

## **Appendix E: Greenhouse Gas Supporting Data**

**16040051 Chapin Operational (2005)**  
**Merced County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	15.00	1000sqft	0.34	15,000.00	0
Other Asphalt Surfaces	37.75	1000sqft	0.87	37,747.00	0
Other Non-Asphalt Surfaces	165.51	1000sqft	3.80	165,515.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	49
<b>Climate Zone</b>	3	<b>Operational Year</b>	2005		
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	641.35	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - 15 Units of Industrial, 37,747sf Asphalt Surfaces, 165,515sf Non-Asphalt Surfaces (Concrete Area + Compacted Base Rock Area)

Vehicle Trips - 6.8 trips per unit, 15 units, 102 trips day, 100 percent Primary Trips

Vehicle Emission Factors - HHD only for operational mobile fleet mix

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	37,750.00	37,747.00
tblLandUse	LandUseSquareFeet	165,510.00	165,515.00

tblProjectCharacteristics	OperationalYear	2014	2005
tblTripsAndVMT	HaulingTripNumber	1,299.00	0.00
tblVehicleEF	HHD	0.18	1.00
tblVehicleEF	LDA	0.36	0.00
tblVehicleEF	LDT1	0.12	0.00
tblVehicleEF	LDT2	0.17	0.00
tblVehicleEF	LHD1	0.02	0.00
tblVehicleEF	LHD2	7.5290e-003	0.00
tblVehicleEF	MCY	0.01	0.00
tblVehicleEF	MDV	0.10	0.00
tblVehicleEF	MH	2.3090e-003	0.00
tblVehicleEF	MHD	0.02	0.00
tblVehicleEF	OBUS	1.3380e-003	0.00
tblVehicleEF	SBUS	2.7490e-003	0.00
tblVehicleEF	UBUS	1.6810e-003	0.00
tblVehicleTrips	ST_TR	1.50	6.80
tblVehicleTrips	SU_TR	1.50	6.80
tblVehicleTrips	WD_TR	1.50	6.80

## 2.0 Emissions Summary

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### 2.1 Overall Construction

#### No Construction

### 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											0.0000	3.9000e-003	3.9000e-003	2.0000e-005	0.0000	4.2800e-003
Energy											0.0000	59.5710	59.5710	2.2400e-003	7.1000e-004	59.8393
Mobile											0.0000	611.9967	611.9967	0.0342	0.0000	612.7143
Waste											3.7756	0.0000	3.7756	0.2231	0.0000	8.4614
Water											1.1005	5.4602	6.5607	0.1133	2.7200e-003	9.7827
<b>Total</b>											<b>4.8761</b>	<b>677.0319</b>	<b>681.9080</b>	<b>0.3728</b>	<b>3.4300e-003</b>	<b>690.8020</b>

### 3.0 Construction Detail

#### No Construction

### 4.0 Operational Detail - Mobile

#### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	611.9967	611.9967	0.0342	0.0000	612.7143
Unmitigated											0.0000	611.9967	611.9967	0.0342	0.0000	612.7143

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	102.00	102.00	102.00	297,790	297,790
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
<b>Total</b>	<b>102.00</b>	<b>102.00</b>	<b>102.00</b>	<b>297,790</b>	<b>297,790</b>

#### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000

## 5.0 Energy Detail

### 4.4 Fleet Mix

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	42.1531	42.1531	1.9100e-003	3.9000e-004	42.3154
Electricity Unmitigated											0.0000	42.1531	42.1531	1.9100e-003	3.9000e-004	42.3154
NaturalGas Mitigated											0.0000	17.4180	17.4180	3.3000e-004	3.2000e-004	17.5240
NaturalGas Unmitigated											0.0000	17.4180	17.4180	3.3000e-004	3.2000e-004	17.5240

### 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					
Other Asphalt Surfaces	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Heavy Industry	326400											0.0000	17.4180	17.4180	3.3000e-004	3.2000e-004	17.5240
<b>Total</b>												<b>0.0000</b>	<b>17.4180</b>	<b>17.4180</b>	<b>3.3000e-004</b>	<b>3.2000e-004</b>	<b>17.5240</b>

### 5.3 Energy by Land Use - Electricity

#### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	144900	42.1531	1.9100e-003	3.9000e-004	42.3154
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>42.1531</b>	<b>1.9100e-003</b>	<b>3.9000e-004</b>	<b>42.3154</b>

### 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											0.0000	3.9000e-003	3.9000e-003	2.0000e-005	0.0000	4.2800e-003
Unmitigated											0.0000	3.9000e-003	3.9000e-003	2.0000e-005	0.0000	4.2800e-003

**6.2 Area by SubCategory**

**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	3.9000e-003	3.9000e-003	2.0000e-005	0.0000	4.2800e-003
<b>Total</b>											<b>0.0000</b>	<b>3.9000e-003</b>	<b>3.9000e-003</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>4.2800e-003</b>



## 7.0 Water Detail

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### 7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	6.5607	0.1133	2.7200e-003	9.7809
Unmitigated	6.5607	0.1133	2.7200e-003	9.7827

### 7.2 Water by Land Use

#### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	3.46875 / 0	6.5607	0.1133	2.7200e-003	9.7827
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>6.5607</b>	<b>0.1133</b>	<b>2.7200e-003</b>	<b>9.7827</b>

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

#### Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.7756	0.2231	0.0000	8.4614
Unmitigated	3.7756	0.2231	0.0000	8.4614

### 8.2 Waste by Land Use

#### Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	18.6	3.7756	0.2231	0.0000	8.4614
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>3.7756</b>	<b>0.2231</b>	<b>0.0000</b>	<b>8.4614</b>



**16040051 - Front End Loader 2005**  
**Merced County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	0.00	User Defined Unit	0.00	0.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	49
<b>Climate Zone</b>	3			<b>Operational Year</b>	2005
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	641.35	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Land use only entered to run model

Construction Phase - Operational Front End Loader Activity for one year operating 6 days per week

Off-road Equipment - 1 Loader, 164 horsepower, 13 hours per day

Grading -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaMitigation	UseLowVOCPaintNonresidentialInterior	250	150
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	150
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	150

tblConstructionPhase	NumDays	0.00	313.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblOffRoadEquipment	HorsePower	97.00	164.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	13.00
tblProjectCharacteristics	OperationalYear	2014	2005
tblWater	AerobicPercent	87.46	84.69
tblWater	AnaDigestCombDigestGasPercent	100.00	3.17
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	2.14
tblWater	SepticTankPercent	10.33	10.00

## 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					
2005											0.0000	224.9442	224.9442	0.0374	0.0000	225.7299
<b>Total</b>											<b>0.0000</b>	<b>224.9442</b>	<b>224.9442</b>	<b>0.0374</b>	<b>0.0000</b>	<b>225.7299</b>

### 2.2 Overall Operational

Not Applicable

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Operations	Building Construction	1/1/2005	12/31/2005	6	313	Front End Loader Activity

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
Operations	Cranes	1	4.00	226	0.29
Operations	Forklifts	2	6.00	89	0.20
Operations	Tractors/Loaders/Backhoes	1	13.00	164	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
Operations	4	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT









**16040051 Chapin Operational (2020)**  
**Merced County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	15.00	1000sqft	0.34	15,000.00	0
Other Asphalt Surfaces	37.75	1000sqft	0.87	37,747.00	0
Other Non-Asphalt Surfaces	165.51	1000sqft	3.80	165,515.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	49
<b>Climate Zone</b>	3			<b>Operational Year</b>	2020
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	641.35	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - 15 Units of Industrial, 37,747sf Asphalt Surfaces, 165,515sf Non-Asphalt Surfaces (Concrete Area + Compacted Base Rock Area)

Vehicle Trips - 6.8 trips per unit, 15 units, 102 trips day, 100 percent Primary Trips

Vehicle Emission Factors - HHD only for operational mobile fleet mix

Vehicle Emission Factors -

Vehicle Emission Factors -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	37,750.00	37,747.00
tblLandUse	LandUseSquareFeet	165,510.00	165,515.00

tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	HaulingTripNumber	1,299.00	0.00
tblVehicleEF	HHD	0.15	1.00
tblVehicleEF	LDA	0.39	0.00
tblVehicleEF	LDT1	0.06	0.00
tblVehicleEF	LDT2	0.15	0.00
tblVehicleEF	LHD1	0.05	0.00
tblVehicleEF	LHD2	6.7520e-003	0.00
tblVehicleEF	MCY	6.6330e-003	0.00
tblVehicleEF	MDV	0.16	0.00
tblVehicleEF	MH	1.7770e-003	0.00
tblVehicleEF	MHD	0.02	0.00
tblVehicleEF	OBUS	2.0940e-003	0.00
tblVehicleEF	SBUS	1.2990e-003	0.00
tblVehicleEF	UBUS	1.6450e-003	0.00
tblVehicleTrips	ST_TR	1.50	6.80
tblVehicleTrips	SU_TR	1.50	6.80
tblVehicleTrips	WD_TR	1.50	6.80

## 2.0 Emissions Summary

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### 2.1 Overall Construction

#### No Construction

### 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											0.0000	3.9000e-003	3.9000e-003	1.0000e-005	0.0000	4.1200e-003
Energy											0.0000	59.5710	59.5710	2.2400e-003	7.1000e-004	59.8393
Mobile											0.0000	480.5136	480.5136	4.0900e-003	0.0000	480.5995
Waste											3.7756	0.0000	3.7756	0.2231	0.0000	8.4614
Water											1.1005	5.4602	6.5607	0.1133	2.7200e-003	9.7827
<b>Total</b>											<b>4.8761</b>	<b>545.5487</b>	<b>550.4248</b>	<b>0.3428</b>	<b>3.4300e-003</b>	<b>558.6870</b>

### 3.0 Construction Detail

#### No Construction

### 4.0 Operational Detail - Mobile

#### 4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	480.5136	480.5136	4.0900e-003	0.0000	480.5995
Unmitigated											0.0000	480.5136	480.5136	4.0900e-003	0.0000	480.5995

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	102.00	102.00	102.00	297,790	297,790
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
<b>Total</b>	<b>102.00</b>	<b>102.00</b>	<b>102.00</b>	<b>297,790</b>	<b>297,790</b>

#### 4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000

## 5.0 Energy Detail

### 4.4 Fleet Mix

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	42.1531	42.1531	1.9100e-003	3.9000e-004	42.3154
Electricity Unmitigated											0.0000	42.1531	42.1531	1.9100e-003	3.9000e-004	42.3154
NaturalGas Mitigated											0.0000	17.4180	17.4180	3.3000e-004	3.2000e-004	17.5240
NaturalGas Unmitigated											0.0000	17.4180	17.4180	3.3000e-004	3.2000e-004	17.5240

### 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					
Other Asphalt Surfaces	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Heavy Industry	326400											0.0000	17.4180	17.4180	3.3000e-004	3.2000e-004	17.5240
<b>Total</b>												<b>0.0000</b>	<b>17.4180</b>	<b>17.4180</b>	<b>3.3000e-004</b>	<b>3.2000e-004</b>	<b>17.5240</b>

### 5.3 Energy by Land Use - Electricity

#### Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	144900	42.1531	1.9100e-003	3.9000e-004	42.3154
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>42.1531</b>	<b>1.9100e-003</b>	<b>3.9000e-004</b>	<b>42.3154</b>

## 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											0.0000	3.9000e-003	3.9000e-003	1.0000e-005	0.0000	4.1200e-003
Unmitigated											0.0000	3.9000e-003	3.9000e-003	1.0000e-005	0.0000	4.1200e-003

### 6.2 Area by SubCategory

#### Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	3.9000e-003	3.9000e-003	1.0000e-005	0.0000	4.1200e-003
<b>Total</b>											<b>0.0000</b>	<b>3.9000e-003</b>	<b>3.9000e-003</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.1200e-003</b>



## 7.0 Water Detail

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### 7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	6.5607	0.1133	2.7200e-003	9.7809
Unmitigated	6.5607	0.1133	2.7200e-003	9.7827

### 7.2 Water by Land Use

#### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	3.46875 / 0	6.5607	0.1133	2.7200e-003	9.7827
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>6.5607</b>	<b>0.1133</b>	<b>2.7200e-003</b>	<b>9.7827</b>

## 8.0 Waste Detail

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### 8.1 Mitigation Measures Waste

#### Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.7756	0.2231	0.0000	8.4614
Unmitigated	3.7756	0.2231	0.0000	8.4614

### 8.2 Waste by Land Use

#### Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	18.6	3.7756	0.2231	0.0000	8.4614
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>3.7756</b>	<b>0.2231</b>	<b>0.0000</b>	<b>8.4614</b>



**16040051 - Front End Loader 2020  
Merced County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	0.00	User Defined Unit	0.00	0.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	49
<b>Climate Zone</b>	3			<b>Operational Year</b>	2020
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	641.35	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Land use only entered to run model

Construction Phase - Operational Front End Loader Activity for one year operating 6 days per week

Off-road Equipment - 1 Loader, 164 horsepower, 13 hours per day

Grading -

Construction Off-road Equipment Mitigation - Forklift Engine Tier 3 as a project design feature

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	0.00	314.00

tblConstructionPhase	NumDaysWeek	5.00	6.00
tblOffRoadEquipment	HorsePower	97.00	164.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	13.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblWater	AerobicPercent	87.46	84.69
tblWater	AnaDigestCombDigestGasPercent	100.00	3.17
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	2.14
tblWater	SepticTankPercent	10.33	10.00

## 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					
2020											0.0000	186.3590	186.3590	0.0603	0.0000	187.6247
<b>Total</b>											<b>0.0000</b>	<b>186.3590</b>	<b>186.3590</b>	<b>0.0603</b>	<b>0.0000</b>	<b>187.6247</b>

### 2.2 Overall Operational

#### Not Applicable

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Operations	Building Construction	1/1/2020	12/31/2020	6	314	Front End Loader Activity

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
Operations	Cranes	1	4.00	226	0.29
Operations	Forklifts	2	6.00	89	0.20
Operations	Tractors/Loaders/Backhoes	1	13.00	164	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
Operations	4	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

