

Appendix E

Air Quality and Greenhouse Gas

CalEEMod Emissions Modeling

Under Canvas Campsite - Tuolumne County, Annual

Under Canvas Campsite Tuolumne County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Motel	99.00	Room	3.20	139,352.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	66
Climate Zone	1			Operational Year	2021
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 - PG&E EF for 2020

Land Use - Camp is on 80 acres with 96% open space.

Construction Phase -

Vehicle Trips - Adjust trip rates to match Transportation analysis.

Woodstoves -

Area Coating -

Energy Use - No natural gas hookups

Water And Wastewater - Campsite. No outdoor water use.; all wastewater is septic

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Table Name	Column Name	Default Value	New Value
tblEnergyUse	NT24NG	0.05	0.00
tblEnergyUse	T24NG	20.71	0.00
tblLandUse	LandUseSquareFeet	194,059.80	139,352.00
tblLandUse	LotAcreage	4.46	3.20
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblVehicleTrips	ST_TR	5.63	2.60
tblVehicleTrips	SU_TR	5.63	2.60
tblVehicleTrips	WD_TR	5.63	2.60
tblWater	AerobicPercent	87.46	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	OutdoorWaterUseRate	279,034.47	0.00
tblWater	SepticTankPercent	10.33	100.00

2.0 Emissions Summary

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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					
2019	0.3999	3.2394	2.9603	4.8200e-003	0.1444	0.1709	0.3153	0.0581	0.1604	0.2185	0.0000	427.8468	427.8468	0.0847	0.0000	429.9642
2020	1.6180	0.0160	0.0247	4.0000e-005	8.5000e-004	1.0100e-003	1.8600e-003	2.3000e-004	1.0100e-003	1.2300e-003	0.0000	3.1110	3.1110	2.5000e-004	0.0000	3.1173
Maximum	1.6180	3.2394	2.9603	4.8200e-003	0.1444	0.1709	0.3153	0.0581	0.1604	0.2185	0.0000	427.8468	427.8468	0.0847	0.0000	429.9642

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.3999	3.2394	2.9603	4.8200e-003	0.1444	0.1709	0.3153	0.0581	0.1604	0.2185	0.0000	427.8464	427.8464	0.0847	0.0000	429.9638
2020	1.6180	0.0160	0.0247	4.0000e-005	8.5000e-004	1.0100e-003	1.8600e-003	2.3000e-004	1.0100e-003	1.2300e-003	0.0000	3.1110	3.1110	2.5000e-004	0.0000	3.1173
Maximum	1.6180	3.2394	2.9603	4.8200e-003	0.1444	0.1709	0.3153	0.0581	0.1604	0.2185	0.0000	427.8464	427.8464	0.0847	0.0000	429.9638

	ROG	NOx	CO	SO2	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

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2019	3-31-2019	0.9799	0.9799
2	4-1-2019	6-30-2019	0.9155	0.9155
3	7-1-2019	9-30-2019	0.9255	0.9255
4	10-1-2019	12-31-2019	0.8056	0.8056
5	1-1-2020	3-31-2020	1.5564	1.5564
		Highest	1.5564	1.5564

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7058	1.0000e-005	9.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7700e-003	1.7700e-003	0.0000	0.0000	1.8900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	136.7464	136.7464	0.0137	2.8300e-003	137.9313
Mobile	0.1560	0.4456	1.5930	2.3700e-003	0.1822	3.2900e-003	0.1855	0.0491	3.0900e-003	0.0521	0.0000	215.0137	215.0137	0.0155	0.0000	215.4018
Waste						0.0000	0.0000		0.0000	0.0000	11.0021	0.0000	11.0021	0.6502	0.0000	27.2573
Water						0.0000	0.0000		0.0000	0.0000	0.0000	1.7875	1.7875	0.5706	1.9700e-003	16.6383
Total	0.8618	0.4456	1.5939	2.3700e-003	0.1822	3.2900e-003	0.1855	0.0491	3.0900e-003	0.0521	11.0021	353.5493	364.5514	1.2500	4.8000e-003	397.2305

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7058	1.0000e-005	9.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7700e-003	1.7700e-003	0.0000	0.0000	1.8900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	136.7464	136.7464	0.0137	2.8300e-003	137.9313
Mobile	0.1560	0.4456	1.5930	2.3700e-003	0.1822	3.2900e-003	0.1855	0.0491	3.0900e-003	0.0521	0.0000	215.0137	215.0137	0.0155	0.0000	215.4018
Waste						0.0000	0.0000		0.0000	0.0000	11.0021	0.0000	11.0021	0.6502	0.0000	27.2573
Water						0.0000	0.0000		0.0000	0.0000	0.0000	1.7875	1.7875	0.5706	1.9700e-003	16.6383
Total	0.8618	0.4456	1.5939	2.3700e-003	0.1822	3.2900e-003	0.1855	0.0491	3.0900e-003	0.0521	11.0021	353.5493	364.5514	1.2500	4.8000e-003	397.2305

	ROG	NOx	CO	SO2	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**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2019	1/7/2019	5	5	
2	Grading	Grading	1/8/2019	1/17/2019	5	8	
3	Building Construction	Building Construction	1/18/2019	12/5/2019	5	230	
4	Paving	Paving	12/6/2019	12/31/2019	5	18	
5	Architectural Coating	Architectural Coating	1/1/2020	1/24/2020	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 209,028; Non-Residential Outdoor: 69,676; Striped Parking Area: 0
(Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	59.00	23.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction**3.2 Site Preparation - 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					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0108	0.1139	0.0552	9.0000e-005		5.9800e-003	5.9800e-003		5.5000e-003	5.5000e-003	0.0000	8.5422	8.5422	2.7000e-003	0.0000	8.6097
Total	0.0108	0.1139	0.0552	9.0000e-005	0.0452	5.9800e-003	0.0512	0.0248	5.5000e-003	0.0303	0.0000	8.5422	8.5422	2.7000e-003	0.0000	8.6097

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3.2 Site Preparation - 2019**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	4.8000e-004	4.0000e-004	3.7800e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3484	0.3484	3.0000e-005	0.0000	0.3492
Total	4.8000e-004	4.0000e-004	3.7800e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3484	0.3484	3.0000e-005	0.0000	0.3492

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0108	0.1139	0.0552	9.0000e-005		5.9800e-003	5.9800e-003		5.5000e-003	5.5000e-003	0.0000	8.5422	8.5422	2.7000e-003	0.0000	8.6097
Total	0.0108	0.1139	0.0552	9.0000e-005	0.0452	5.9800e-003	0.0512	0.0248	5.5000e-003	0.0303	0.0000	8.5422	8.5422	2.7000e-003	0.0000	8.6097

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3.2 Site Preparation - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	4.0000e-004	3.7800e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3484	0.3484	3.0000e-005	0.0000	0.3492
Total	4.8000e-004	4.0000e-004	3.7800e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3484	0.3484	3.0000e-005	0.0000	0.3492

3.3 Grading - 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					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.1134	0.0652	1.2000e-004		5.5900e-003	5.5900e-003		5.1400e-003	5.1400e-003	0.0000	10.6569	10.6569	3.3700e-003	0.0000	10.7412
Total	0.0103	0.1134	0.0652	1.2000e-004	0.0262	5.5900e-003	0.0318	0.0135	5.1400e-003	0.0186	0.0000	10.6569	10.6569	3.3700e-003	0.0000	10.7412

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3.3 Grading - 2019**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	5.3000e-004	5.0400e-003	1.0000e-005	4.7000e-004	1.0000e-005	4.8000e-004	1.3000e-004	1.0000e-005	1.3000e-004	0.0000	0.4645	0.4645	5.0000e-005	0.0000	0.4657
Total	6.4000e-004	5.3000e-004	5.0400e-003	1.0000e-005	4.7000e-004	1.0000e-005	4.8000e-004	1.3000e-004	1.0000e-005	1.3000e-004	0.0000	0.4645	0.4645	5.0000e-005	0.0000	0.4657

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0103	0.1134	0.0652	1.2000e-004		5.5900e-003	5.5900e-003		5.1400e-003	5.1400e-003	0.0000	10.6569	10.6569	3.3700e-003	0.0000	10.7412
Total	0.0103	0.1134	0.0652	1.2000e-004	0.0262	5.5900e-003	0.0318	0.0135	5.1400e-003	0.0186	0.0000	10.6569	10.6569	3.3700e-003	0.0000	10.7412

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3.3 Grading - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	5.3000e-004	5.0400e-003	1.0000e-005	4.7000e-004	1.0000e-005	4.8000e-004	1.3000e-004	1.0000e-005	1.3000e-004	0.0000	0.4645	0.4645	5.0000e-005	0.0000	0.4657
Total	6.4000e-004	5.3000e-004	5.0400e-003	1.0000e-005	4.7000e-004	1.0000e-005	4.8000e-004	1.3000e-004	1.0000e-005	1.3000e-004	0.0000	0.4645	0.4645	5.0000e-005	0.0000	0.4657

3.4 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	0.2715	2.4241	1.9738	3.0900e-003		0.1483	0.1483		0.1395	0.1395	0.0000	270.3698	270.3698	0.0659	0.0000	272.0164
Total	0.2715	2.4241	1.9738	3.0900e-003		0.1483	0.1483		0.1395	0.1395	0.0000	270.3698	270.3698	0.0659	0.0000	272.0164

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3.4 Building Construction - 2019**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	0.0202	0.4103	0.1608	7.2000e-004	0.0172	3.8600e-003	0.0211	4.9700e-003	3.6900e-003	8.6600e-003	0.0000	68.4948	68.4948	2.7000e-003	0.0000	68.5623
Worker	0.0726	0.0604	0.5705	5.9000e-004	0.0536	6.8000e-004	0.0542	0.0143	6.3000e-004	0.0149	0.0000	52.5266	52.5266	5.2100e-003	0.0000	52.6568
Total	0.0928	0.4707	0.7313	1.3100e-003	0.0708	4.5400e-003	0.0753	0.0192	4.3200e-003	0.0235	0.0000	121.0214	121.0214	7.9100e-003	0.0000	121.2192

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2715	2.4241	1.9738	3.0900e-003		0.1483	0.1483		0.1395	0.1395	0.0000	270.3695	270.3695	0.0659	0.0000	272.0161
Total	0.2715	2.4241	1.9738	3.0900e-003		0.1483	0.1483		0.1395	0.1395	0.0000	270.3695	270.3695	0.0659	0.0000	272.0161

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3.4 Building Construction - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0202	0.4103	0.1608	7.2000e-004	0.0172	3.8600e-003	0.0211	4.9700e-003	3.6900e-003	8.6600e-003	0.0000	68.4948	68.4948	2.7000e-003	0.0000	68.5623
Worker	0.0726	0.0604	0.5705	5.9000e-004	0.0536	6.8000e-004	0.0542	0.0143	6.3000e-004	0.0149	0.0000	52.5266	52.5266	5.2100e-003	0.0000	52.6568
Total	0.0928	0.4707	0.7313	1.3100e-003	0.0708	4.5400e-003	0.0753	0.0192	4.3200e-003	0.0235	0.0000	121.0214	121.0214	7.9100e-003	0.0000	121.2192

3.5 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	0.0114	0.1148	0.1108	1.7000e-004		6.4800e-003	6.4800e-003		5.9700e-003	5.9700e-003	0.0000	15.0501	15.0501	4.6300e-003	0.0000	15.1658
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0114	0.1148	0.1108	1.7000e-004		6.4800e-003	6.4800e-003		5.9700e-003	5.9700e-003	0.0000	15.0501	15.0501	4.6300e-003	0.0000	15.1658

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3.5 Paving - 2019**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	1.9300e-003	1.6000e-003	0.0151	2.0000e-005	1.4200e-003	2.0000e-005	1.4400e-003	3.8000e-004	2.0000e-005	3.9000e-004	0.0000	1.3935	1.3935	1.4000e-004	0.0000	1.3969
Total	1.9300e-003	1.6000e-003	0.0151	2.0000e-005	1.4200e-003	2.0000e-005	1.4400e-003	3.8000e-004	2.0000e-005	3.9000e-004	0.0000	1.3935	1.3935	1.4000e-004	0.0000	1.3969

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0114	0.1148	0.1108	1.7000e-004		6.4800e-003	6.4800e-003		5.9700e-003	5.9700e-003	0.0000	15.0501	15.0501	4.6300e-003	0.0000	15.1658
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0114	0.1148	0.1108	1.7000e-004		6.4800e-003	6.4800e-003		5.9700e-003	5.9700e-003	0.0000	15.0501	15.0501	4.6300e-003	0.0000	15.1658

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3.5 Paving - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9300e-003	1.6000e-003	0.0151	2.0000e-005	1.4200e-003	2.0000e-005	1.4400e-003	3.8000e-004	2.0000e-005	3.9000e-004	0.0000	1.3935	1.3935	1.4000e-004	0.0000	1.3969
Total	1.9300e-003	1.6000e-003	0.0151	2.0000e-005	1.4200e-003	2.0000e-005	1.4400e-003	3.8000e-004	2.0000e-005	3.9000e-004	0.0000	1.3935	1.3935	1.4000e-004	0.0000	1.3969

3.6 Architectural Coating - 2020**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	1.6147					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1800e-003	0.0152	0.0165	3.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	2.2979	2.2979	1.8000e-004	0.0000	2.3024
Total	1.6169	0.0152	0.0165	3.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	2.2979	2.2979	1.8000e-004	0.0000	2.3024

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3.6 Architectural Coating - 2020**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	1.0800e-003	8.7000e-004	8.2200e-003	1.0000e-005	8.5000e-004	1.0000e-005	8.6000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.8130	0.8130	7.0000e-005	0.0000	0.8149
Total	1.0800e-003	8.7000e-004	8.2200e-003	1.0000e-005	8.5000e-004	1.0000e-005	8.6000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.8130	0.8130	7.0000e-005	0.0000	0.8149

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.6147					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1800e-003	0.0152	0.0165	3.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	2.2979	2.2979	1.8000e-004	0.0000	2.3024
Total	1.6169	0.0152	0.0165	3.0000e-005		1.0000e-003	1.0000e-003		1.0000e-003	1.0000e-003	0.0000	2.2979	2.2979	1.8000e-004	0.0000	2.3024

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3.6 Architectural Coating - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0800e-003	8.7000e-004	8.2200e-003	1.0000e-005	8.5000e-004	1.0000e-005	8.6000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.8130	0.8130	7.0000e-005	0.0000	0.8149
Total	1.0800e-003	8.7000e-004	8.2200e-003	1.0000e-005	8.5000e-004	1.0000e-005	8.6000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.8130	0.8130	7.0000e-005	0.0000	0.8149

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1560	0.4456	1.5930	2.3700e-003	0.1822	3.2900e-003	0.1855	0.0491	3.0900e-003	0.0521	0.0000	215.0137	215.0137	0.0155	0.0000	215.4018
Unmitigated	0.1560	0.4456	1.5930	2.3700e-003	0.1822	3.2900e-003	0.1855	0.0491	3.0900e-003	0.0521	0.0000	215.0137	215.0137	0.0155	0.0000	215.4018

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Motel	257.40	257.40	257.40	488,486	488,486
Total	257.40	257.40	257.40	488,486	488,486

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-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Motel	9.50	7.30	7.30	19.00	62.00	19.00	58	38	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Motel	0.471330	0.050819	0.207818	0.162046	0.053743	0.008065	0.018819	0.011540	0.003291	0.001284	0.007070	0.001791	0.002386

5.0 Energy Detail

Historical Energy Use: N

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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	136.7464	136.7464	0.0137	2.8300e-003	137.9313
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	136.7464	136.7464	0.0137	2.8300e-003	137.9313
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Motel	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Motel	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Motel	1.03957e+006	136.7464	0.0137	2.8300e-003	137.9313
Total		136.7464	0.0137	2.8300e-003	137.9313

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5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Motel	1.03957e+006	136.7464	0.0137	2.8300e-003	137.9313
Total		136.7464	0.0137	2.8300e-003	137.9313

6.0 Area Detail**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7058	1.0000e-005	9.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7700e-003	1.7700e-003	0.0000	0.0000	1.8900e-003
Unmitigated	0.7058	1.0000e-005	9.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7700e-003	1.7700e-003	0.0000	0.0000	1.8900e-003

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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	0.1615					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5442					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.0000e-005	1.0000e-005	9.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7700e-003	1.7700e-003	0.0000	0.0000	1.8900e-003
Total	0.7058	1.0000e-005	9.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7700e-003	1.7700e-003	0.0000	0.0000	1.8900e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1615					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5442					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.0000e-005	1.0000e-005	9.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7700e-003	1.7700e-003	0.0000	0.0000	1.8900e-003
Total	0.7058	1.0000e-005	9.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.7700e-003	1.7700e-003	0.0000	0.0000	1.8900e-003

7.0 Water Detail

Under Canvas Campsite - Tuolumne County, Annual

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.7875	0.5706	1.9700e-003	16.6383
Unmitigated	1.7875	0.5706	1.9700e-003	16.6383

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Motel	2.51131 / 0	1.7875	0.5706	1.9700e-003	16.6383
Total		1.7875	0.5706	1.9700e-003	16.6383

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Motel	2.51131 / 0	1.7875	0.5706	1.9700e-003	16.6383
Total		1.7875	0.5706	1.9700e-003	16.6383

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

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	11.0021	0.6502	0.0000	27.2573
Unmitigated	11.0021	0.6502	0.0000	27.2573

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Motel	54.2	11.0021	0.6502	0.0000	27.2573
Total		11.0021	0.6502	0.0000	27.2573

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Motel	54.2	11.0021	0.6502	0.0000	27.2573
Total		11.0021	0.6502	0.0000	27.2573

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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Under Canvas Campsite - Tuolumne County, Annual

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

Under Canvas Woodstoves and Fire Rings - Tuolumne County, Annual

Under Canvas Woodstoves and Fire Rings

Tuolumne County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Residential	99.00	Dwelling Unit	5.00	0.00	283

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	66
Climate Zone	1			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	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 - test

Construction Phase - test

Off-road Equipment - test

Woodstoves - woodstoves and fire rings

Under Canvas Woodstoves and Fire Rings - Tuolumne County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	1.00
tblFireplaces	NumberGas	54.45	0.00
tblFireplaces	NumberNoFireplace	9.90	0.00
tblFireplaces	NumberWood	34.65	2.00
tblLandUse	LotAcreage	0.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	WorkerTripNumber	0.00	18.00
tblWoodstoves	NumberCatalytic	4.95	99.00
tblWoodstoves	NumberNoncatalytic	4.95	0.00

2.0 Emissions Summary

Under Canvas Woodstoves and Fire Rings - Tuolumne County, Annual

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					
2020	1.3000e-004	1.1000e-004	9.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1043	0.1043	1.0000e-005	0.0000	0.1046
Maximum	1.3000e-004	1.1000e-004	9.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1043	0.1043	1.0000e-005	0.0000	0.1046

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	1.3000e-004	1.1000e-004	9.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1043	0.1043	1.0000e-005	0.0000	0.1046
Maximum	1.3000e-004	1.1000e-004	9.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1043	0.1043	1.0000e-005	0.0000	0.1046

	ROG	NOx	CO	SO2	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

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	2-25-2020	5-24-2020	0.0002	0.0002
		Highest	0.0002	0.0002

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	1.4957	0.1620	8.9268	0.0305		1.5817	1.5817		1.5817	1.5817	204.8623	1.2008	206.0631	0.7875	4.2000e-004	225.8760
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.4957	0.1620	8.9268	0.0305	0.0000	1.5817	1.5817	0.0000	1.5817	1.5817	204.8623	1.2008	206.0631	0.7875	4.2000e-004	225.8760

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.4957	0.1620	8.9268	0.0305		1.5817	1.5817		1.5817	1.5817	204.8623	1.2008	206.0631	0.7875	4.2000e-004	225.8760
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.4957	0.1620	8.9268	0.0305	0.0000	1.5817	1.5817	0.0000	1.5817	1.5817	204.8623	1.2008	206.0631	0.7875	4.2000e-004	225.8760

	ROG	NOx	CO	SO2	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	3/24/2020	3/24/2020	5	1	

Acres of Grading (Site Preparation Phase): 0

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

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	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	0	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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3.2 Site Preparation - 2020**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	0.0000	0.0000	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

	ROG	NOx	CO	SO2	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	1.3000e-004	1.1000e-004	9.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1043	0.1043	1.0000e-005	0.0000	0.1046
Total	1.3000e-004	1.1000e-004	9.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1043	0.1043	1.0000e-005	0.0000	0.1046

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3.2 Site Preparation - 2020**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	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
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	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	1.3000e-004	1.1000e-004	9.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1043	0.1043	1.0000e-005	0.0000	0.1046
Total	1.3000e-004	1.1000e-004	9.9000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1043	0.1043	1.0000e-005	0.0000	0.1046

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Residential	16.80	7.10	7.90	37.30	20.70	42.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Residential	0.471330	0.050819	0.207818	0.162046	0.053743	0.008065	0.018819	0.011540	0.003291	0.001284	0.007070	0.001791	0.002386

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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

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

Mitigated

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

Under Canvas Woodstoves and Fire Rings - Tuolumne County, Annual

5.3 Energy by Land Use - Electricity**Unmitigated**

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

Mitigated

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

6.0 Area Detail**6.1 Mitigation Measures Area**

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	ROG	NOx	CO	SO2	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	1.4957	0.1620	8.9268	0.0305		1.5817	1.5817		1.5817	1.5817	204.8623	1.2008	206.0631	0.7875	4.2000e-004	225.8760
Unmitigated	1.4957	0.1620	8.9268	0.0305		1.5817	1.5817		1.5817	1.5817	204.8623	1.2008	206.0631	0.7875	4.2000e-004	225.8760

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.4734	0.1535	8.1901	0.0305		1.5777	1.5777		1.5777	1.5777	204.8623	0.0000	204.8623	0.7864	4.2000e-004	224.6461
Landscaping	0.0223	8.5000e-003	0.7367	4.0000e-005		4.0600e-003	4.0600e-003		4.0600e-003	4.0600e-003	0.0000	1.2008	1.2008	1.1600e-003	0.0000	1.2298
Total	1.4957	0.1620	8.9268	0.0306		1.5817	1.5817		1.5817	1.5817	204.8623	1.2008	206.0631	0.7875	4.2000e-004	225.8760

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6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.4734	0.1535	8.1901	0.0305		1.5777	1.5777		1.5777	1.5777	204.8623	0.0000	204.8623	0.7864	4.2000e-004	224.6461
Landscaping	0.0223	8.5000e-003	0.7367	4.0000e-005		4.0600e-003	4.0600e-003		4.0600e-003	4.0600e-003	0.0000	1.2008	1.2008	1.1600e-003	0.0000	1.2298
Total	1.4957	0.1620	8.9268	0.0306		1.5817	1.5817		1.5817	1.5817	204.8623	1.2008	206.0631	0.7875	4.2000e-004	225.8760

7.0 Water Detail**7.1 Mitigation Measures Water**

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

7.2 Water by Land Use

Unmitigated

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

Under Canvas Woodstoves and Fire Rings - Tuolumne County, Annual

7.2 Water by Land Use**Mitigated**

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

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

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

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8.2 Waste by Land Use**Unmitigated**

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

Mitigated

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

9.0 Operational Offroad

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

PM2.5 Dispersion Modeling

Under Canvas
Yosemite Site

Site Info 99 stoves/tents

Distance Group Bin	Tent Count	Distance (m)
>1600 ft	11	487.8
>1800 ft	13	548.8
>2000 ft	14	609.8
>2200 ft	8	670.7
>2400 ft	8	731.7
>2600 ft	8	792.7
>2800 ft	37	853.7

	Total	per stove	
Emission Rate Annual	1.53E+00	1.55E-02	tpy
	4.40E-02	4.45E-04	g/s
Emission Rate Daily	9.08E-02	9.17E-04	g/s
	5.45E-02	5.50E-04	g/s

assume 177 day/year operations (CalEEMod Tuolumne County Default)
assume 60% occupied and burning at the same day for same durations

	Distance		Output ([ug/m ³]/[g/s])		
	(ft)	(m)	Max 1 Hour	Annual	24 Hour
AERSCREEN OUT					
$y = 5957.2x^{-0.632}$	1600	487.8	119.1	11.91	71.49
	1800	548.8	110.6	11.06	66.36
where,	2000	609.8	103.5	10.35	62.08
Y = Max 1 Hour output @1 g/s	2200	670.7	97.4	9.74	58.45
X = distance in meters	2400	731.7	92.2	9.22	55.33
	2600	792.7	87.7	8.77	52.60
	2800	853.7	83.7	8.37	50.19

Concentrations PM_{2.5} (ug/m³)

Distance Group Bin	Annual	24 Hour
>1600 ft	5.83E-02	4.33E-01
>1800 ft	6.39E-02	4.75E-01
>2000 ft	6.44E-02	4.78E-01
>2200 ft	3.46E-02	2.57E-01
>2400 ft	3.28E-02	2.43E-01
>2600 ft	3.12E-02	2.31E-01
>2800 ft	1.38E-01	1.02E+00
Total	0.42	3.14

undercanvas_yosemite-pm25

AERSCREEN 16216 / AERMOD 18081

02/18/20
18:03:10

TITLE: UnderCanvas_Yosemite-PM25

***** STACK PARAMETERS *****

SOURCE EMISSION RATE:	1.0000 g/s	7.937 lb/hr
STACK HEIGHT:	4.60 meters	15.09 feet
STACK INNER DIAMETER:	0.110 meters	4.33 inches
PLUME EXIT TEMPERATURE:	383.0 K	229.7 Deg F
PLUME EXIT VELOCITY:	0.732 m/s	2.40 ft/s
STACK AIR FLOW RATE:	15 ACFM	
RURAL OR URBAN:	RURAL	

FLAGPOLE RECEPTOR HEIGHT:	1.50 meters	4.92 feet
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INITIAL PROBE DISTANCE =	5000. meters	16404. feet
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***** BUILDING DOWNWASH PARAMETERS *****

NO BUILDING DOWNWASH HAS BEEN REQUESTED FOR THIS ANALYSIS

***** PROBE ANALYSIS *****

25 meter receptor spacing: 1. meters - 5000. meters

Zo SECTOR	ROUGHNESS LENGTH	1-HR CONC (ug/m3)	DIST (m)	TEMPORAL PERIOD
1*	0.500	3937.	25.0	WIN

* = worst case flow sector

***** MAKEMET METEOROLOGY PARAMETERS *****

undercanvas_yosemite-pm25
MIN/MAX TEMPERATURE: 250.0 / 310.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Deciduous Forest

DOMINANT CLIMATE TYPE: Average Moisture

DOMINANT SEASON: Winter

ALBEDO: 0.50

BOWEN RATIO: 1.50

ROUGHNESS LENGTH: 0.500 (meters)

SURFACE FRICTION VELOCITY (U*) ADJUSTED

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

YR MO DY JDY HR

-- -- -- -- --

10 02 07 7 12

H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS
176.60	0.144	1.200	0.020	373.	126.	-1.6	0.500	1.50	0.50	0.50	0.50	

HT	REF	TA	HT
10.0	310.0		2.0

WIND SPEED AT STACK HEIGHT (non-downwash): 0.4 m/s

STACK-TIP DOWNWASH ADJUSTED STACK HEIGHT: 4.6 meters

ESTIMATED FINAL PLUME RISE (non-downwash): 0.8 meters

ESTIMATED FINAL PLUME HEIGHT (non-downwash): 5.4 meters

METEOROLOGY CONDITIONS USED TO PREDICT AMBIENT BOUNDARY IMPACT

YR MO DY JDY HR

-- -- -- -- --

10 02 11 7 01

H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS
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undercanvas_yosemite-pm25

- - - - -
-7.58 0.806 -9.000 0.020 -999. 1666. 6589.9 1.300 0.30 0.12 2.00

HT REF TA HT

- - - - -
10.0 310.0 2.0

WIND SPEED AT STACK HEIGHT (non-downwash): 2.0 m/s
STACK-TIP DOWNWASH ADJUSTED STACK HEIGHT: 4.4 meters
ESTIMATED FINAL PLUME RISE (non-downwash): 0.1 meters
ESTIMATED FINAL PLUME HEIGHT (non-downwash): 4.4 meters

***** AERSCREEN AUTOMATED DISTANCES *****
OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE

DIST (m)	MAXIMUM 1-HR CONC (ug/m3)	DIST (m)	MAXIMUM 1-HR CONC (ug/m3)
1.00	2400.	2525.00	39.49
25.00	3937.	2550.00	39.21
50.00	1834.	2575.00	38.93
75.00	1070.	2600.00	38.65
100.00	714.6	2625.00	38.38
125.00	519.7	2650.00	38.11
150.00	399.9	2675.00	37.85
175.00	320.3	2700.00	37.59
200.00	264.3	2725.00	37.34
225.00	223.1	2750.00	37.09
250.00	191.7	2775.00	36.84
275.00	170.4	2800.00	36.60
300.00	161.1	2825.00	36.35
325.00	153.1	2850.00	36.12
350.00	146.2	2875.00	35.88
375.00	140.1	2900.00	35.65
400.00	134.6	2925.00	35.43
425.00	129.6	2950.00	35.20
450.00	125.0	2975.00	34.98
475.00	120.9	3000.00	34.77
500.00	117.1	3025.00	34.55
525.00	113.6	3050.00	34.34
550.00	110.3	3075.00	34.13
575.00	107.3	3100.00	33.92

undercanvas_yosemite-pm25

600.00	104.5	3125.00	33.72
625.00	101.9	3150.00	33.52
650.00	99.40	3175.00	33.32
675.00	97.06	3200.00	33.12
700.00	94.85	3225.00	32.93
725.00	92.76	3250.00	32.74
750.00	90.77	3275.00	32.55
775.00	88.89	3300.00	32.36
800.00	87.09	3325.00	32.18
825.00	85.38	3350.00	32.00
850.00	83.74	3375.00	31.82
875.00	82.18	3400.00	31.64
900.00	80.68	3425.00	31.47
925.00	79.25	3450.00	31.29
950.00	77.87	3475.00	31.12
975.00	76.55	3500.00	30.95
1000.00	75.28	3525.00	30.79
1025.00	74.06	3550.00	30.62
1050.00	72.88	3575.00	30.46
1075.00	71.75	3600.00	30.30
1100.00	70.66	3625.00	30.14
1125.00	69.60	3650.00	29.98
1150.00	68.58	3675.00	29.82
1175.00	67.60	3700.00	29.67
1200.00	66.64	3725.00	29.51
1225.00	65.72	3750.00	29.36
1250.00	64.83	3775.00	29.21
1275.00	63.96	3800.00	29.07
1300.00	63.12	3825.00	28.92
1325.00	62.31	3850.00	28.78
1350.00	61.52	3875.00	28.63
1375.00	60.75	3900.00	28.49
1400.00	60.00	3925.00	28.35
1425.00	59.27	3950.00	28.21
1450.00	58.57	3975.00	28.07
1475.00	57.88	4000.00	27.94
1500.00	57.21	4025.00	27.80
1525.00	56.56	4050.00	27.67
1550.00	55.93	4075.00	27.54
1575.00	55.31	4100.00	27.41
1600.00	54.70	4125.00	27.28
1625.00	54.12	4150.00	27.15
1650.00	53.54	4175.00	27.03
1675.00	52.98	4200.00	26.90
1700.00	52.43	4225.00	26.78
1725.00	51.90	4250.00	26.65
1750.00	51.38	4275.00	26.53
1775.00	50.87	4300.00	26.41

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1800.00	50.37	4325.00	26.29
1825.00	49.88	4350.00	26.17
1850.00	49.40	4375.00	26.06
1875.00	48.93	4400.00	25.94
1900.00	48.48	4425.00	25.82
1925.00	48.03	4450.00	25.71
1950.00	47.59	4475.00	25.60
1975.00	47.16	4500.00	25.49
2000.00	46.74	4525.00	25.37
2025.00	46.32	4550.00	25.26
2050.00	45.92	4575.00	25.16
2075.00	45.52	4600.00	25.05
2100.00	45.13	4625.00	24.94
2125.00	44.75	4650.00	24.83
2150.00	44.38	4675.00	24.73
2175.00	44.01	4700.00	24.63
2200.00	43.65	4725.00	24.52
2225.00	43.29	4750.00	24.42
2250.00	42.95	4775.00	24.32
2275.00	42.60	4800.00	24.22
2300.00	42.27	4825.00	24.12
2325.00	41.94	4850.00	24.02
2350.00	41.61	4875.00	23.92
2375.00	41.29	4900.00	23.82
2400.00	40.98	4925.00	23.73
2425.00	40.67	4950.00	23.63
2450.00	40.37	4975.00	23.54
2475.00	40.07	5000.00	23.44
2500.00	39.78		

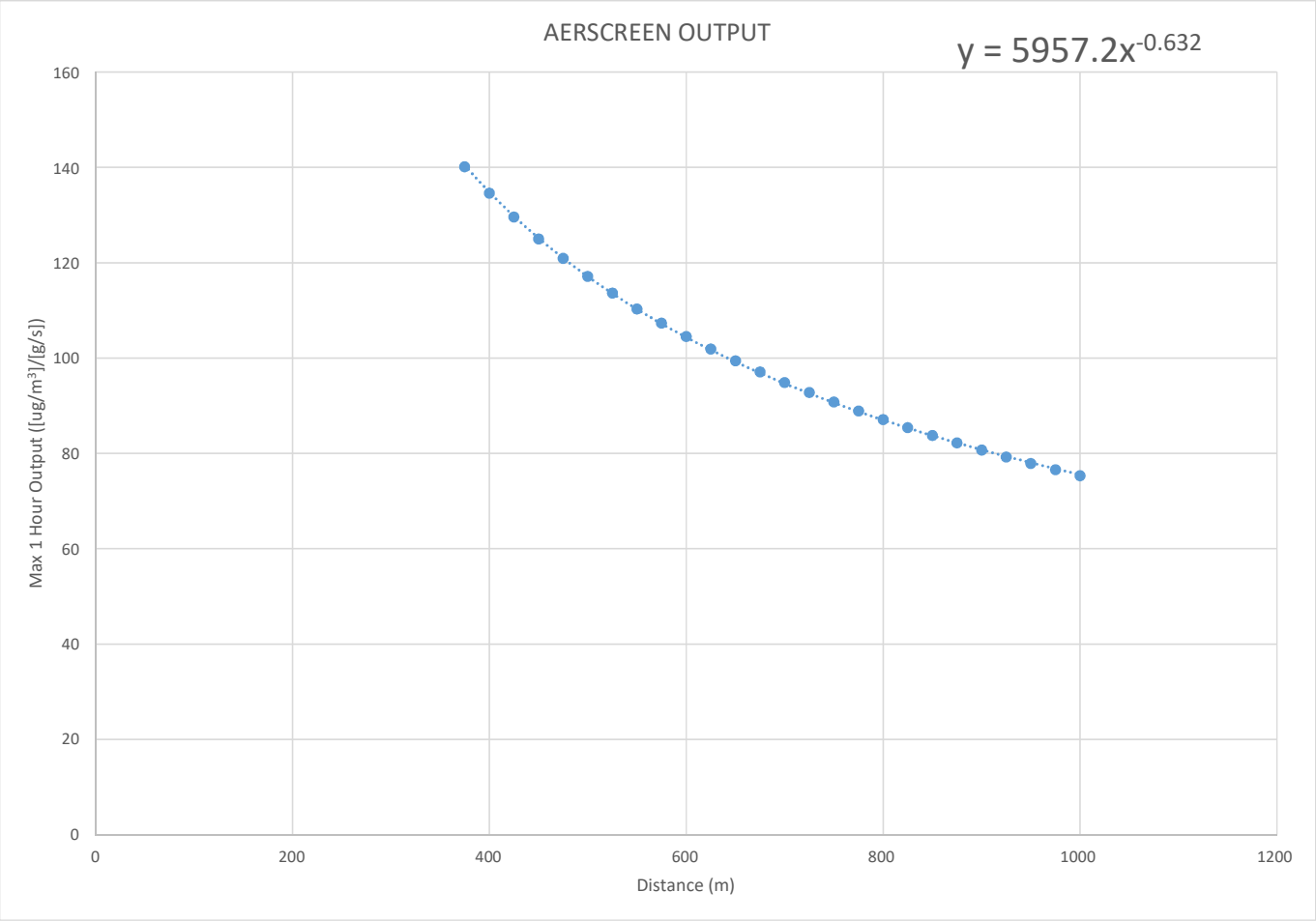
***** AERSCREEN MAXIMUM IMPACT SUMMARY *****

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	5368.	5368.	4831.	3221.	536.8

DISTANCE FROM SOURCE 5.00 meters

IMPACT AT THE

		undercanvas_yosemite-pm25			
AMBIENT BOUNDARY	2400.	2400.	2160.	1440.	240.0
DISTANCE FROM SOURCE	1.00 meters				



Under Canvas
Yosemite Site

Site Info 99 stoves/tents

Distance Group Bin	Tent Count	Distance (m)
>1600 ft	11	487.8
>1800 ft	13	548.8
>2000 ft	14	609.8
>2200 ft	8	670.7
>2400 ft	8	731.7
>2600 ft	8	792.7
>2800 ft	37	853.7

	Total	per stove	
Emission Rate Annual	1.53E+00	1.55E-02	tpy
	4.40E-02	4.45E-04	g/s
Emission Rate Daily	9.08E-02	9.17E-04	g/s
	5.45E-02	5.50E-04	g/s

assume 177 day/year operations (CalEEMod Tuolumne County Default)
assume 60% occupied and burning at the same day for same durations

	Distance		Output ([ug/m ³]/[g/s])		
	(ft)	(m)	Max 1 Hour	Annual	24 Hour
AERSCREEN OUT					
$y = 5957.2x^{-0.632}$	1600	487.8	119.1	11.91	71.49
	1800	548.8	110.6	11.06	66.36
where,	2000	609.8	103.5	10.35	62.08
Y = Max 1 Hour output @1 g/s	2200	670.7	97.4	9.74	58.45
X = distance in meters	2400	731.7	92.2	9.22	55.33
	2600	792.7	87.7	8.77	52.60
	2800	853.7	83.7	8.37	50.19

Concentrations PM_{2.5} (ug/m³)

Distance Group Bin	Annual	24 Hour
>1600 ft	5.83E-02	4.33E-01
>1800 ft	6.39E-02	4.75E-01
>2000 ft	6.44E-02	4.78E-01
>2200 ft	3.46E-02	2.57E-01
>2400 ft	3.28E-02	2.43E-01
>2600 ft	3.12E-02	2.31E-01
>2800 ft	1.38E-01	1.02E+00
Total	0.42	3.14

GHG Memorandum

memorandum

date May 27, 2020

to Luke Evans, Project Manager

cc

from Chris Sanchez, Senior Technical Associate

subject Tuolumne County Threshold for Greenhouse Gases

This memorandum describes the method for adjusting the greenhouse gas (GHG) CEQA Threshold adopted by Tuolumne County in its *Tuolumne County Regional Blueprint Greenhouse Gas Study*. The GHG Study identified a CEQA significance threshold of 4.6 Metric Tons of CO₂e per year per service population applicable in Tuolumne County. However, this threshold was developed based on achieving GHG reductions for year 2020 as identified in the initial 2008 Climate Change Scoping Plan developed by CARB to address AB 32. The First Update to the Scoping Plan was approved by CARB in May 2014 and built upon the initial Scoping Plan with new strategies and recommendations (CARB, 2014). CARB approved the 2017 Climate Change Scoping Plan Update (2017 Scoping Plan Update) in December 2017. The 2017 Scoping Plan Update outlines the proposed framework of action for achieving the 2030 GHG target of 40 percent reduction in GHG emissions relative to 1990 levels (CARB, 2017).

Consequently, an adjusted 2030 threshold of 2.7 MT of CO₂e per service population was developed to address the more stringent year 2030 GHG reduction targets. This 2030 threshold was calculated based on the GHG reduction goal established under SB 32 and Governor's Executive Order B-30-15 (40 percent reduction below 1990 levels by 2030, taking into account the 1990 emissions levels. Emissions in excess of the 2030 threshold of 2.7 MT of CO₂e per service population could impede attainment of statewide GHG reduction targets for 2030 established under SB 32. See Attachment 1 for a derivation of this adjusted threshold.

As can be seen from Attachment 1, this adjusted threshold is based on California Statewide metrics similar to those that were initially used by the Bay Area Air Quality Management District (BAAQMD) to develop the 4.6 Metric Tons of CO₂e per year per service population threshold¹. However, recent court decisions have suggested that there needs to be a link to support the efficiency metric with substantial evidence establishing a relationship

¹ Bay Area Air Quality Management District, BAAQMD, *Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance*, October 2009, <http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/revised-draft-ceqa-thresholds-justification-report-oct-2009.pdf?la=en>, accessed May, 2020.

between the statewide data used to establish the metric and the county-specific reduction targets in the County in which a given project is located.

BAAQMD documentation for the development of the efficiency metric indicate that it was developed using a land use sector approach². Table 1, below, correlates the GHG emissions for land use sectors for California as a whole and for Tuolumne County. As can be seen from the Table, the GHG emissions for each land use sector correlate closely between the County and the state.

At present, Tuolumne County is requesting proposals to update its *Regional Blueprint Greenhouse Gas Study* into a Climate Action Plan that addresses and formulates County-specific reduction targets for year 2030 and beyond. Until such an effort is completed it would be speculative to establish a relationship between these as yet undeveloped reduction targets and the statewide reduction efforts. Therefore, the land use sector-based GHG emissions correlation in Table 1 represents a best-efforts demonstration of the appropriateness of applying the year 2030 adjusted efficiency metric of 2.7 MT of CO₂e per service population per year within the County. In lieu of the development of pending county-wide emission reduction targets or identification of other specific thresholds for addressing GHG emissions for the County relative to CEQA, this threshold is applied in the impact assessment for GHG emissions within the Draft Environmental Impact Report for the Under Canvas Yosemite project.

Table 1. GHG Emissions by land use sector

Land Use Sector	Tuolumne County Percentage	State of California Percentage
Residential	17 %	6 %
Non-Residential	7 %	25 %
Transportation	58 %	40 %
Agriculture	5 %	8 %
Total	87 %	79 %
Source: <i>Tuolumne County Regional Blueprint Greenhouse Gas Study</i> and California Air Resources Board, <i>California Greenhouse Gas 2000-2017 Inventory by Scoping Plan Category – Summary</i> , http://www.arb.ca.gov/cc/inventory/data/data.htm . Accessed May 2020.		

² *Ibid.*

Table 1
California 2030 GHG Emissions, Population Projections and GHG Service Population Target
CA

2030 Service Population Calculation (Based on the 2014 First Updated Scoping Plan)¹	
Original 2020 Limit (MMT CO ₂ e) (i.e., 1990 level approved in 2007) ²	427
BAAQMD-used California Land Use Sector Emissions Target Based on Original 2020 Limit (MMT CO ₂ e/yr) ³	296
BAAQMD-used Land Use Sector 2020 Emission Target/2020 Emission Limit	69.21%
Updated 2020 Limit (i.e., 1990 level approved in 2014 and most correct) (MMT CO ₂ e) ²	431
California Land Use Sector Emissions Target Based on <u>Updated</u> 2020 Limit (MMT CO ₂ e/yr)	298
Percentage the 2030 GHG Target Emissions Relative to 1990 level ³	60%
Estimate 10-year employment growth rate (2012 -2022) ⁴	14.9%
Estimated 2030 Data⁴	CY 2030
Land Use Sectors Greenhouse Gas Emissions Target ⁴ (MT CO ₂ e/yr)	178,979,059
Population ⁶	44,085,600
Employment ⁷	23,205,813
California Service Population (Population + Employment)	67,291,413
AB 32 Goal GHG emissions (MT CO ₂ e/SP/yr)	2.7

Notes:

¹. Using AR4 Global Warming Potentials for the 1990 Inventory

². California 1990 Greenhouse Gas Emissions Level and 2020 Limit. Available at: <http://www.arb.ca.gov/cc/inventory/1990level/1990level.htm>. Accessed: February 2016.

³. Executive Order B-30-15. Available at: <https://www.gov.ca.gov/news.php?id=18938>. Accessed: February 2016.

⁴. California Industry Employment Projections Between 2012-2022. Employment Development Department (EDD), State of California, September 19, 2014. Available at: [http://www.labormarketinfo.edd.ca.gov/file/indproj/cal\\$indnarr.pdf](http://www.labormarketinfo.edd.ca.gov/file/indproj/cal$indnarr.pdf). Accessed: February 2016.

⁵. California Environmental Quality Act Guidelines Update - Proposed Air Quality CEQA Thresholds of Significance. Bay Area Air Quality Management District (BAAQMD), May 3, 2010. Emissions adjusted by AR4 GWP and reduction target for 2030.

⁶. Report P-1 (County): State and County Total Population Projections, 2010-2060 (5-year increments). California Department of Finance. Available at: http://www.dof.ca.gov/research/demographic/reports/projections/P-1/documents/P-1_Total_CAProj_2010-2060_5-Year.xls

⁷. Assume the 10-year employment growth rate between 2020 and 2030 is the same as that of the 2012-2022.

Abbreviations:

AB - Assembly Bill

BAAQMD - Bay Area Air Quality Management District

CO₂e - carbon dioxide equivalents

GHG - greenhouse gases

MT - metric tonnes

SP - service population

yr - year