600e-003	9.9700e-003	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	1.2757	1.2757	1.8000e-004	0.0000	1.2801
Waste						0.0000	0.0000		0.0000	0.0000	183.2440	0.0000	183.2440	10.8294	0.0000	453.9793
Water						0.0000	0.0000		0.0000	0.0000	53.4097	119.8269	173.2366	5.4977	0.1320	350.0168
Total	4.5237	5.9549	15.3520	0.0529	2.4993	0.1193	2.6186	0.7060	0.1164	0.8224	236.6537	6,350.1347	6,586.7884	16.5851	0.1691	7,051.8112

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	3.2805	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0421	0.0421	1.1000e-004	0.0000	0.0449
Energy	0.1040	0.9450	0.7938	5.6700e-003		0.0718	0.0718		0.0718	0.0718	0.0000	1,910.4180	1,910.4180	0.1079	0.0371	1,924.1716
Mobile	1.1365	5.0008	14.5264	0.0472	2.4993	0.0470	2.5463	0.7060	0.0441	0.7501	0.0000	4,318.5720	4,318.5720	0.1499	0.0000	4,322.3186
Stationary	2.7500e-003	8.9600e-003	9.9700e-003	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	1.2757	1.2757	1.8000e-004	0.0000	1.2801
Waste						0.0000	0.0000		0.0000	0.0000	183.2440	0.0000	183.2440	10.8294	0.0000	453.9793
Water						0.0000	0.0000		0.0000	0.0000	53.4097	119.8269	173.2366	5.4977	0.1320	350.0168
Total	4.5237	5.9549	15.3520	0.0529	2.4993	0.1193	2.6186	0.7060	0.1164	0.8224	236.6537	6,350.1347	6,586.7884	16.5851	0.1691	7,051.8112

	ROG	NOx	CO	SO2	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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Total		0.1040	0.9450	0.7938	5.6700e-003		0.0718	0.0718		0.0718	0.0718	0.0000	1,028.7176	1,028.7176	0.0197	0.0189	1,034.8308
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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	tons/yr										MT/yr					
General Light Industry	1.92774e+007	0.1040	0.9450	0.7938	5.6700e-003		0.0718	0.0718		0.0718	0.0718	0.0000	1,028.7176	1,028.7176	0.0197	0.0189	1,034.8308
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.1040	0.9450	0.7938	5.6700e-003		0.0718	0.0718		0.0718	0.0718	0.0000	1,028.7176	1,028.7176	0.0197	0.0189	1,034.8308

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	6.12976e+006	806.3196	0.0806	0.0167	813.3068
Parking Lot	573056	75.3808	7.5400e-003	1.5600e-003	76.0340
Total		881.7004	0.0882	0.0182	889.3408

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	6.12976e+006	806.3196	0.0806	0.0167	813.3068
Parking Lot	573056	75.3808	7.5400e-003	1.5600e-003	76.0340
Total		881.7004	0.0882	0.0182	889.3408

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.2805	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0421	0.0421	1.1000e-004	0.0000	0.0449
Unmitigated	3.2805	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0421	0.0421	1.1000e-004	0.0000	0.0449

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	0.3932					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.8853					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0500e-003	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0421	0.0421	1.1000e-004	0.0000	0.0449	
Total	3.2805	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0421	0.0421	1.1000e-004	0.0000	0.0449	

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	0.3932					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.8853					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0500e-003	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0421	0.0421	1.1000e-004	0.0000	0.0449	
Total	3.2805	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0421	0.0421	1.1000e-004	0.0000	0.0449	

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	173.2366	5.4977	0.1320	350.0168
Unmitigated	173.2366	5.4977	0.1320	350.0168

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	168.35 / 0	173.2366	5.4977	0.1320	350.0168

Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		173.2366	5.4977	0.1320	350.0168

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	168.35 / 0	173.2366	5.4977	0.1320	350.0168
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		173.2366	5.4977	0.1320	350.0168

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	183.2440	10.8294	0.0000	453.9793
Unmitigated	183.2440	10.8294	0.0000	453.9793

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	902.72	183.2440	10.8294	0.0000	453.9793
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		183.2440	10.8294	0.0000	453.9793

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	902.72	183.2440	10.8294	0.0000	453.9793

Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		183.2440	10.8294	0.0000	453.9793

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
Emergency Generator	1	1	50	67	0.73	Diesel

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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10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										M1/yr					
Emergency Generator - Diesel (60.75 HP)	2.7500e-003	8.9600e-003	9.9700e-003	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	1.2757	1.2757	1.8000e-004	0.0000	1.2801
Total	2.7500e-003	8.9600e-003	9.9700e-003	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	1.2757	1.2757	1.8000e-004	0.0000	1.2801

11.0 Vegetation