

**Appendix A:
Air Quality/Greenhouse Gas
Assumptions and Modeling Output**

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**Air Quality and Greenhouse Gas Model Assumptions
La Paloma Winery
City of Clovis, Fresno County, California**

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MODELING PARAMETERS AND ASSUMPTIONS

Model Selection

Air pollutant emissions can be estimated by using emission factors and a level of activity. Emission factors are the emission rate of a pollutant given the activity over time, for example, grams of NO_x per horsepower-hour. The California Air Resources Board (ARB) has published emission factors for on-road mobile vehicles/trucks in the EMFAC mobile source emissions model and emission factors for off-road equipment and vehicles in the OFFROAD emissions model. An air emissions model (or calculator) combines the emission factors and the various levels of activity and outputs the emissions for the various pieces of equipment.

The California Emissions Estimator Model (CalEEMod) version 2013.2.2 was developed in cooperation with the South Coast Air Quality Management District and other air districts throughout the State. CalEEMod is designed as a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas emissions associated with construction and operation from a variety of land uses. The San Joaquin Valley Air Pollution Control District (SJVAPCD) recommends the use of CalEEMod for estimating air quality and greenhouse gas impacts.

The models used in this analysis are summarized as follows:

- Demolition emissions: CalEEMod, version 2013.2

Demolition and Site Preparation

Demolition is assumed to begin in January 2016 and occur intermittently during a 12-month period. It should be noted that CalEEMod estimates a total of 30 days and 10 days of site preparation to demolish and prepare a site the size of the project. In order to provide a conservative estimate the analysis assumed continuous activities for the 12-month duration. The number of construction equipment an hours of operation were adjusted to conserve the default horsepower hours. The construction schedule utilized in the analysis represents a “worst-case” analysis scenario since emission factors for construction equipment decrease as the analysis year increases, due to improvements in technology and more stringent regulatory requirements. Therefore, construction emissions would decrease if the construction schedule moves to later years. The duration of construction activity and associated equipment represent a reasonable approximation of the expected construction fleet as require per CEQA guidelines.

The construction schedule is provided in Table 1.

Table 1: Construction Schedule

Component	Start Date	End Date	CalEEMod Default Duration Estimate (days)	Project Duration (days)
Demolition	1/1/2016	11/10/2016	20	225
Site Preparation	8/26/2016	1/26/2017	10	30

Source: Personal communication with Steven White, City of Clovis, August 11, 2015

Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and prevailing weather conditions. Construction emissions result from on-site and off-site activities. On-site emissions principally consist of exhaust emissions from the activity levels of heavy-duty construction equipment, motor vehicle operation, and fugitive dust (mainly PM₁₀) from disturbed soil. Off-site emissions are caused by motor vehicle exhaust from delivery vehicles, worker traffic, and road dust (PM₁₀ and PM_{2.5}).

The construction equipment list is shown in Table 2. The activity for construction equipment is based on the horsepower and load factors of the equipment. In general, the horsepower is the power of an engine—the greater the horsepower, the greater the power. The load factor is the average power of a given piece of equipment while in operation compared with its maximum rated horsepower. A load factor of 1.0 indicates that a piece of equipment continually operates at its maximum operating capacity.

Table 2: Construction Equipment Assumptions

Activity	Equipment	Number	Hours per day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	1	0.7	81	0.73
	Excavators	3	2.1	162	0.38
	Rubber Tired Dozers	2	1.4	255	0.4
Site Preparation	Rubber Tired Dozers	1	8.0	255	0.4
	Tractors/Loaders/Backhoes	2	5.3	97	0.37
	Excavators	1	2.8	162	0.38

Source: CalEEMod, 2013 and First Carbon Solutions, 2015.

Equipment Tiers and Emission Factors

Equipment tiers refer to a generation of emission standards established by the United States Environmental Protection Agency (EPA) and ARB that apply to diesel engines in off-road equipment. The “tier” of an engine depends on the model year and horsepower rating; generally, the newer a piece of equipment is, the greater the tier it is likely to have. Excluding engines greater than 750 horsepower, Tier 1 engines were manufactured generally between 1996 and 2003. Tier 2 engines

were manufactured between 2001 and 2007. Tier 3 engines were manufactured between 2006 and 2011. Tier 4 engines are the newest and some incorporate hybrid electric technology; they were manufactured after 2007 (South Coast Air Quality Management District 2011b).

CalEEMod contains an inventory of construction equipment that incorporates estimates of the number of equipment, their age, their horsepower, and equipment tier from which rates of emissions are developed. The CalEEMod default tier mix was used in this analysis for the estimation of emissions from on-site construction equipment for the unmitigated scenario.

CalEEMod’s off-road emission factors are based on the equipment populations from the OFFROAD2011 model. For the unmitigated scenario, emission factors for the construction year were used.

Construction Off-site Trips

A summary of the construction related trips is shown in Table 3. Note that the total number of off-site construction trips would not necessarily occur on the same day, since the various construction activities would vary each day. Two vendor trips per day were added to reflect potential transport of water for dust control to the site, however, water will most likely be obtained from an on-site well. The trip lengths from the CalEEMod default are 12.4 miles for workers, 7.3 miles for vendors, and 20 miles for haul trips. Demolition material hauled off-site and the percentage of materials may go to three different locations. A weighted trip length was derived for the possible locations.

1. Local Construction Recycling Facilities (e.g. Kroeker) = 20 miles x 50 percent of material (per Construction and Demolition Ordinance) = 10 miles
2. American Avenue Landfill = 33 miles x 25 percent of material = 8.25 miles
3. Forward Landfill (Stockton – Hazardous materials) = 135 miles x 25 percent = 33.75 miles

Weighted trip length = 52 miles

Table 3: Construction Off-site Trips

Activity	Construction Trips per Day		Haul Trips (Total)
	Worker	Vendor	
Demolition	15	2	3,043
Site Preparation	20	2	0

Source: CalEEMod 2013.2.2 and First Carbon Solutions, 2015.

Operation

No development is proposed as part of the project, accordingly, there would be no increase in operational emissions over the existing baseline. Therefore, operational emissions were not estimated.

**Appendix A:
CalEEMod Output**

La Paloma Winery
Fresno County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	1.00	User Defined Unit	16.56	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	45
Climate Zone	3			Operational Year	2017
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 - Project site is approx 16.56 acres
- Construction Phase - Demolition and site preparation activities expected to begin Jan 2016
- Off-road Equipment - Revised to conserve estimated horsepower hours from default assumptions
- Off-road Equipment - Added excavator to account for trenching for PG&E line
- Trips and VMT - est 52 miles trip length
- Demolition - Existing buildings onsite to be demolished total 245,600 SF multiplied by 3 because of mutiilevels
- Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	225.00
tblConstructionPhase	NumDays	10.00	30.00
tblLandUse	LotAcreage	0.00	16.56

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	UsageHours	8.00	0.71
tblOffRoadEquipment	UsageHours	8.00	2.14
tblOffRoadEquipment	UsageHours	8.00	1.43
tblOffRoadEquipment	UsageHours	8.00	5.35
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	HaulingTripLength	20.00	52.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00

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					
2016	0.1425	1.7937	1.2222	3.7800e-003	0.7188	0.0556	0.7744	0.2272	0.0514	0.2786	0.0000	344.0239	344.0239	0.0192	0.0000	344.4265
Total	0.1425	1.7937	1.2222	3.7800e-003	0.7188	0.0556	0.7744	0.2272	0.0514	0.2786	0.0000	344.0239	344.0239	0.0192	0.0000	344.4265

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					
2016	0.1425	1.7937	1.2222	3.7800e-003	0.3703	0.0556	0.4259	0.1150	0.0514	0.1664	0.0000	344.0238	344.0238	0.0192	0.0000	344.4264
Total	0.1425	1.7937	1.2222	3.7800e-003	0.3703	0.0556	0.4259	0.1150	0.0514	0.1664	0.0000	344.0238	344.0238	0.0192	0.0000	344.4264

	ROG	NOx	CO	SO2	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	48.48	0.00	45.00	49.36	0.00	40.25	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	Demolition	Demolition	1/1/2016	11/10/2016	5	225	
2	Site Preparation	Site Preparation	11/11/2016	12/22/2016	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.71	81	0.73
Demolition	Excavators	1	2.14	162	0.38
Demolition	Rubber Tired Dozers	1	1.43	255	0.40
Site Preparation	Excavators	1	2.75	162	0.38

Site Preparation	Rubber Tired Dozers	1	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	5.35	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
Demolition	6	15.00	2.00	3,043.00	10.80	7.30	52.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	8	20.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3626	0.0000	0.3626	0.0549	0.0000	0.0549	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0431	0.4586	0.3518	4.0000e-004		0.0230	0.0230		0.0215	0.0215	0.0000	37.2425	37.2425	0.0101	0.0000	37.4552
Total	0.0431	0.4586	0.3518	4.0000e-004	0.3626	0.0230	0.3857	0.0549	0.0215	0.0764	0.0000	37.2425	37.2425	0.0101	0.0000	37.4552

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	0.0614	1.0040	0.5167	2.9100e-003	0.0676	0.0162	0.0838	0.0186	0.0149	0.0335	0.0000	266.4593	266.4593	1.9100e-003	0.0000	266.4993
Vendor	2.9100e-003	0.0225	0.0329	5.0000e-005	1.4600e-003	3.9000e-004	1.8600e-003	4.2000e-004	3.6000e-004	7.8000e-004	0.0000	4.8577	4.8577	4.0000e-005	0.0000	4.8586
Worker	6.2500e-003	8.0400e-003	0.0790	1.6000e-004	0.0135	1.0000e-004	0.0136	3.5900e-003	9.0000e-005	3.6800e-003	0.0000	11.7064	11.7064	6.3000e-004	0.0000	11.7196
Total	0.0705	1.0345	0.6286	3.1200e-003	0.0826	0.0167	0.0992	0.0226	0.0153	0.0379	0.0000	283.0234	283.0234	2.5800e-003	0.0000	283.0775

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					0.1632	0.0000	0.1632	0.0247	0.0000	0.0247	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0431	0.4586	0.3518	4.0000e-004		0.0230	0.0230		0.0215	0.0215	0.0000	37.2424	37.2424	0.0101	0.0000	37.4552
Total	0.0431	0.4586	0.3518	4.0000e-004	0.1632	0.0230	0.1862	0.0247	0.0215	0.0462	0.0000	37.2424	37.2424	0.0101	0.0000	37.4552

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	0.0614	1.0040	0.5167	2.9100e-003	0.0676	0.0162	0.0838	0.0186	0.0149	0.0335	0.0000	266.4593	266.4593	1.9100e-003	0.0000	266.4993
Vendor	2.9100e-003	0.0225	0.0329	5.0000e-005	1.4600e-003	3.9000e-004	1.8600e-003	4.2000e-004	3.6000e-004	7.8000e-004	0.0000	4.8577	4.8577	4.0000e-005	0.0000	4.8586
Worker	6.2500e-003	8.0400e-003	0.0790	1.6000e-004	0.0135	1.0000e-004	0.0136	3.5900e-003	9.0000e-005	3.6800e-003	0.0000	11.7064	11.7064	6.3000e-004	0.0000	11.7196
Total	0.0705	1.0345	0.6286	3.1200e-003	0.0826	0.0167	0.0992	0.0226	0.0153	0.0379	0.0000	283.0234	283.0234	2.5800e-003	0.0000	283.0775

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2710	0.0000	0.2710	0.1490	0.0000	0.1490	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0274	0.2962	0.2234	2.2000e-004		0.0158	0.0158		0.0146	0.0146	0.0000	21.0292	21.0292	6.3400e-003	0.0000	21.1625
Total	0.0274	0.2962	0.2234	2.2000e-004	0.2710	0.0158	0.2868	0.1490	0.0146	0.1635	0.0000	21.0292	21.0292	6.3400e-003	0.0000	21.1625

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	3.9000e-004	3.0000e-003	4.3800e-003	1.0000e-005	2.0000e-004	5.0000e-005	2.5000e-004	6.0000e-005	5.0000e-005	1.0000e-004	0.0000	0.6477	0.6477	1.0000e-005	0.0000	0.6478
Worker	1.1100e-003	1.4300e-003	0.0141	3.0000e-005	2.4000e-003	2.0000e-005	2.4200e-003	6.4000e-004	2.0000e-005	6.5000e-004	0.0000	2.0811	2.0811	1.1000e-004	0.0000	2.0835
Total	1.5000e-003	4.4300e-003	0.0184	4.0000e-005	2.6000e-003	7.0000e-005	2.6700e-003	7.0000e-004	7.0000e-005	7.5000e-004	0.0000	2.7288	2.7288	1.2000e-004	0.0000	2.7313

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					0.1220	0.0000	0.1220	0.0670	0.0000	0.0670	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0274	0.2962	0.2234	2.2000e-004		0.0158	0.0158		0.0146	0.0146	0.0000	21.0292	21.0292	6.3400e-003	0.0000	21.1624
Total	0.0274	0.2962	0.2234	2.2000e-004	0.1220	0.0158	0.1378	0.0670	0.0146	0.0816	0.0000	21.0292	21.0292	6.3400e-003	0.0000	21.1624

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	3.9000e-004	3.0000e-003	4.3800e-003	1.0000e-005	2.0000e-004	5.0000e-005	2.5000e-004	6.0000e-005	5.0000e-005	1.0000e-004	0.0000	0.6477	0.6477	1.0000e-005	0.0000	0.6478
Worker	1.1100e-003	1.4300e-003	0.0141	3.0000e-005	2.4000e-003	2.0000e-005	2.4200e-003	6.4000e-004	2.0000e-005	6.5000e-004	0.0000	2.0811	2.0811	1.1000e-004	0.0000	2.0835
Total	1.5000e-003	4.4300e-003	0.0184	4.0000e-005	2.6000e-003	7.0000e-005	2.6700e-003	7.0000e-004	7.0000e-005	7.5000e-004	0.0000	2.7288	2.7288	1.2000e-004	0.0000	2.7313

**La Paloma Winery
Fresno County, Winter**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	1.00	User Defined Unit	16.56	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	45
Climate Zone	3			Operational Year	2017
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 - Project site is approx 16.56 acres
- Construction Phase - Demolition and site preparation activities expected to begin Jan 2016
- Off-road Equipment - Revised to conserve estimated horsepower hours from default assumptions
- Off-road Equipment - Added excavator to account for trenching for PG&E line
- Revised to conserve horsepower hours from default assumption
- Trips and VMT - est 52 miles trip length
- Added 3 truck trips per day for water
- Demolition - Existing buildings onsite to be demolished total 245,600 SF multiplied by 3 because of mutiilevels
- Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	225.00
tblConstructionPhase	NumDays	10.00	30.00
tblLandUse	LotAcreage	0.00	16.56

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	UsageHours	8.00	0.71
tblOffRoadEquipment	UsageHours	8.00	2.14
tblOffRoadEquipment	UsageHours	8.00	1.43
tblOffRoadEquipment	UsageHours	8.00	5.35
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	HaulingTripLength	20.00	52.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1.9319	20.0545	16.1957	0.0312	18.2439	1.0602	19.3041	9.9781	0.9754	10.9535	0.0000	3,132.0297	3,132.0297	0.4748	0.0000	3,142.0004
Total	1.9319	20.0545	16.1957	0.0312	18.2439	1.0602	19.3041	9.9781	0.9754	10.9535	0.0000	3,132.0297	3,132.0297	0.4748	0.0000	3,142.0004

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1.9319	20.0545	16.1957	0.0312	8.3074	1.0602	9.3677	4.5162	0.9754	5.4916	0.0000	3,132.0297	3,132.0297	0.4748	0.0000	3,142.0004
Total	1.9319	20.0545	16.1957	0.0312	8.3074	1.0602	9.3677	4.5162	0.9754	5.4916	0.0000	3,132.0297	3,132.0297	0.4748	0.0000	3,142.0004

	ROG	NOx	CO	SO2	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	54.46	0.00	51.47	54.74	0.00	49.86	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	Demolition	Demolition	1/1/2016	11/10/2016	5	225	
2	Site Preparation	Site Preparation	11/11/2016	12/22/2016	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.71	81	0.73
Demolition	Excavators	1	2.14	162	0.38
Demolition	Rubber Tired Dozers	1	1.43	255	0.40

Site Preparation	Excavators	1	2.75	162	0.38
Site Preparation	Rubber Tired Dozers	1	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	5.35	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
Demolition	6	15.00	2.00	3,043.00	10.80	7.30	52.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	8	20.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.2234	0.0000	3.2234	0.4881	0.0000	0.4881			0.0000			0.0000
Off-Road	0.3827	4.0760	3.1273	3.5600e-003		0.2046	0.2046		0.1907	0.1907		364.9138	364.9138	0.0993		366.9984
Total	0.3827	4.0760	3.1273	3.5600e-003	3.2234	0.2046	3.4280	0.4881	0.1907	0.6788		364.9138	364.9138	0.0993		366.9984

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	lb/day										lb/day			
Hauling	0.5778	9.0844	5.2693	0.0259	0.6155	0.1437	0.7593	0.1688	0.1322	0.3010	2,609.4680	2,609.4680	0.0187	2,609.8612
Vendor	0.0295	0.2028	0.3610	4.7000e-004	0.0133	3.5200e-003	0.0168	3.8000e-003	3.2300e-003	7.0300e-003	47.3868	47.3868	4.2000e-004	47.3957
Worker	0.0564	0.0782	0.7083	1.3500e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335	110.2611	110.2611	6.1700e-003	110.3907
Total	0.6637	9.3653	6.3386	0.0277	0.7521	0.1481	0.9002	0.2053	0.1362	0.3415	2,767.1159	2,767.1159	0.0253	2,767.6476

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4505	0.0000	1.4505	0.2196	0.0000	0.2196			0.0000			0.0000
Off-Road	0.3827	4.0760	3.1273	3.5600e-003		0.2046	0.2046		0.1907	0.1907	0.0000	364.9138	364.9138	0.0993		366.9984
Total	0.3827	4.0760	3.1273	3.5600e-003	1.4505	0.2046	1.6551	0.2196	0.1907	0.4103	0.0000	364.9138	364.9138	0.0993		366.9984

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5778	9.0844	5.2693	0.0259	0.6155	0.1437	0.7593	0.1688	0.1322	0.3010	2,609.4680	2,609.4680	0.0187	2,609.8612		
Vendor	0.0295	0.2028	0.3610	4.7000e-004	0.0133	3.5200e-003	0.0168	3.8000e-003	3.2300e-003	7.0300e-003	47.3868	47.3868	4.2000e-004	47.3957		
Worker	0.0564	0.0782	0.7083	1.3500e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335	110.2611	110.2611	6.1700e-003	110.3907		

Total	0.6637	9.3653	6.3386	0.0277	0.7521	0.1481	0.9002	0.2053	0.1362	0.3415		2,767.1159	2,767.1159	0.0253		2,767.6476
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3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000				0.0000
Off-Road	1.8272	19.7474	14.8903	0.0149		1.0556	1.0556		0.9711	0.9711		1,545.3848	1,545.3848	0.4661			1,555.1738
Total	1.8272	19.7474	14.8903	0.0149	18.0663	1.0556	19.1218	9.9307	0.9711	10.9018		1,545.3848	1,545.3848	0.4661			1,555.1738

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0295	0.2028	0.3610	4.7000e-004	0.0133	3.5200e-003	0.0168	3.8000e-003	3.2300e-003	7.0300e-003		47.3868	47.3868	4.2000e-004			47.3957
Worker	0.0752	0.1043	0.9444	1.7900e-003	0.1643	1.1700e-003	0.1655	0.0436	1.0800e-003	0.0447		147.0148	147.0148	8.2300e-003			147.1876
Total	0.1047	0.3071	1.3054	2.2600e-003	0.1776	4.6900e-003	0.1823	0.0474	4.3100e-003	0.0517		194.4017	194.4017	8.6500e-003			194.5833

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	1.8272	19.7474	14.8903	0.0149		1.0556	1.0556		0.9711	0.9711	0.0000	1,545.3848	1,545.3848	0.4661		1,555.1738
Total	1.8272	19.7474	14.8903	0.0149	8.1298	1.0556	9.1854	4.4688	0.9711	5.4399	0.0000	1,545.3848	1,545.3848	0.4661		1,555.1738

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0295	0.2028	0.3610	4.7000e-004	0.0133	3.5200e-003	0.0168	3.8000e-003	3.2300e-003	7.0300e-003		47.3868	47.3868	4.2000e-004		47.3957
Worker	0.0752	0.1043	0.9444	1.7900e-003	0.1643	1.1700e-003	0.1655	0.0436	1.0800e-003	0.0447		147.0148	147.0148	8.2300e-003		147.1876
Total	0.1047	0.3071	1.3054	2.2600e-003	0.1776	4.6900e-003	0.1823	0.0474	4.3100e-003	0.0517		194.4017	194.4017	8.6500e-003		194.5833

**La Paloma Winery
Fresno County, Summer**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	1.00	User Defined Unit	16.56	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	45
Climate Zone	3			Operational Year	2017
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 - Project site is approx 16.56 acres
- Construction Phase - Demolition and site preparation activities expected to begin Jan 2016
- Off-road Equipment - Revised to conserve estimated horsepower hours from default assumptions
- Off-road Equipment - Added excavator to account for trenching for PG&E line
- Trips and VMT - est 52 miles trip length
- Demolition - Existing buildings onsite to be demolished total 245,600 SF multiplied by 3 because of mutiilevels
- Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	225.00
tblConstructionPhase	NumDays	10.00	30.00
tblLandUse	LotAcreage	0.00	16.56

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	UsageHours	8.00	0.71
tblOffRoadEquipment	UsageHours	8.00	2.14
tblOffRoadEquipment	UsageHours	8.00	1.43
tblOffRoadEquipment	UsageHours	8.00	5.35
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	HaulingTripLength	20.00	52.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1.9382	20.0277	16.1952	0.0314	18.2439	1.0602	19.3040	9.9781	0.9754	10.9534	0.0000	3,150.2831	3,150.2831	0.4748	0.0000	3,160.2535
Total	1.9382	20.0277	16.1952	0.0314	18.2439	1.0602	19.3040	9.9781	0.9754	10.9534	0.0000	3,150.2831	3,150.2831	0.4748	0.0000	3,160.2535

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1.9382	20.0277	16.1952	0.0314	8.3074	1.0602	9.3676	4.5162	0.9754	5.4916	0.0000	3,150.2831	3,150.2831	0.4748	0.0000	3,160.2535
Total	1.9382	20.0277	16.1952	0.0314	8.3074	1.0602	9.3676	4.5162	0.9754	5.4916	0.0000	3,150.2831	3,150.2831	0.4748	0.0000	3,160.2535

	ROG	NOx	CO	SO2	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	54.46	0.00	51.47	54.74	0.00	49.86	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	Demolition	Demolition	1/1/2016	11/10/2016	5	225	
2	Site Preparation	Site Preparation	11/11/2016	12/22/2016	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	0.71	81	0.73
Demolition	Excavators	1	2.14	162	0.38

Demolition	Rubber Tired Dozers	1	1.43	255	0.40
Site Preparation	Excavators	1	2.75	162	0.38
Site Preparation	Rubber Tired Dozers	1	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	5.35	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
Demolition	6	15.00	2.00	3,043.00	10.80	7.30	52.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	8	20.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.2234	0.0000	3.2234	0.4881	0.0000	0.4881			0.0000			0.0000
Off-Road	0.3827	4.0760	3.1273	3.5600e-003		0.2046	0.2046		0.1907	0.1907			364.9138	364.9138	0.0993	366.9984
Total	0.3827	4.0760	3.1273	3.5600e-003	3.2234	0.2046	3.4280	0.4881	0.1907	0.6788			364.9138	364.9138	0.0993	366.9984

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5257	8.5090	4.1149	0.0259	0.6155	0.1435	0.7591	0.1688	0.1320	0.3008		2,611.8574	2,611.8574	0.0186		2,612.2486
Vendor	0.0237	0.1921	0.2425	4.8000e-004	0.0133	3.4700e-003	0.0168	3.8000e-003	3.1900e-003	6.9800e-003		47.7499	47.7499	4.1000e-004		47.7586
Worker	0.0655	0.0661	0.7968	1.5400e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		125.7619	125.7619	6.1700e-003		125.8915
Total	0.6149	8.7672	5.1542	0.0279	0.7521	0.1479	0.9000	0.2053	0.1360	0.3413		2,785.3693	2,785.3693	0.0252		2,785.8986

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4505	0.0000	1.4505	0.2196	0.0000	0.2196			0.0000			0.0000
Off-Road	0.3827	4.0760	3.1273	3.5600e-003		0.2046	0.2046		0.1907	0.1907	0.0000	364.9138	364.9138	0.0993		366.9984
Total	0.3827	4.0760	3.1273	3.5600e-003	1.4505	0.2046	1.6551	0.2196	0.1907	0.4103	0.0000	364.9138	364.9138	0.0993		366.9984

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.5257	8.5090	4.1149	0.0259	0.6155	0.1435	0.7591	0.1688	0.1320	0.3008		2,611.8574	2,611.8574	0.0186		2,612.2486
Vendor	0.0237	0.1921	0.2425	4.8000e-004	0.0133	3.4700e-003	0.0168	3.8000e-003	3.1900e-003	6.9800e-003		47.7499	47.7499	4.1000e-004		47.7586

Worker	0.0655	0.0661	0.7968	1.5400e-003	0.1232	8.8000e-004	0.1241	0.0327	8.1000e-004	0.0335		125.7619	125.7619	6.1700e-003		125.8915
Total	0.6149	8.7672	5.1542	0.0279	0.7521	0.1479	0.9000	0.2053	0.1360	0.3413		2,785.3693	2,785.3693	0.0252		2,785.8986

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000				0.0000
Off-Road	1.8272	19.7474	14.8903	0.0149		1.0556	1.0556		0.9711	0.9711		1,545.3848	1,545.3848	0.4661			1,555.1738
Total	1.8272	19.7474	14.8903	0.0149	18.0663	1.0556	19.1218	9.9307	0.9711	10.9018		1,545.3848	1,545.3848	0.4661			1,555.1738

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Vendor	0.0237	0.1921	0.2425	4.8000e-004	0.0133	3.4700e-003	0.0168	3.8000e-003	3.1900e-003	6.9800e-003		47.7499	47.7499	4.1000e-004			47.7586
Worker	0.0873	0.0881	1.0624	2.0500e-003	0.1643	1.1700e-003	0.1655	0.0436	1.0800e-003	0.0447		167.6826	167.6826	8.2300e-003			167.8554
Total	0.1110	0.2802	1.3049	2.5300e-003	0.1776	4.6400e-003	0.1822	0.0474	4.2700e-003	0.0516		215.4325	215.4325	8.6400e-003			215.6139

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	1.8272	19.7474	14.8903	0.0149		1.0556	1.0556		0.9711	0.9711	0.0000	1,545.3848	1,545.3848	0.4661		1,555.1738
Total	1.8272	19.7474	14.8903	0.0149	8.1298	1.0556	9.1854	4.4688	0.9711	5.4399	0.0000	1,545.3848	1,545.3848	0.4661		1,555.1738

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0237	0.1921	0.2425	4.8000e-004	0.0133	3.4700e-003	0.0168	3.8000e-003	3.1900e-003	6.9800e-003		47.7499	47.7499	4.1000e-004		47.7586
Worker	0.0873	0.0881	1.0624	2.0500e-003	0.1643	1.1700e-003	0.1655	0.0436	1.0800e-003	0.0447		167.6826	167.6826	8.2300e-003		167.8554
Total	0.1110	0.2802	1.3049	2.5300e-003	0.1776	4.6400e-003	0.1822	0.0474	4.2700e-003	0.0516		215.4325	215.4325	8.6400e-003		215.6139

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