
APPENDIX C

Air Pollutant and Greenhouse Gas Emissions
Technical Calculations

CONSTRUCTION RELATED EMISSIONS

Maximum Annual Construction Related Air Pollutant Emissions

Maximum Annual Emissions by Year	Emissions (tons/year)					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
2021 Construction Emissions Phase 1a	0.0469	0.4108	0.4118	7.0E-04	0.0298	0.0229
2022 Construction Emissions Phase 1b	0.0753	0.6568	0.7175	1.32E-03	0.0540	0.0361
2023 Construction Emissions Phase 2	0.0814	0.7053	0.8299	1.53E-03	0.0501	0.0352
Maximum Annual Emissions	0.0814	0.7053	0.8299	1.53E-03	0.0540	0.0361
SJVAPCD Significance Criteria	10	10	100	27	15	15
Criterion Exceeded?	No	No	No	No	No	No

Notes: Calculations completed in January 2021. See CalEEMod calculation assumptions in Appendix C.

Source: Planning Partners, 2021.

Maximum Daily Construction Related Air Pollutant Emissions (Summer)

Maximum Daily Emissions by Year	Emissions (pounds/day)					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
2021 Construction Emissions Phase 1a	1.50	13.01	13.14	0.02	1.98	0.85
2022 Construction Emissions Phase 1b	1.41	12.18	13.46	0.02	1.71	0.82
2023 Construction Emissions Phase 2	1.30	11.15	13.28	0.02	0.84	0.55
Maximum Daily Emissions	1.50	13.01	13.46	0.02	1.98	0.85
SJVAPCD Screening Thresholds	100	100	100	100	100	100
Threshold Exceeded?	No	No	No	No	No	No

Notes: Calculations completed in January 2021. See CalEEMod calculation assumptions in Appendix C.

Source: Planning Partners, 2021.

Maximum Annual Construction Related Greenhouse Gas Emissions

Maximum Annual Emissions by Year	GHG Emissions (metric tons CO _{2e} /yr)
2021 Construction Emissions Phase 1a	60.8
2022 Construction Emissions Phase 1b	114.8
2023 Construction Emissions Phase 2	132.7
Total Construction Emissions	308.3

Notes: Calculations completed in January 2021. See CalEEMod calculation assumptions in Appendix C.

Source: Planning Partners, 2021.

OPERATIONS RELATED EMISSIONS

VOC Emissions

Emission Source	Existing VOC/ ROG Emissions (tons/yr)	Proposed VOC/ROG Emissions (tons/yr)	Increment of Increase with Proposed Expansion
Traffic, Onsite Mobile Source, and Area Sources			0.603
Feed and Manure Management	12.00	20.72	8.73
	12.00	20.72	9.33

VOC emissions from traffic and area sources were estimated using CalEEMod Version 2016.3.2. VOC emissions from feed and manure management (including cow housing, liquid manure, and solid manure) were estimated using the SJVAPCD dairy emissions calculator. See Appendix C for calculator emissions and CalEEMod results.

PM 10 Emissions from Animal Movement

Emission	Existing Total Emissions (lbs/yr)	Proposed Total Emissions (lbs/yr)	Increment of Increase (tons/year)
Animal Movement	2,176	2,379	
Tons/Year	1.09	1.19	0.10

See Appendix C for calculator emissions.

PM 10 Emissions from Mobile Sources

Emissions	Increment of Increase (tons/ year)
Traffic & Onsite Mobile Source	0.0325
Tons/Year	0.0325

See Appendix C for CalEEMod results.

Greenhouse Gas Emission Rates for Electricity Use

eGrid State	Average Output Emission Rate (lb CO ₂ e/MWh)	Average Output Emission Rate (lb CO ₂ e/kWh)
California	422.029	0.422029

Source: eGRID2018. Released 1/28/2020. Accessed at: <<https://www.epa.gov/energy/emissions-generation-resource-integrated-database-eGRID>>

OPERATIONS RELATED EMISSIONS

GHG Emissions from Energy Consumption

	Herd Count	Average Electricity Use (kWh/yr)	GHG Emission Rate (lbs CO ₂ e/kWh)	GHG Emissions (lbs CO ₂ e/yr)	GHG Emissions (metric tons CO ₂ e/yr)
PG&E Electricity Use	1225	644,707	0.422029	272,085	123
Expansion Projection	2450	1,289,414	0.422029	544,170	247
Increment of Increase	1225	644,707	-	272,085	123

Electricity use provided by the project applicant. The Expansion Projection conservatively assumes the same electricity use per cow.

Source: eGRID2018. Released 1/28/2020. Accessed at: <<https://www.epa.gov/energy/emissions-generation-resource-integrated-database-eGRID>>

Total Greenhouse Gas Emissions

	Increased Herd (metric tons CO ₂ e/yr)	Increased Mobile Source (metric tons CO ₂ e/yr)	Increased Electricity (metric tons CO ₂ e/yr)	GHG Emissions (metric tons CO ₂ /yr)
Martins View Jersey Dairy Expansion	6,812	16	123	6,952

GHG emissions from traffic were estimated using CalEEMod Version 2016.3.2.

GHG emissions from the herd were estimated using the SJVAPCD dairy emissions calculator. See Appendix C for calculator emissions.

Conversion Factors	
1 megawatt-hour (MWh)	1,000 kilowatt-hour (kWh)
1 short ton	2,000 pounds (lb)
1.10231 short ton	1 metric ton
2.2046 lb	1 kilogram (kg)

“Remarks” for the Martins View Jersey Dairy Expansion Project CalEEMod (v.2016.3.2) Model Run

“Remarks” are typically used in California Emissions Estimator Model (CalEEMod) to explain non-default inputs. For the current modeling, this document replaces the “remarks” section of the referenced CalEEMod model to provide more space to both identify non-default inputs and to explain how CalEEMod is used to calculate emissions for the current project. When defaults were retained and no further explanation was necessary, no “remarks” are recorded below.

The proposed project construction emissions and increment of increase of operational emissions were estimated as set forth below.

Martins View Jersey Dairy Model Runs – Phase 1a Construction (2021), Phase 1b Construction (2022), and Phase 2 Construction (2023)

Land Use

- The General Light Industrial land use subtype was used to represent the dairy project, an industrial agriculture project. The proposed project would be constructed in several phases:
 - ⇒ Phase 1a would include new structures of 18,900 square feet of construction and removal of a 4,400-square-foot shade barn;
 - ⇒ Phase 1b would include new structures of 40,000 square feet of construction and removal of 9,600 square feet of structures; and
 - ⇒ Phase 2 would include new structures of 58,864 square feet of construction. There would be 4,100 cubic yards of fill imported.

Construction Phase

- The proposed dairy expansion would be constructed in several phases. The estimated schedule is as follows:
 - ⇒ Phase 1a would include 3 months of construction.
 - ⇒ Phase 1b would include 6 months construction.
 - ⇒ Phase 2 would include an estimated 6 months construction.
- Off-road Equipment - While there would likely be a small construction crew, most default equipment was used since construction details are unknown at this time. Anticipated construction equipment would include scrapers, water trucks, construction crew pickups, concrete trucks, material delivery trucks, and lifts.

Martins View Jersey Dairy Model Run – Operation (2024)

Land Use

- The General Light Industrial land use subtype was used to represent the dairy project, an industrial agriculture project. With implementation of the proposed dairy expansion, new structures would consist of approximately 117,764 square feet.

Vehicle Trips

- Since the residential dwellings would not change, these trips were not included in the model as an increment of increase. Animal Confinement Facilities operate 7 days a week. The proposed expanded operations would generate an increase of approximately 6.6 average daily trips (ADTs) (or 0.056 trips per 1,000 square feet).

Operational Off-Road Equipment

- The increase in the number of hours for bedding delivery and feed delivery was used based on estimates from the project applicant.

Area Sources, Energy Use, Water and Wastewater, Solid Waste

- These rates are not applicable to the Martins View Jersey Dairy, and were not included.

Martins View Construction Phase 1a - Merced County, Annual

Martins View Construction Phase 1a
Merced County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	18.90	1000sqft	0.43	18,900.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	49
Climate Zone	3			Operational Year	2022
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

Martins View Construction Phase 1a - Merced County, Annual

Project Characteristics -

Land Use -

Construction Phase - Estimated construction schedule 3 months

Off-road Equipment -

Grading - Area of construction

Demolition -

Vehicle Trips - Construction Run only

Area Coating - Construction Run Only

Landscape Equipment - Construction Run Only

Energy Use - Construction Run Only

Water And Wastewater - Construction Run Only

Operational Off-Road Equipment -

Fleet Mix -

Consumer Products - Construction Run Only

Solid Waste - Construction Run Only

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	0
tblAreaCoating	Area_EF_Nonresidential_Interior	150	0
tblAreaCoating	Area_EF_Parking	150	0
tblAreaCoating	Area_EF_Residential_Exterior	150	0
tblAreaCoating	Area_EF_Residential_Interior	150	0
tblAreaCoating	Area_Nonresidential_Exterior	9450	0
tblAreaCoating	Area_Nonresidential_Interior	28350	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	100.00	58.00
tblConstructionPhase	NumDays	10.00	3.00

Martins View Construction Phase 1a - Merced County, Annual

tblConstructionPhase	NumDays	2.00	4.00
tblConstructionPhase	NumDays	1.00	2.00
tblConstructionPhase	PhaseEndDate	11/4/2021	9/1/2021
tblConstructionPhase	PhaseEndDate	6/14/2021	6/3/2021
tblConstructionPhase	PhaseEndDate	6/17/2021	6/11/2021
tblConstructionPhase	PhaseEndDate	6/15/2021	6/7/2021
tblConstructionPhase	PhaseStartDate	6/18/2021	6/14/2021
tblConstructionPhase	PhaseStartDate	6/16/2021	6/8/2021
tblConstructionPhase	PhaseStartDate	6/15/2021	6/4/2021
tblEnergyUse	LightingElect	2.70	0.00
tblEnergyUse	NT24E	4.16	0.00
tblEnergyUse	NT24NG	3.84	0.00
tblEnergyUse	T24E	1.96	0.00
tblEnergyUse	T24NG	17.03	0.00
tblGrading	AcresOfGrading	0.00	0.43
tblGrading	AcresOfGrading	1.00	0.43
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	23.44	0.00
tblTripsAndVMT	HaulingTripNumber	20.00	0.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	IndoorWaterUseRate	4,370,625.00	0.00

2.0 Emissions Summary

Martins View Construction Phase 1a - Merced County, Annual

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

3.0 Construction Detail

Construction Phase

Martins View Construction Phase 1a - Merced County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2021	6/3/2021	5	3	
2	Site Preparation	Site Preparation	6/4/2021	6/7/2021	5	2	
3	Grading	Grading	6/8/2021	6/11/2021	5	4	
4	Building Construction	Building Construction	6/14/2021	9/1/2021	5	58	

Acres of Grading (Site Preparation Phase): 0.43

Acres of Grading (Grading Phase): 0.43

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

Martins View Construction Phase 1a - Merced County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Welders	1	8.00	46	0.45
Building Construction	Generator Sets	1	8.00	84	0.74
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	7	8.00	3.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Martins View Construction Phase 1a - Merced County, Annual

3.2 Demolition - 2021

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					2.1700e-003	0.0000	2.1700e-003	3.3000e-004	0.0000	3.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1900e-003	0.0109	0.0114	2.0000e-005		6.1000e-004	6.1000e-004		5.8000e-004	5.8000e-004	0.0000	1.5614	1.5614	2.9000e-004	0.0000	1.5687
Total	1.1900e-003	0.0109	0.0114	2.0000e-005	2.1700e-003	6.1000e-004	2.7800e-003	3.3000e-004	5.8000e-004	9.1000e-004	0.0000	1.5614	1.5614	2.9000e-004	0.0000	1.5687

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	9.0000e-005	6.0000e-005	6.6000e-004	0.0000	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1627	0.1627	0.0000	0.0000	0.1628
Total	9.0000e-005	6.0000e-005	6.6000e-004	0.0000	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1627	0.1627	0.0000	0.0000	0.1628

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3.2 Demolition - 2021

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					2.1700e-003	0.0000	2.1700e-003	3.3000e-004	0.0000	3.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1900e-003	0.0109	0.0114	2.0000e-005		6.1000e-004	6.1000e-004		5.8000e-004	5.8000e-004	0.0000	1.5614	1.5614	2.9000e-004	0.0000	1.5687
Total	1.1900e-003	0.0109	0.0114	2.0000e-005	2.1700e-003	6.1000e-004	2.7800e-003	3.3000e-004	5.8000e-004	9.1000e-004	0.0000	1.5614	1.5614	2.9000e-004	0.0000	1.5687

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	9.0000e-005	6.0000e-005	6.6000e-004	0.0000	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1627	0.1627	0.0000	0.0000	0.1628
Total	9.0000e-005	6.0000e-005	6.6000e-004	0.0000	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1627	0.1627	0.0000	0.0000	0.1628

Martins View Construction Phase 1a - Merced County, Annual

3.3 Site Preparation - 2021

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					2.3000e-004	0.0000	2.3000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4000e-004	7.8200e-003	4.0300e-003	1.0000e-005		3.0000e-004	3.0000e-004		2.8000e-004	2.8000e-004	0.0000	0.8551	0.8551	2.8000e-004	0.0000	0.8620
Total	6.4000e-004	7.8200e-003	4.0300e-003	1.0000e-005	2.3000e-004	3.0000e-004	5.3000e-004	2.0000e-005	2.8000e-004	3.0000e-004	0.0000	0.8551	0.8551	2.8000e-004	0.0000	0.8620

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	3.0000e-005	2.0000e-005	2.2000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0542	0.0542	0.0000	0.0000	0.0543
Total	3.0000e-005	2.0000e-005	2.2000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0542	0.0542	0.0000	0.0000	0.0543

Martins View Construction Phase 1a - Merced County, Annual

3.3 Site Preparation - 2021

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					2.3000e-004	0.0000	2.3000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4000e-004	7.8200e-003	4.0300e-003	1.0000e-005		3.0000e-004	3.0000e-004		2.8000e-004	2.8000e-004	0.0000	0.8551	0.8551	2.8000e-004	0.0000	0.8620
Total	6.4000e-004	7.8200e-003	4.0300e-003	1.0000e-005	2.3000e-004	3.0000e-004	5.3000e-004	2.0000e-005	2.8000e-004	3.0000e-004	0.0000	0.8551	0.8551	2.8000e-004	0.0000	0.8620

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	3.0000e-005	2.0000e-005	2.2000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0542	0.0542	0.0000	0.0000	0.0543
Total	3.0000e-005	2.0000e-005	2.2000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0542	0.0542	0.0000	0.0000	0.0543

Martins View Construction Phase 1a - Merced County, Annual

3.4 Grading - 2021

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					1.7300e-003	0.0000	1.7300e-003	8.5000e-004	0.0000	8.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5900e-003	0.0145	0.0151	2.0000e-005		8.1000e-004	8.1000e-004		7.8000e-004	7.8000e-004	0.0000	2.0819	2.0819	3.9000e-004	0.0000	2.0916
Total	1.5900e-003	0.0145	0.0151	2.0000e-005	1.7300e-003	8.1000e-004	2.5400e-003	8.5000e-004	7.8000e-004	1.6300e-003	0.0000	2.0819	2.0819	3.9000e-004	0.0000	2.0916

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	1.2000e-004	9.0000e-005	8.8000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2169	0.2169	1.0000e-005	0.0000	0.2171
Total	1.2000e-004	9.0000e-005	8.8000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2169	0.2169	1.0000e-005	0.0000	0.2171

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3.4 Grading - 2021

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					1.7300e-003	0.0000	1.7300e-003	8.5000e-004	0.0000	8.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5900e-003	0.0145	0.0151	2.0000e-005		8.1000e-004	8.1000e-004		7.8000e-004	7.8000e-004	0.0000	2.0819	2.0819	3.9000e-004	0.0000	2.0916
Total	1.5900e-003	0.0145	0.0151	2.0000e-005	1.7300e-003	8.1000e-004	2.5400e-003	8.5000e-004	7.8000e-004	1.6300e-003	0.0000	2.0819	2.0819	3.9000e-004	0.0000	2.0916

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	1.2000e-004	9.0000e-005	8.8000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2169	0.2169	1.0000e-005	0.0000	0.2171
Total	1.2000e-004	9.0000e-005	8.8000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2169	0.2169	1.0000e-005	0.0000	0.2171

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3.5 Building Construction - 2021

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	0.0416	0.3671	0.3674	6.0000e-004		0.0200	0.0200		0.0190	0.0190	0.0000	50.8732	50.8732	0.0109	0.0000	51.1466
Total	0.0416	0.3671	0.3674	6.0000e-004		0.0200	0.0200		0.0190	0.0190	0.0000	50.8732	50.8732	0.0109	0.0000	51.1466

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	2.9000e-004	9.2700e-003	1.9200e-003	2.0000e-005	5.2000e-004	3.0000e-005	5.5000e-004	1.5000e-004	3.0000e-005	1.8000e-004	0.0000	2.1761	2.1761	2.3000e-004	0.0000	2.1817
Worker	1.3400e-003	9.9000e-004	0.0102	3.0000e-005	2.8800e-003	2.0000e-005	2.9000e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.5163	2.5163	7.0000e-005	0.0000	2.5182
Total	1.6300e-003	0.0103	0.0122	5.0000e-005	3.4000e-003	5.0000e-005	3.4500e-003	9.1000e-004	5.0000e-005	9.6000e-004	0.0000	4.6924	4.6924	3.0000e-004	0.0000	4.6999

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3.5 Building Construction - 2021

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	0.0416	0.3671	0.3674	6.0000e-004		0.0200	0.0200		0.0190	0.0190	0.0000	50.8732	50.8732	0.0109	0.0000	51.1465
Total	0.0416	0.3671	0.3674	6.0000e-004		0.0200	0.0200		0.0190	0.0190	0.0000	50.8732	50.8732	0.0109	0.0000	51.1465

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	2.9000e-004	9.2700e-003	1.9200e-003	2.0000e-005	5.2000e-004	3.0000e-005	5.5000e-004	1.5000e-004	3.0000e-005	1.8000e-004	0.0000	2.1761	2.1761	2.3000e-004	0.0000	2.1817
Worker	1.3400e-003	9.9000e-004	0.0102	3.0000e-005	2.8800e-003	2.0000e-005	2.9000e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.5163	2.5163	7.0000e-005	0.0000	2.5182
Total	1.6300e-003	0.0103	0.0122	5.0000e-005	3.4000e-003	5.0000e-005	3.4500e-003	9.1000e-004	5.0000e-005	9.6000e-004	0.0000	4.6924	4.6924	3.0000e-004	0.0000	4.6999

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

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
General Light Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.498498	0.030090	0.155509	0.109662	0.018147	0.004601	0.015536	0.154991	0.002397	0.002156	0.006230	0.001554	0.000628

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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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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	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			
General Light Industry	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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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
Total	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

7.0 Water Detail

7.1 Mitigation Measures Water

	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

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7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	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

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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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	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
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

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Martins View Construction Phase 1b - Merced County, Annual

Martins View Construction Phase 1b
Merced County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	40.00	1000sqft	0.92	40,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	49
Climate Zone	3			Operational Year	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Martins View Construction Phase 1b - Merced County, Annual

Project Characteristics -

Land Use -

Construction Phase - Estimated Construction Schedule of 6 months

Off-road Equipment -

Grading - Estimated project area

Demolition -

Vehicle Trips - Construction Model Only

Consumer Products - Construction Model Only

Area Coating - Construction Model Only

Landscape Equipment - Construction Model Only

Energy Use - Construction Model Only

Water And Wastewater - Construction Model Only

Solid Waste - Construction Model Only

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Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	20000	0
tblAreaCoating	Area_Nonresidential_Interior	60000	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblEnergyUse	LightingElect	2.70	0.00
tblEnergyUse	NT24E	4.16	0.00
tblEnergyUse	NT24NG	3.84	0.00
tblEnergyUse	T24E	1.96	0.00
tblEnergyUse	T24NG	17.03	0.00
tblGrading	AcresOfGrading	0.00	0.92
tblGrading	AcresOfGrading	2.00	0.92
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	49.60	0.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	IndoorWaterUseRate	9,250,000.00	0.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-3-2022	4-2-2022	0.4035	0.4035
2	4-3-2022	7-2-2022	0.3253	0.3253
		Highest	0.4035	0.4035

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	0.1563	0.0000	3.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.1000e-004	7.1000e-004	0.0000	0.0000	7.6000e-004
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	0.1563	0.0000	3.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	7.1000e-004	7.1000e-004	0.0000	0.0000	7.6000e-004

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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	0.1563	0.0000	3.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.1000e-004	7.1000e-004	0.0000	0.0000	7.6000e-004
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	0.1563	0.0000	3.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	7.1000e-004	7.1000e-004	0.0000	0.0000	7.6000e-004

	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	Demolition	Demolition	1/3/2022	1/14/2022	5	10	
2	Site Preparation	Site Preparation	1/15/2022	1/17/2022	5	1	
3	Grading	Grading	1/18/2022	1/19/2022	5	2	
4	Building Construction	Building Construction	1/20/2022	6/8/2022	5	100	

Acres of Grading (Site Preparation Phase): 0.92

Acres of Grading (Grading Phase): 0.92

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

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Welders	1	8.00	46	0.45
Building Construction	Generator Sets	1	8.00	84	0.74
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	7	17.00	7.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	10.00	0.00	44.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	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 Demolition - 2022

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					4.7200e-003	0.0000	4.7200e-003	7.2000e-004	0.0000	7.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5500e-003	0.0321	0.0374	6.0000e-005		1.6900e-003	1.6900e-003		1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308
Total	3.5500e-003	0.0321	0.0374	6.0000e-005	4.7200e-003	1.6900e-003	6.4100e-003	7.2000e-004	1.6100e-003	2.3300e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6000e-004	5.1700e-003	8.3000e-004	2.0000e-005	3.8000e-004	2.0000e-005	3.9000e-004	1.0000e-004	1.0000e-005	1.2000e-004	0.0000	1.6351	1.6351	1.1000e-004	0.0000	1.6379
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	2.7000e-004	1.9000e-004	2.0100e-003	1.0000e-005	6.2000e-004	0.0000	6.2000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5229	0.5229	1.0000e-005	0.0000	0.5232
Total	4.3000e-004	5.3600e-003	2.8400e-003	3.0000e-005	1.0000e-003	2.0000e-005	1.0100e-003	2.6000e-004	1.0000e-005	2.9000e-004	0.0000	2.1580	2.1580	1.2000e-004	0.0000	2.1611

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3.2 Demolition - 2022

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					4.7200e-003	0.0000	4.7200e-003	7.2000e-004	0.0000	7.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.5500e-003	0.0321	0.0374	6.0000e-005		1.6900e-003	1.6900e-003		1.6100e-003	1.6100e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308
Total	3.5500e-003	0.0321	0.0374	6.0000e-005	4.7200e-003	1.6900e-003	6.4100e-003	7.2000e-004	1.6100e-003	2.3300e-003	0.0000	5.2068	5.2068	9.6000e-004	0.0000	5.2308

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	1.6000e-004	5.1700e-003	8.3000e-004	2.0000e-005	3.8000e-004	2.0000e-005	3.9000e-004	1.0000e-004	1.0000e-005	1.2000e-004	0.0000	1.6351	1.6351	1.1000e-004	0.0000	1.6379
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	2.7000e-004	1.9000e-004	2.0100e-003	1.0000e-005	6.2000e-004	0.0000	6.2000e-004	1.6000e-004	0.0000	1.7000e-004	0.0000	0.5229	0.5229	1.0000e-005	0.0000	0.5232
Total	4.3000e-004	5.3600e-003	2.8400e-003	3.0000e-005	1.0000e-003	2.0000e-005	1.0100e-003	2.6000e-004	1.0000e-005	2.9000e-004	0.0000	2.1580	2.1580	1.2000e-004	0.0000	2.1611

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3.3 Site Preparation - 2022

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					4.9000e-004	0.0000	4.9000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9000e-004	3.4700e-003	1.9800e-003	0.0000		1.3000e-004	1.3000e-004		1.2000e-004	1.2000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310
Total	2.9000e-004	3.4700e-003	1.9800e-003	0.0000	4.9000e-004	1.3000e-004	6.2000e-004	5.0000e-005	1.2000e-004	1.7000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310

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	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0261	0.0261	0.0000	0.0000	0.0262
Total	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0261	0.0261	0.0000	0.0000	0.0262

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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					4.9000e-004	0.0000	4.9000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9000e-004	3.4700e-003	1.9800e-003	0.0000		1.3000e-004	1.3000e-004		1.2000e-004	1.2000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310
Total	2.9000e-004	3.4700e-003	1.9800e-003	0.0000	4.9000e-004	1.3000e-004	6.2000e-004	5.0000e-005	1.2000e-004	1.7000e-004	0.0000	0.4275	0.4275	1.4000e-004	0.0000	0.4310

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	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0261	0.0261	0.0000	0.0000	0.0262
Total	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0261	0.0261	0.0000	0.0000	0.0262

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3.4 Grading - 2022

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					3.5000e-003	0.0000	3.5000e-003	1.7100e-003	0.0000	1.7100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1000e-004	6.4100e-003	7.4700e-003	1.0000e-005		3.4000e-004	3.4000e-004		3.2000e-004	3.2000e-004	0.0000	1.0414	1.0414	1.9000e-004	0.0000	1.0462
Total	7.1000e-004	6.4100e-003	7.4700e-003	1.0000e-005	3.5000e-003	3.4000e-004	3.8400e-003	1.7100e-003	3.2000e-004	2.0300e-003	0.0000	1.0414	1.0414	1.9000e-004	0.0000	1.0462

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	5.0000e-005	4.0000e-005	4.0000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1046	0.1046	0.0000	0.0000	0.1046
Total	5.0000e-005	4.0000e-005	4.0000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1046	0.1046	0.0000	0.0000	0.1046

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3.4 Grading - 2022

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					3.5000e-003	0.0000	3.5000e-003	1.7100e-003	0.0000	1.7100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1000e-004	6.4100e-003	7.4700e-003	1.0000e-005		3.4000e-004	3.4000e-004		3.2000e-004	3.2000e-004	0.0000	1.0414	1.0414	1.9000e-004	0.0000	1.0462
Total	7.1000e-004	6.4100e-003	7.4700e-003	1.0000e-005	3.5000e-003	3.4000e-004	3.8400e-003	1.7100e-003	3.2000e-004	2.0300e-003	0.0000	1.0414	1.0414	1.9000e-004	0.0000	1.0462

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	5.0000e-005	4.0000e-005	4.0000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1046	0.1046	0.0000	0.0000	0.1046
Total	5.0000e-005	4.0000e-005	4.0000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1046	0.1046	0.0000	0.0000	0.1046

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3.5 Building Construction - 2022

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	0.0647	0.5709	0.6262	1.0300e-003		0.0291	0.0291		0.0277	0.0277	0.0000	87.7453	87.7453	0.0187	0.0000	88.2118
Total	0.0647	0.5709	0.6262	1.0300e-003		0.0291	0.0291		0.0277	0.0277	0.0000	87.7453	87.7453	0.0187	0.0000	88.2118

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	1.0700e-003	0.0354	6.9900e-003	9.0000e-005	2.1000e-003	9.0000e-005	2.1900e-003	6.1000e-004	9.0000e-005	7.0000e-004	0.0000	8.6730	8.6730	8.8000e-004	0.0000	8.6950
Worker	4.5500e-003	3.2300e-003	0.0341	1.0000e-004	0.0105	7.0000e-005	0.0106	2.8000e-003	7.0000e-005	2.8700e-003	0.0000	8.8887	8.8887	2.4000e-004	0.0000	8.8948
Total	5.6200e-003	0.0386	0.0411	1.9000e-004	0.0126	1.6000e-004	0.0128	3.4100e-003	1.6000e-004	3.5700e-003	0.0000	17.5617	17.5617	1.1200e-003	0.0000	17.5898

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3.5 Building Construction - 2022

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	0.0647	0.5709	0.6262	1.0300e-003		0.0291	0.0291		0.0277	0.0277	0.0000	87.7451	87.7451	0.0187	0.0000	88.2117
Total	0.0647	0.5709	0.6262	1.0300e-003		0.0291	0.0291		0.0277	0.0277	0.0000	87.7451	87.7451	0.0187	0.0000	88.2117

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	1.0700e-003	0.0354	6.9900e-003	9.0000e-005	2.1000e-003	9.0000e-005	2.1900e-003	6.1000e-004	9.0000e-005	7.0000e-004	0.0000	8.6730	8.6730	8.8000e-004	0.0000	8.6950
Worker	4.5500e-003	3.2300e-003	0.0341	1.0000e-004	0.0105	7.0000e-005	0.0106	2.8000e-003	7.0000e-005	2.8700e-003	0.0000	8.8887	8.8887	2.4000e-004	0.0000	8.8948
Total	5.6200e-003	0.0386	0.0411	1.9000e-004	0.0126	1.6000e-004	0.0128	3.4100e-003	1.6000e-004	3.5700e-003	0.0000	17.5617	17.5617	1.1200e-003	0.0000	17.5898

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

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
General Light Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.504505	0.029429	0.155974	0.104791	0.016717	0.004370	0.015463	0.156066	0.002403	0.002061	0.006105	0.001524	0.000591

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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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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	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			
General Light Industry	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	0.1563	0.0000	3.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.1000e-004	7.1000e-004	0.0000	0.0000	7.6000e-004
Unmitigated	0.1563	0.0000	3.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.1000e-004	7.1000e-004	0.0000	0.0000	7.6000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	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	0.1562					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.1000e-004	7.1000e-004	0.0000	0.0000	7.6000e-004
Total	0.1563	0.0000	3.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.1000e-004	7.1000e-004	0.0000	0.0000	7.6000e-004

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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	0.1562					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.1000e-004	7.1000e-004	0.0000	0.0000	7.6000e-004
Total	0.1563	0.0000	3.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.1000e-004	7.1000e-004	0.0000	0.0000	7.6000e-004

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			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	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			
General Light Industry	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			
General Light Industry	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

Martins View Construction Phase 2 - Merced County, Annual

Martins View Construction Phase 2
Merced County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	58.86	1000sqft	1.35	58,860.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	49
Climate Zone	3			Operational Year	2024
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

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Project Characteristics -

Land Use -

Construction Phase - Estimated Construction Schedule of 6 months

Off-road Equipment -

Grading - Estimated project area

Demolition -

Vehicle Trips - Construction Model Only

Consumer Products - Construction Model Only

Area Coating - Construction Model Only

Landscape Equipment - Construction Model Only

Energy Use - Construction Model Only

Water And Wastewater - Construction Model Only

Solid Waste - Construction Model Only

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	20000	0
tblAreaCoating	Area_Nonresidential_Interior	60000	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	200.00	120.00
tblConstructionPhase	NumDays	4.00	8.00
tblConstructionPhase	NumDays	2.00	4.00
tblConstructionPhase	PhaseEndDate	11/6/2023	12/1/2023
tblConstructionPhase	PhaseEndDate	6/19/2023	6/16/2023
tblConstructionPhase	PhaseEndDate	6/15/2023	6/6/2023
tblConstructionPhase	PhaseStartDate	6/20/2023	6/19/2023
tblConstructionPhase	PhaseStartDate	6/16/2023	6/7/2023
tblConstructionPhase	PhaseStartDate	6/15/2023	6/1/2023

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tblEnergyUse	LightingElect	2.70	0.00
tblEnergyUse	NT24E	4.16	0.00
tblEnergyUse	NT24NG	3.84	0.00
tblEnergyUse	T24E	1.96	0.00
tblEnergyUse	T24NG	17.03	0.00
tblGrading	AcresOfGrading	0.00	1.35
tblGrading	AcresOfGrading	0.50	1.35
tblGrading	MaterialImported	0.00	4,100.00
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	49.60	0.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	IndoorWaterUseRate	9,250,000.00	0.00

2.0 Emissions Summary

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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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

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	6/1/2023	6/6/2023	5	4	
2	Grading	Grading	6/7/2023	6/16/2023	5	8	
3	Building Construction	Building Construction	6/19/2023	12/1/2023	5	120	

Martins View Construction Phase 2 - Merced County, Annual

Acres of Grading (Site Preparation Phase): 1.35

Acres of Grading (Grading Phase): 1.35

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
Building Construction	Welders	1	8.00	46	0.45
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	7	17.00	7.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	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 - 2023

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					7.2000e-004	0.0000	7.2000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0700e-003	0.0124	7.8500e-003	2.0000e-005		4.5000e-004	4.5000e-004		4.2000e-004	4.2000e-004	0.0000	1.7099	1.7099	5.5000e-004	0.0000	1.7237
Total	1.0700e-003	0.0124	7.8500e-003	2.0000e-005	7.2000e-004	4.5000e-004	1.1700e-003	8.0000e-005	4.2000e-004	5.0000e-004	0.0000	1.7099	1.7099	5.5000e-004	0.0000	1.7237

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	5.0000e-005	3.0000e-005	3.6000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1006	0.1006	0.0000	0.0000	0.1007
Total	5.0000e-005	3.0000e-005	3.6000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1006	0.1006	0.0000	0.0000	0.1007

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3.2 Site Preparation - 2023

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					7.2000e-004	0.0000	7.2000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0700e-003	0.0124	7.8500e-003	2.0000e-005		4.5000e-004	4.5000e-004		4.2000e-004	4.2000e-004	0.0000	1.7099	1.7099	5.5000e-004	0.0000	1.7237
Total	1.0700e-003	0.0124	7.8500e-003	2.0000e-005	7.2000e-004	4.5000e-004	1.1700e-003	8.0000e-005	4.2000e-004	5.0000e-004	0.0000	1.7099	1.7099	5.5000e-004	0.0000	1.7237

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	5.0000e-005	3.0000e-005	3.6000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1006	0.1006	0.0000	0.0000	0.1007
Total	5.0000e-005	3.0000e-005	3.6000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1006	0.1006	0.0000	0.0000	0.1007

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3.3 Grading - 2023

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					1.7000e-003	0.0000	1.7000e-003	5.3000e-004	0.0000	5.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5900e-003	0.0231	0.0296	5.0000e-005		1.1300e-003	1.1300e-003		1.0800e-003	1.0800e-003	0.0000	4.1673	4.1673	7.6000e-004	0.0000	4.1862
Total	2.5900e-003	0.0231	0.0296	5.0000e-005	1.7000e-003	1.1300e-003	2.8300e-003	5.3000e-004	1.0800e-003	1.6100e-003	0.0000	4.1673	4.1673	7.6000e-004	0.0000	4.1862

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	2.0000e-004	1.4000e-004	1.4600e-003	0.0000	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4026	0.4026	1.0000e-005	0.0000	0.4028
Total	2.0000e-004	1.4000e-004	1.4600e-003	0.0000	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4026	0.4026	1.0000e-005	0.0000	0.4028

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3.3 Grading - 2023

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					1.7000e-003	0.0000	1.7000e-003	5.3000e-004	0.0000	5.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5900e-003	0.0231	0.0296	5.0000e-005		1.1300e-003	1.1300e-003		1.0800e-003	1.0800e-003	0.0000	4.1673	4.1673	7.6000e-004	0.0000	4.1862
Total	2.5900e-003	0.0231	0.0296	5.0000e-005	1.7000e-003	1.1300e-003	2.8300e-003	5.3000e-004	1.0800e-003	1.6100e-003	0.0000	4.1673	4.1673	7.6000e-004	0.0000	4.1862

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	2.0000e-004	1.4000e-004	1.4600e-003	0.0000	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4026	0.4026	1.0000e-005	0.0000	0.4028
Total	2.0000e-004	1.4000e-004	1.4600e-003	0.0000	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4026	0.4026	1.0000e-005	0.0000	0.4028

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3.4 Building Construction - 2023

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	0.0716	0.6333	0.7467	1.2300e-003		0.0302	0.0302		0.0287	0.0287	0.0000	105.3307	105.3307	0.0222	0.0000	105.8850
Total	0.0716	0.6333	0.7467	1.2300e-003		0.0302	0.0302		0.0287	0.0287	0.0000	105.3307	105.3307	0.0222	0.0000	105.8850

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	8.9000e-004	0.0329	6.8100e-003	1.1000e-004	2.5100e-003	3.0000e-005	2.5500e-003	7.3000e-004	3.0000e-005	7.6000e-004	0.0000	10.1614	10.1614	7.3000e-004	0.0000	10.1796
Worker	5.0500e-003	3.4600e-003	0.0372	1.1000e-004	0.0127	9.0000e-005	0.0127	3.3600e-003	8.0000e-005	3.4400e-003	0.0000	10.2651	10.2651	2.6000e-004	0.0000	10.2716
Total	5.9400e-003	0.0364	0.0440	2.2000e-004	0.0152	1.2000e-004	0.0153	4.0900e-003	1.1000e-004	4.2000e-003	0.0000	20.4265	20.4265	9.9000e-004	0.0000	20.4512

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3.4 Building Construction - 2023

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	0.0716	0.6333	0.7467	1.2300e-003		0.0302	0.0302		0.0287	0.0287	0.0000	105.3306	105.3306	0.0222	0.0000	105.8849
Total	0.0716	0.6333	0.7467	1.2300e-003		0.0302	0.0302		0.0287	0.0287	0.0000	105.3306	105.3306	0.0222	0.0000	105.8849

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	8.9000e-004	0.0329	6.8100e-003	1.1000e-004	2.5100e-003	3.0000e-005	2.5500e-003	7.3000e-004	3.0000e-005	7.6000e-004	0.0000	10.1614	10.1614	7.3000e-004	0.0000	10.1796
Worker	5.0500e-003	3.4600e-003	0.0372	1.1000e-004	0.0127	9.0000e-005	0.0127	3.3600e-003	8.0000e-005	3.4400e-003	0.0000	10.2651	10.2651	2.6000e-004	0.0000	10.2716
Total	5.9400e-003	0.0364	0.0440	2.2000e-004	0.0152	1.2000e-004	0.0153	4.0900e-003	1.1000e-004	4.2000e-003	0.0000	20.4265	20.4265	9.9000e-004	0.0000	20.4512

4.0 Operational Detail - Mobile

Martins View Construction Phase 2 - Merced County, Annual

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

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
General Light Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.504505	0.029429	0.155974	0.104791	0.016717	0.004370	0.015463	0.156066	0.002403	0.002061	0.006105	0.001524	0.000591

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5.3 Energy by Land Use - Electricity

Unmitigated

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

Martins View Construction Phase 2 - Merced County, Annual

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

7.0 Water Detail

7.1 Mitigation Measures Water

	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

Martins View Construction Phase 2 - Merced County, Annual

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	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

Martins View Construction Phase 2 - Merced County, Annual

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Martins View Construction Phase 2 - Merced County, Annual

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	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

Martins View Construction Phase 2 - Merced County, Annual

Martins View Jersey Dairy Expansion - Operation - Merced County, Annual

**Martins View Jersey Dairy Expansion - Operation
Merced County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	117.76	1000sqft	2.70	117,764.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	49
Climate Zone	3			Operational Year	2024
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

Martins View Jersey Dairy Expansion - Operation - Merced County, Annual

Project Characteristics -

Land Use -

Construction Phase - Operation model only

Demolition -

Vehicle Trips - Revised to reflect project-specific ADT

Landscape Equipment - Not applicable

Energy Use - No applicable

Water And Wastewater - Not applicable

Solid Waste - No applicable

Operational Off-Road Equipment - Increase in hours per day provided by the project applicant

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	0.00
tblConstructionPhase	PhaseEndDate	1/12/2023	12/29/2022
tblEnergyUse	LightingElect	2.70	0.00
tblEnergyUse	NT24E	4.16	0.00
tblEnergyUse	NT24NG	3.84	0.00
tblEnergyUse	T24E	1.96	0.00
tblEnergyUse	T24NG	17.03	0.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	365.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	365.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	2.00
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	1.00
tblOperationalOffRoadEquipment	OperHorsePower	97.00	730.00
tblOperationalOffRoadEquipment	OperHorsePower	97.00	500.00
tblOperationalOffRoadEquipment	OperHorsePower	97.00	202.00
tblOperationalOffRoadEquipment	OperHorsePower	97.00	200.00

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tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	2.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	1.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	7.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	7.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	146.02	0.00
tblVehicleTrips	ST_TR	1.32	0.06
tblVehicleTrips	SU_TR	0.68	0.06
tblVehicleTrips	WD_TR	6.97	0.06
tblWater	IndoorWaterUseRate	27,232,000.00	0.00

2.0 Emissions Summary

Martins View Jersey Dairy Expansion - Operation - Merced County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

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	0.5418					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	2.6300e-003	0.0296	0.0298	1.8000e-004	0.0105	1.0000e-004	0.0106	2.8100e-003	1.0000e-004	2.9100e-003	0.0000	16.3510	16.3510	9.7000e-004	0.0000	16.3754
Offroad	0.0595	0.5707	0.3819	1.4200e-003		0.0220	0.0220		0.0202	0.0202	0.0000	124.4860	124.4860	0.0403	0.0000	125.4925
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	0.6039	0.6003	0.4117	1.6000e-003	0.0105	0.0221	0.0325	2.8100e-003	0.0203	0.0231	0.0000	140.8370	140.8370	0.0412	0.0000	141.8679

Martins View Jersey Dairy Expansion - Operation - Merced County, Annual

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	0.5418					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	2.6300e-003	0.0296	0.0298	1.8000e-004	0.0105	1.0000e-004	0.0106	2.8100e-003	1.0000e-004	2.9100e-003	0.0000	16.3510	16.3510	9.7000e-004	0.0000	16.3754
Offroad	0.0595	0.5707	0.3819	1.4200e-003		0.0220	0.0220		0.0202	0.0202	0.0000	124.4860	124.4860	0.0403	0.0000	125.4925
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	0.6039	0.6003	0.4117	1.6000e-003	0.0105	0.0221	0.0325	2.8100e-003	0.0203	0.0231	0.0000	140.8370	140.8370	0.0412	0.0000	141.8679

	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	Architectural Coating	Architectural Coating	12/30/2022	12/29/2022	5	0	

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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: 176,646; Non-Residential Outdoor: 58,882; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Architectural Coating	1	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Martins View Jersey Dairy Expansion - Operation - Merced County, Annual

3.2 Architectural Coating - 2022

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

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

Martins View Jersey Dairy Expansion - Operation - Merced County, Annual

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	2.6300e-003	0.0296	0.0298	1.8000e-004	0.0105	1.0000e-004	0.0106	2.8100e-003	1.0000e-004	2.9100e-003	0.0000	16.3510	16.3510	9.7000e-004	0.0000	16.3754
Unmitigated	2.6300e-003	0.0296	0.0298	1.8000e-004	0.0105	1.0000e-004	0.0106	2.8100e-003	1.0000e-004	2.9100e-003	0.0000	16.3510	16.3510	9.7000e-004	0.0000	16.3754

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	7.07	7.07	7.07	27,298	27,298
Total	7.07	7.07	7.07	27,298	27,298

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
General Light Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.510644	0.028911	0.156693	0.100614	0.015429	0.004164	0.015358	0.155771	0.002390	0.001975	0.005996	0.001496	0.000559

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	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			
General Light Industry	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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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	0.0819					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4599					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.5418					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

7.0 Water Detail

7.1 Mitigation Measures Water

	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

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7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	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

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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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Martins View Jersey Dairy Expansion - Operation - Merced County, Annual

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	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
Tractors/Loaders/Backhoes	1	2.00	365	730	0.37	Diesel
Tractors/Loaders/Backhoes	1	1.00	365	500	0.37	Diesel
Tractors/Loaders/Backhoes	1	7.00	2	202	0.37	Diesel
Tractors/Loaders/Backhoes	1	7.00	1	200	0.37	Diesel

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UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Tractors/Loaders/Backhoes	0.0595	0.5707	0.3819	1.4200e-003		0.0220	0.0220		0.0202	0.0202	0.0000	124.4860	124.4860	0.0403	0.0000	125.4925
Total	0.0595	0.5707	0.3819	1.4200e-003		0.0220	0.0220		0.0202	0.0202	0.0000	124.4860	124.4860	0.0403	0.0000	125.4925

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Pre-Project Facility Information

- Does this facility house Holstein or Jersey cows?
Most facilities house Holstein cows unless explicitly stated on the PTO or application.
- Does the facility have an anaerobic treatment lagoon?
- Does the facility land apply liquid manure?
Answering "yes" assumes worst case.
- Does the facility land apply solid manure?
Answering "yes" assumes worst case.
- Is any scraped manure sent to a lagoon/storage pond?
Answering "yes" assumes worst case.

Pre-Project Herd Size							
Herd	Flushed Freestalls	Scraped Freestalls	Flushed Corrals	Scraped Corrals	Total # of Animals		
Milk Cows	615				615		
Dry Cows	10			65	75		
Support Stock (Heifers, Calves, and Bulls)	500			35	535		
Large Heifers					0		
Medium Heifers					0		
Small Heifers					0		
Bulls					0		
	Calf Hutches				Calf Corrals		Total # of Calves
	Aboveground Flushed	Aboveground Scraped	On-Ground Flushed	On-Ground Scraped	Flushed	Scraped	
Calves							0

Total Herd Summary	
Total Milk Cows	615
Total Mature Cows	690
Support Stock (Heifers, Calves, and Bulls)	535
Total Calves	0
Total Dairy Head	1,225

Pre-Project Silage Information			
Feed Type	Max # Open Piles	Max Height (ft)	Max Width (ft)
Corn	1	10	10
Alfalfa			
Wheat	1	6	10

Post-Project Facility Information

- Does this facility house Holstein or Jersey cows?
Most facilities house Holstein cows unless explicitly stated on the PTO or application.
- Does the facility have an anaerobic treatment lagoon?
- Does the facility land apply liquid manure?
Answering "yes" assumes worst case.
- Does the facility land apply solid manure?
Answering "yes" assumes worst case.
- Is any scraped manure sent to a lagoon/storage pond?
Answering "yes" assumes worst case.
- Does this project result in an increase or relocation of uncovered surface area for any lagoon/storage pond?

Post-Project Herd Size							
Herd	Flushed Freestalls	Scraped Freestalls	Flushed Corrals	Scraped Corrals	Total # of Animals		
Milk Cows	1,500				1,500		
Dry Cows	200			75	275		
Support Stock (Heifers, Calves, and Bulls)	650			25	675		
Large Heifers					0		
Medium Heifers					0		
Small Heifers					0		
Bulls					0		
	Calf Hutches				Calf Corrals		Total # of Calves
	Aboveground Flushed	Aboveground Scraped	On-Ground Flushed	On-Ground Scraped	Flushed	Scraped	
Calves							0

Total Herd Summary	
Total Milk Cows	1,500
Total Mature Cows	1,775
Support Stock (Heifers, Calves, and Bulls)	675
Total Calves	0
Total Dairy Head	2,450

Post-Project Silage Information			
Feed Type	Max # Open Piles	Max Height (ft)	Max Width (ft)
Corn	1	10	10
Alfalfa			
Wheat	1	6	10

Pre-Project Potential to Emit (PE1)

Pre-Project Herd Size							
Herd	Flushed Freestalls	Scraped Freestalls	Flushed Corrals	Scraped Corrals	Total # of Animals		
Milk Cows	615	0	0	0	615		
Dry Cows	10	0	0	65	75		
Support Stock (Heifers, Calves and Bulls)	500	0	0	35	535		
Large Heifers	0	0	0	0	0		
Medium Heifers	0	0	0	0	0		
Small Heifers	0	0	0	0	0		
Bulls	0	0	0	0	0		
	Calf Hutches				Calf Corrals		Total # of Calves
	Aboveground Flushed	Aboveground Scraped	On-Ground Flushed	On-Ground Scraped	Flushed	Scraped	
Calves	0	0	0	0	0	0	0

Silage Information				
Feed Type	Maximum # Open Piles	Maximum Height (ft)	Maximum Width (ft)	Open Face Area (ft ²)
Corn	1	10	10	89
Alfalfa	0	0	0	
Wheat	1	6	10	52

Milking Parlor				
Cow	VOC		NH3	
	lb/day	lb/yr	lb/day	lb/yr
Milk Cows	0.5	185	0.2	62

Cow Housing						
Cow	VOC		NH3		PM10	
	lb/day	lb/yr	lb/day	lb/yr	lb/day	lb/yr
Total	24.5	8,947	59.3	21,623	6.1	2,176

Liquid Manure Handling						
Cow	VOC		NH3		H2S*	
	lb/day	lb/yr	lb/day	lb/yr	lb/day	lb/yr
Milk Cows	3.4	1,242	14.7	5,375	1.7	629
Dry Cows	0.2	82	0.9	334	0.1	43
Support Stock (Heifers, Calves and Bulls)	1.2	455	3.4	1,231	0.2	73
Large Heifers	0.0	0	0.0	0	0	0
Medium Heifers	0.0	0	0.0	0	0	0
Small Heifers	0.0	0	0.0	0	0	0
Calves	0.0	0	0.0	0	0	0
Bulls	0.0	0	0.0	0	0	0
Total	4.8	1,779	19.0	6,939	2	745

Solid Manure Handling				
Cow	VOC		NH3	
	lb/day	lb/yr	lb/day	lb/yr
Milk Cows	0.7	240	3.4	1,236
Dry Cows	0.0	16	0.2	77
Support Stock (Heifers, Calves and Bulls)	0.2	86	0.8	284
Large Heifers	0.0	0	0.0	0
Medium Heifers	0.0	0	0.0	0
Small Heifers	0.0	0	0.0	0
Calves	0.0	0	0.0	0
Bulls	0.0	0	0.0	0
Total	0.9	341	4.4	1,596

Feed Handling and Storage		
	Daily PE (lb-VOC/day)	Annual PE (lb-VOC/yr)
Corn Emissions	0.9	332
Alfalfa Emissions	0.0	0
Wheat Emissions	0.7	243
TMR	33.3	12,169
Total	34.9	12,744

Total Daily Pre-Project Potential to Emit (lb/day)							
Permit	NOx	SOx	PM10	CO	VOC	NH3	H2S
Milking Parlor	0.0	0.0	0.0	0.0	0.5	0.2	0.0
Cow Housing	0.0	0.0	6.1	0.0	24.5	59.3	0.0
Liquid Manure	0.0	0.0	0.0	0.0	4.8	19.0	2.0
Solid Manure	0.0	0.0	0.0	0.0	0.9	4.4	0.0
Feed Handling	0.0	0.0	0.0	0.0	34.9	0.0	0.0
Total	0.0	0.0	6.1	0.0	65.6	82.9	2.0

Total Annual Pre-Project Potential to Emit (lb/yr)							
Permit	NOx	SOx	PM10	CO	VOC	NH3	H2S
Milking Parlor	0	0	0	0	185	62	0
Cow Housing	0	0	2,176	0	8,947	21,623	0
Liquid Manure	0	0	0	0	1,779	6,939	745
Solid Manure	0	0	0	0	341	1,596	0
Feed Handling	0	0	0	0	12,744	0	0
Total	0	0	2,176	0	23,995	30,220	745

Calculations for milking parlor:

Annual PE = (# milk cows) x (EF1 lb-pollutant/hd-yr)

Daily PE = (Annual PE lb/yr) ÷ (365 day/yr)

Calculations for cow housing:

See detailed calculations under Cow Housing Calculations worksheet.

Calculations for liquid manure and solid manure handling:

Annual PE = [(# milk cows) x (EF1 lb-pollutant/hd-yr)] + [(# dry cows) x (EF1 lb-pollutant/hd-yr)] + [(# large heifers) x (EF1 lb-pollutant/hd-yr)] + [(# medium heifers) x (EF1 lb-pollutant/hd-yr)] + [(# small heifers) x (EF1 lb-pollutant/hd-yr)] + [(# calves) x (EF1 lb-pollutant/hd-yr)] + [(# bulls) x (EF1 lb-pollutant/hd-yr)]

Daily PE = (Annual PE lb/yr) ÷ (365 day/yr)

The H2S emission factor is assumed to be 10% of the NH3 lagoon/storage pond(s) emission factor, for each respective herd size.

Calculations for silage emissions:

Annual PE = (EF1) x (area ft²) x (0.0929 m²/ft²) x (8,760 hr/yr) x (60 min/hr) x 2.20E-9 lb/μg

Daily PE = (Annual PE lb/yr) ÷ (365 day/yr)

Calculation for TMR emissions:

Annual PE = (# cows) x (EF1) x (0.658 m²) x (525,600 min/yr) x (2.20E-9 lb/μg)

Daily PE = (Annual PE lb/yr) ÷ (365 day/yr)

Notes

Calves are not included in TMR calculation.

*Since there will be no change to the lagoons/storage ponds surface area, no change in H2S emissions is expected. Therefore, it will be assumed that PE1 for H2S emissions is equal to PE2 for H2S emissions.

Major Source Emissions (lb/yr)					
Permit	NOx	SOx	PM10	CO	VOC
Milk Parlor	0	0	0	0	0
Cow Housing	0	0	0	0	0
Liquid Manure	0	0	0	0	855
Solid Manure	0	0	0	0	0
Feed Handling	0	0	0	0	0
Total	0	0	0	0	855

Greenhouse Gas Emissions - CEQA

Uncontrolled GHG Emission Factors (lbs/hd-yr)						
Animal Type	CH4 (Anaerobic Treatment Lagoon)	CH4 (Lagoon)	CH4 (Manure Spreading)	CH4 (Solid Manure Storage)	CH4 (Enteric)	CO2 Equivalent Multiplier for CH4
Milk Cows	513	307.8	3.5	27.7	271.5	21
Dry Cows	513	307.8	3.5	27.7	271.5	21
Support Stock*	110.4	110.4	1.6	--	151.6	21
Large Heifers	110.4	110.4	1.6	--	151.6	21
Medium Heifers	110.4	110.4	1.6	--	100.5	21
Small Heifers	110.4	110.4	1.6	--	100.5	21
Calves	--	--	--	--	--	--
Bulls*	110.4	110.4	1.6	--	151.6	21

Uncontrolled GHG Emission Factors (lbs/hd-yr)					
Animal Type	N2O (Anaerobic Treatment Lagoon)	N2O (Manure Spreading)	N2O (Solid Manure Storage)	N2O (Enteric)	CO2 Equivalent Multiplier for N2O
Milk Cows	1.5	0	2.6	0	310
Dry Cows	1.5	0	2.6	0	310
Support Stock*	1.4	0	--	0	310
Large Heifers	1.4	0	--	0	310
Medium Heifers	1.4	0	--	0	310
Small Heifers	1.4	0	--	0	310
Calves	--	0	--	0	--
Bulls*	1.4	0	--	0	310

*Emission factors for Support Stock and Bulls assumed to be the same as Large Heifers.
 1 short ton = 0.9072 metric ton
 CO2e from CH4 = [CH4 (anaerobic treatment) lagoon + CH4 manure spreading + CH4 solid manure storage + CH4 enteric] x 21 x 0.9072 metric tons/short tons + 2000 lb/ton
 CO2e from N2O = [N2O anaerobic treatment lagoon + N2O manure spreading + N2O solid manure storage + N2O enteric] x 310 x 0.9072 metric tons/short tons + 2000 lb/ton

Pre-Project CO2e Emissions

Pre-Project Lagoon CO2e Emissions from CH4 (metric tons/yr)				
Animal Type	Number of Cows	CH4 Lagoons (lb/hd-yr)	CO2e Multiplier	CO2e Lagoons (metric tons/yr)
Milk Cows	615	307.8	21.0	1,803
Dry Cows	75	307.8	21.0	220
Support Stock	535	110.4	21.0	563
Large Heifers	0	110.4	21.0	0
Medium Heifers	0	110.4	21.0	0
Small Heifers	0	110.4	21.0	0
Calves	0	--	--	0
Bulls	0	110.4	21.0	0

Pre-Project Non-Lagoons CO2e Emissions from CH4 (metric tons/yr)						
Animal Type	Number of Cows	CH4 Manure Spreading (lbs/hd-yr)	CH4 Solid Manure Storage (lbs/hd-yr)	CH4 Enteric (lbs/hd-yr)	Multiplier	CO2e Non-Lagoons (metric tons/yr)
Milk Cows	615	3.5	27.7	271.5	21.0	1,773
Dry Cows	75	3.5	27.7	271.5	21.0	216
Support Stock	535	1.6	--	151.6	21.0	781
Large Heifers	0	1.6	--	151.6	21.0	0
Medium Heifers	0	1.6	--	100.5	21.0	0
Small Heifers	0	1.6	--	100.5	21.0	0
Calves	0	--	--	--	--	0
Bulls	0	1.6	--	151.6	21.0	0

Pre-Project Lagoon CO2e Emissions from N2O (metric tons/yr)				
Animal Type	Number of Cows	N2O Lagoons (lb/hd-yr)	CO2e Multiplier	CO2e Lagoons (metric tons/yr)
Milk Cows	615	0.0	310.0	0
Dry Cows	75	0.0	310.0	0
Support Stock	535	0.0	310.0	0
Large Heifers	0	0.0	310.0	0
Medium Heifers	0	0.0	310.0	0
Small Heifers	0	0.0	310.0	0
Calves	0	0.0	310.0	0
Bulls	0	0.0	310.0	0

Pre-Project Non-Lagoons CO2e Emissions from N2O (metric tons/yr)						
Animal Type	Number of Cows	N2O Manure Spreading (lbs/hd-yr)	N2O Solid Manure Storage (lbs/hd-yr)	N2O Enteric (lbs/hd-yr)	Multiplier	CO2e Non-Lagoons (metric tons/yr)
Milk Cows	615	0.0	2.6	0.0	310.0	225
Dry Cows	75	0.0	2.6	0.0	310.0	27
Support Stock	535	0.0	--	0.0	310.0	0
Large Heifers	0	0.0	--	0.0	310.0	0
Medium Heifers	0	0.0	--	0.0	310.0	0
Small Heifers	0	0.0	--	0.0	310.0	0
Calves	0	0.0	--	0.0	310.0	0
Bulls	0	0.0	--	0.0	310.0	0

Total Pre-Project CO2e Emissions (metric tons/yr)			
Animal Type	CO2e from CH4	CO2e from N2O	Total
Milk Cows	3,576	225	3,801
Dry Cows	436	27	464
Support Stock	1,343	0	1,343
Large Heifers	0	0	0
Medium Heifers	0	0	0
Small Heifers	0	0	0
Calves	0	0	0
Bulls	0	0	0
Total			5,608

Post-Project CO2e Emissions

Post-Project Lagoon CO2e Emissions from CH4 (metric tons/yr)				
Animal Type	Number of Cows	CH4 Lagoons (lb/hd-yr)	CO2e Multiplier	CO2e Lagoons (metric tons/yr)
Milk Cows	1,500	307.8	21.0	4,398
Dry Cows	200	307.8	21.0	586
Support Stock	650	110.4	21.0	684
Large Heifers	0	110.4	21.0	0
Medium Heifers	0	110.4	21.0	0
Small Heifers	0	110.4	21.0	0
Calves	0	--	--	0
Bulls	0	110.4	21.0	0

Post-Project Non-Lagoons CO2e Emissions from CH4 (metric tons/yr)						
Animal Type	Number of Cows	CH4 Manure Spreading (lbs/hd-yr)	CH4 Solid Manure Storage (lbs/hd-yr)	CH4 Enteric (lbs/hd-yr)	Multiplier	CO2e Non-Lagoons (metric tons/yr)
Milk Cows	1,500	3.5	27.7	271.5	21.0	4,325
Dry Cows	275	3.5	27.7	271.5	21.0	793
Support Stock	675	1.6	--	151.6	21.0	985
Large Heifers	0	1.6	--	151.6	21.0	0
Medium Heifers	0	1.6	--	100.5	21.0	0
Small Heifers	0	1.6	--	100.5	21.0	0
Calves	0	--	--	--	--	0
Bulls	0	1.6	--	151.6	21.0	0

Post-Project Lagoon CO2e Emissions from N2O (metric tons/yr)				
Animal Type	Number of Cows	N2O Lagoons (lb/hd-yr)	CO2e Multiplier	CO2e Lagoons (metric tons/yr)
Milk Cows	1,500	0.0	310.0	0
Dry Cows	200	0.0	310.0	0
Support Stock	650	0.0	310.0	0
Large Heifers	0	0.0	310.0	0
Medium Heifers	0	0.0	310.0	0
Small Heifers	0	0.0	310.0	0
Calves	0	0.0	310.0	0
Bulls	0	0.0	310.0	0

Post-Project Non-Lagoons CO2e Emissions from N2O (metric tons/yr)						
Animal Type	Number of Cows	N2O Manure Spreading (lbs/hd-yr)	N2O Solid Manure Storage (lbs/hd-yr)	N2O Enteric (lbs/hd-yr)	Multiplier	CO2e Non-Lagoons (metric tons/yr)
Milk Cows	1,500	0.0	2.6	0.0	310.0	548
Dry Cows	275	0.0	2.6	0.0	310.0	101
Support Stock	675	0.0	--	0.0	310.0	0
Large Heifers	0	0.0	--	0.0	310.0	0
Medium Heifers	0	0.0	--	0.0	310.0	0
Small Heifers	0	0.0	--	0.0	310.0	0
Calves	0	0.0	--	0.0	310.0	0
Bulls	0	0.0	--	0.0	310.0	0

Total Post-Project CO2e Emissions (metric tons/yr)			
Animal Type	CO2e from CH4	CO2e from N2O	Total
Milk Cows	8,723	548	9,271
Dry Cows	1,379	101	1,480
Support Stock	1,669	0	1,669
Large Heifers	0	0	0
Medium Heifers	0	0	0
Small Heifers	0	0	0
Calves	0	0	0
Bulls	0	0	0
Total			12,420

Change in CO2e Emissions

Change in Project GHG Emissions			
Animal Type	Pre-Project CO2e (metric tons/yr)	Post-Project CO2e (metric tons/yr)	Change (metric tons/yr)
Milk Cows	3,801	9,271	5,470
Dry Cows	464	1,480	1,016
Support Stock	1,343	1,669	325
Large Heifers	0	0	0
Medium Heifers	0	0	0
Small Heifers	0	0	0
Calves	0	0	0
Bulls	0	0	0
Total			6,812