APPENDIX G

Health Risk Assessment and Ambient Air Quality Analysis

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Health Risk Assessment and Ambient Air Quality Analysis

Silva Dairy Farms Facility Expansion

1499 and 1904 N. Edminster Road
Stevenson, CA 95374
Merced County

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1. EXECUTIVE SUMMARY

This document contains the health risk assessment (HRA) and ambient air quality analysis (AAQA) performed on behalf of Environmental Planning Partners, Inc. for the Silva Dairy Farms facility operation in Merced County, California. As part of the development requirements for the project, an assessment is required of the potential risk to the population attributable to emissions of hazardous air pollutants from the proposed dairy expansion and an ambient air quality analysis of the criteria pollutants compared to the California and national ambient air quality standards.

Emissions of hazardous air pollutants attributable to proposed construction activities, animal movement, manure management and on-site mobile sources were calculated using generally accepted emission factors and the California Emissions Estimator Model version 2020.4.0 (CalEEMod). Ambient air concentrations were predicted with dispersion modeling to arrive at a conservative estimate of increased individual carcinogenic risk that might occur as a result of continuous exposure over a 70-year lifetime. Similarly, concentrations of compounds with non-cancer adverse health effects were used to calculate hazard indices (HIs), which are the ratio of expected exposure to acceptable exposure.

The San Joaquin Valley Air Pollution Control District (SJVAPCD) has set the level of significance for carcinogenic risk to twenty in one million (20×10^{-6}), which is understood as the possibility of causing twenty additional cancer cases in a population of one million people. The level of significance for acute and chronic non-cancer risk is a hazard index of 1.0. The maximum predicted cancer risk among the modeled receptors is 19.04 in one million, which is below the significance level of twenty in one million. The maximum predicted acute and chronic non-cancer hazard indices among the modeled receptors are 0.232 and 0.124, respectively, which is below the significance level for chronic and acute significance level.

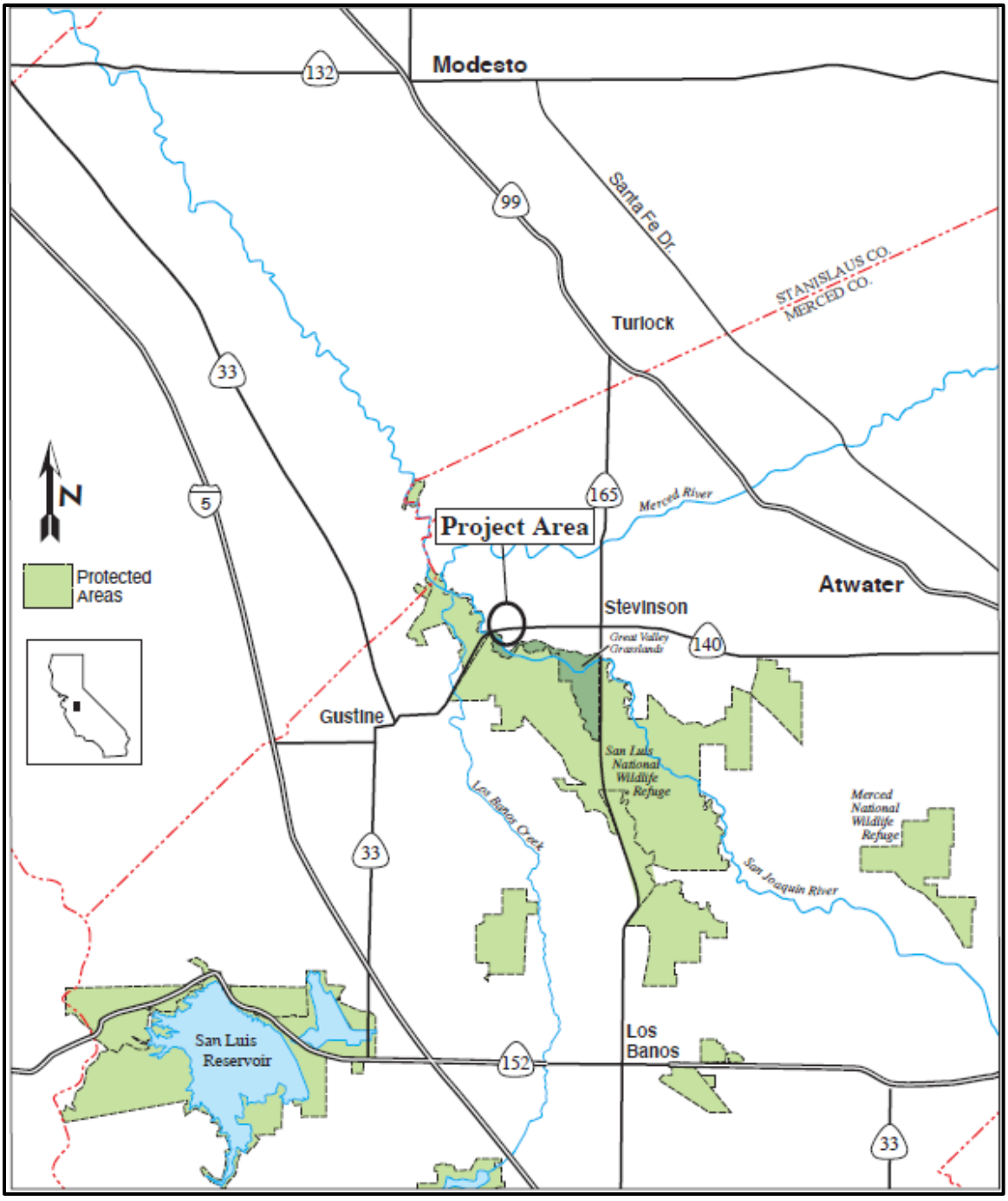
In accordance with the SJVAPCD's *Guide for Assessing and Mitigating Air Quality Impacts* (SJVAPCD 2015a) and polices (SJVAPCD 2015b; SJVAPCD 2015c) the potential health risk attributable to the proposed project is determined to be less than significant.

Emissions of criteria pollutants attributable to proposed construction activities animal movement, manure management and on-site mobile sources were calculated using generally accepted emission factors. The SJVAPCD has developed screening levels for requiring an AAQA. The SJVAPCD recommends that an AAQA be performed for all criteria pollutants when emissions of any criteria pollutant or ammonia resulting from project construction or operational activities exceed the 100 pounds per day screening level, after compliance with Rule 9510 requirements and implementation of all enforceable mitigation measures. The proposed project's construction and operational activities will not exceed 100 pounds per day of any criteria pollutant or ammonia. Therefore, an AAQA is not required, and the proposed Project is considered less than significant for ambient air quality impacts.

2. INTRODUCTION

This Health Risk Assessment (HRA) is provided as a service of Trinity Consultants, performed on behalf of Environmental Planning Partners, Inc. for the Silva Dairy Farms facility operation in Merced County, California (**Figure 2-1**). As part of the development requirements for the property, an HRA and AAQA are required.

Figure 2-1. Location Map



2.1. PROJECT DESCRIPTION

The existing dairy is located at 1499 and 1904 N. Edminster Road in Stevinson, California, which is in the County of Merced. The facility will not be located within 1,000 feet of a K-12 school.

The proposed structure construction was modeled as multiple phases. Construction would include the construction of five freestall barns totaling 200,995 square feet, two loafing barns totaling 84,137 square feet, an addition of 22,040 square feet to the milking parlor, a 44,000 square foot commodity barn, a 2,400 square foot shop and a new wastewater storage pond. Additionally, existing structures totaling 20,800 square feet will be removed. Construction of the proposed dairy facilities would occur intermittently over multiple phases commencing within 5 years of issuance of the CUP and could take up to 10 years to complete.

After modification, the dairy will house approximately 7,300 head of cattle. The existing and proposed herd configuration is provided in Table 2-1. The dairy will continue to operate 24 hours per day and 365 days per year.

Table 2-1. Herd Configuration – Existing and Proposed

Cow Type	Current	Proposed	Increment
Milk Cows	2,420	4,000	1,580
Dry Cows	425	500	75
Bred Heifers 15-24 mos.	865	1,000	135
Heifers 7-14 mos.	695	1,000	305
Heifers 4-6 mos.	400	400	0
Calves 0-3 mos.	400	400	0
Bulls	0	0	0
TOTAL	**5,205**	**7,300**	**2,095**

3. AMBIENT AIR QUALITY ANALYSIS

As stated in the GAMAQI (2015, p 96-97), SJVAPCD has developed screening levels for requiring an Ambient Air Quality Analysis (AAQA). The SJVAPCD recommends that an AAQA be performed for all criteria pollutants when emissions of any criteria pollutant or ammonia resulting from project construction or operational activities exceed the 100 pounds per day screening level, after compliance with Rule 9510 requirements and implementation of all enforceable mitigation measures.

As shown below in **Table 3-1**, average daily emissions for construction and operational activities associated with this Project would not exceed 100 pounds per day for any criteria pollutant or ammonia. *Therefore, an AAQA is not required for this Project.*

Table 3-1. Average Daily Criteria Pollutant Emissions

Emissions Source	Pollutant (lbs/day)						
	NOX	CO	SOX	PM_{10}	$PM_{2.5}$	VOC	NH3
Construction Emissions							
Daily Max Construction Emissions	14.71	19.01	0.04	2.07	1.05	1.76	0.00
Operational Emissions							
Milk Parlor	-	-	-	-	-	1.73	0.59
Cow Housing	-	-	-	-20.94	-2.39	25.11	-30.53
Liquid Manure	-	-	-	-	-	14.37	40.55
Solid Manure	-	-	-	-	-	2.31	13.45
Feed Handling*	-	-	-	-	-	30.97	0.00
Mobile Sources	0.51	4.53	0.01	0.01	0.01	0.27	0.00
Total Average Daily Operational Emissions	**0.51**	**4.53**	**0.01**	**-20.93**	**-2.38**	**74.76**	**24.06**
SJVAPCD AAQA Screening Threshold	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Is Threshold Exceeded?	No	No	No	No	No	No	No
*No change is the size of the silage piles of corn, wheat or alfalfa. Emissions from TMR only.							

4. RISK ASSESSMENT METHODOLOGY

This section describes the methodology used to predict the potential health risk to the population attributable to emissions of hazardous air pollutants from the proposed expansion of the dairy operation.

4.1. HAZARD IDENTIFICATION

The basis for evaluating potential health risk is the identification of sources of hazardous air pollutants (HAPs). The proposed dairy will include sources with the potential to emit HAPs.

Construction equipment sources include diesel-fueled dozers, loaders, backhoes, excavators, graders, cranes, forklifts, generator sets, concrete/industrial saws, and welders. CalEEMod default equipment listing for general heavy industrial usages were utilized. Default horsepower, daily operating hours, and load factors were also used. Operational mobile sources include a diesel-fueled feed loading tractor, a feed delivery tractor, bedding delivery tractor, manure scraping tractor, manure loading tractor, milk tankers, solids manure removal trucks, silage delivery trucks, and commodity delivery trucks. There will also be emissions from the housing barns, milk barn, lagoons, solid manure storage and land application areas associated with increased herd size. HRA emission sources are listed in **Table 4-1**.

Table 4-1. Sources of Potential Emissions

Source ID	Description
MTI	Milk Truck Idling
MTT	Milk Truck Travel
CTI	Commodity Truck Idling
CTT	Commodity Truck Travel
SMTI1-2	Solid Manure Truck Idling
SMTT1-2	Solid Manure Truck Travel
STI	Silage Truck Idling
STT	Silage Truck Travel
FLT	Feed Loading Tractor
FBDT1-6	Feed and Bedding Delivery Tractors
Milk1	Milk Parlor
FSB4 and 6-11	Free Stall Barns (4 and 6-11)
OC7-8	Open Corrals 7-8
LB1	Loafing Barn 1
LLA	Liquid Land Application
SLA	Solid Land Application
LAGOON1-3	Lagoons
MLT1-2	Manure Loading Tractor
MST1-2	Manure Scraping
SMS1-2	Solid Manure Storage
QMTT	Off-Site Quarter Mile Truck Travel
CONST1-5	Construction Activities

Table 4-2 lists the toxic substances emitted from each of these activities and also presents the classification of these species as to their potential for producing carcinogenic and non-cancer acute or chronic health impacts, if any.

Table 4-2. Chemicals of Potential Concern

CAS	Pollutant	Source	Cancer	Non-Cancer	
				Acute	Chronic
9901	Diesel Exhaust, Particulate Matter	Tractors, Diesel Trucks	X		X
9960	Sulfates	Animal Movement		X	X
50000	Formaldehyde	Animal Movement	X	X	X
56235	Carbon tetrachloride	Animal Movement, Lagoons	X	X	X
67630	Isopropyl Alcohol	Animal Movement		X	X
67663	Chloroform	Animal Movement, Lagoons	X	X	X
71432	Benzene	Animal Movement, Lagoons	X	X	X
71556	1,1,1-trichloroethane	Lagoons		X	X
74873	Methyl Chloride	Animal Movement	X	X	X
75003	Ethyl Chloride	Animal Movement			X
75070	Acetaldehyde	Animal Movement	X		X
75150	Carbon disulfide	Animal Movement		X	X
75252	Tribromomethane *	Lagoons			
75694	Trichloromonofluoromethane *	Lagoons			
76131	1,1,2-Trichloro-1,2,2-trifluoroethane	Lagoons			X
78933	Methyl Ethyl Ketone (MEK)	Animal Movement, Lagoons		X	X
79005	1,1,2-Trichloroethane	Animal Movement	X		
79016	Trichloroethylene	Animal Movement, Lagoons	X		X
79345	1,1,2,2-Tetrachloroethane	Animal Movement	X		
91203	Naphthalene	Animal Movement	X		X
95501	1,2-Dichlorobenzene *	Animal Movement, Lagoons			
95636	1,2,4-Trichlorobenzene *	Lagoons			
96128	1,2-Dibromo-3-chloropropane	Animal Movement	X		X
96184	1,2,3-Trichloropropane *	Animal Movement			
98828	Cumene *	Animal Movement			
100414	Ethylbenzene	Animal Movement			X
100425	Styrene	Animal Movement, Lagoons		X	X
100447	Benzyl chloride	Animal Movement	X	X	X
106467	1,4-Dichlorobenzene	Animal Movement, Lagoons	X		X
106934	1,2-Dibromoethane (EDB)	Animal Movement	X		X
106990	1,3-Butadiene	Lagoons	X		X
107062	1,2-Dichloroethane (EDC)	Animal Movement	X		X
107131	Acrylonitrile	Animal Movement	X		X
108054	Vinyl acetate	Animal Movement, Lagoons			X
108101	Methyl Isobutyl Ketone *	Animal Movement, Lagoons			
108883	Toluene	Animal Movement, Lagoons		X	X
108907	Chlorobenzene	Animal Movement			X
110543	Hexane	Animal Movement			X
110827	Cyclohexane *	Animal Movement, Lagoons			
115071	Propylene	Lagoons			X

CAS	Pollutant	Source	Cancer	Non-Cancer	
				Acute	Chronic
120821	1,2,4-Trichlorobenzene *	Animal Movement			
123728	Butyraldehyde *	Animal Movement			
123911	1,4 Dioxane	Animal Movement	X	X	X
127184	Tetrachloroethene	Animal Movement	X	X	X
541731	1,3-Dichlorobenzene *	Animal Movement, Lagoons			
764410	t-1,4-Dichloro-2-butene *	Animal Movement			
1330207	Xylene Isomers	Animal Movement, Lagoons		X	X
4170303	Crotonaldehyde *	Animal Movement			
7429905	Aluminum *	Animal Movement			
7439921	Lead	Animal Movement	X		
7439965	Manganese	Animal Movement			X
7439976	Mercury	Animal Movement		X	X
7440020	Nickel	Animal Movement	X	X	X
7440360	Antimony *	Animal Movement			
7440382	Arsenic	Animal Movement	X	X	X
7440393	Barium *	Animal Movement			
7440439	Cadmium	Animal Movement	X		X
7440473	Chromium *	Animal Movement			
7440508	Copper	Animal Movement		X	X
7440622	Vanadium	Animal Movement	X		
7440666	Zinc	Animal Movement			X
7664417	Ammonia	Animal Movement, Lagoons Wastewater Application		X	X
7723140	Phosphorus *	Animal Movement			
7726956	Bromine	Animal Movement			X
7782492	Selenium	Animal Movement			X
7782505	Chlorine	Animal Movement		X	X
18540299	Hexavalent Chromium	Animal Movement	X	X	X

*Health risk assessment values have not yet been assigned for this chemical.

4.2. EXPOSURE ASSESSMENT

4.2.1. Source Emissions and Characterization

Peak one-hour emission rates and annual-averaged emission rates were calculated for all pollutants for each modeled source. Emissions attribute to animal movement and manure management were estimated by the SJVAPCD using PM_{10} emission factors and HAPs speciation spreadsheets. The project applicant provided cattle numbers. Control efficiencies were applied to PM_{10} emission factors for having at least bi-weekly scraping of corrals or pens, no exercise pens for freestall barns and loafing barns with the exception of Freestall Barn 6. Emissions for tractors were calculated using the EPA's *Nonroad Compression-Ignition Engines - Exhaust Emission Standards* for the appropriate engine horsepower (HP) and year and load factors for the appropriate engine horsepower from California Emissions Estimator Model (CalEEMod) Appendix D, Tables 3.3 and 3.4. Diesel truck running and idling emissions are based on EMFAC2021 emission factors specific to Merced County for vehicle category "T7 Single Other Class 8." Diesel trucks were assumed to have 15 minutes of idling per visit.

The lagoon's H_2S emissions calculations are based on the surface area of the lagoon. The new lagoon's H_2S emissions were assumed to be 10% of the NH3 lagoon emissions. This assumption was taken from the SJVAPCD's dairy calculator.

Actual total construction activities for all phases were estimated to be less than 2 years. Therefore, a two-year exposure HRA was conducted for each construction phase and added to the operational HRA results. Construction emissions will be restricted to occur between the hours of 7am and 5pm.

The calculation worksheets and CalEEMod output files for the emissions are provided in **Appendix A**. Hourly and annual emissions for each source are also provided in the HARP output files, electronic copies of which are provided in **Appendix B**.

4.2.2. Dispersion Modeling

A version of EPA's AMS/EPA Regulatory Model - AERMOD (recompiled for the Lakes ISC-AERMOD View interface) was used to predict the dispersion of emissions from the proposed dairy. The construction activities, animal housing areas, milk barn, lagoons, solid manure storage, and land application areas were modeled as area sources. Unit emission rates for the area sources of 1 g/sec divided by the area of the source were input into AERMOD. The travel route for the feed and bedding delivery tractors, solids removal trucks, milk tankers, silage delivery trucks and commodity trucks were modeled as line sources, which represents a series of volume sources, with a unit emission rate of 1 g/sec. The feed loading tractor, manure loading tractor, manure scraping, solids removal truck idling, milk tanker idling, and commodity truck idling were modeled as point sources, with a unit emission rate of 1 g/sec. Modeled sources are identified in **Table 4-1**.

All of the AERMOD regulatory default parameters were employed. Rural dispersion parameters were used because the facility and surrounding land are considered "rural" under the Auer land use classification method. The AERMOD files are provided in electronic format on a CD in **Appendix B.**

4.2.2.1. Meteorological Data

The SJVAPCD provided meteorological data for Merced County, California to be used for projects within Merced County. SJVAPCD-approved, AERMET processed meteorological datasets for calendar years 2013 through 2017[1] was input into AERMOD. This was the most recent available dataset available at the time the modeling runs were conducted.

4.2.2.2. Receptors

Existing land uses in the area where the proposed dairy will be located are predominantly agriculture. There are scattered rural residences in the general area of the project; most of which are associated with local agricultural operations. A total of 177 off-site receptors of residences and workers were assessed during the preparation of this HRA. There are currently two on-site residence which includes children under the age of 18 reside and is not occupied by the owner, however, one of these residences will be removed as a result of the dairy expansion. The other on-site resident was analyzed during this HRA. Coordinates for the point of maximum impact (PMI) receptors are provided in **Table 4-3**.

[1] Provided via website, San Joaquin Valley Air Pollution Control District (SJVAPCD), ftp://12.219.204.27/public/Modeling/Meteorological_Data/AERMET_v16216/Modesto_23258/

4.2.3. HARP Post-Processing

The files generated in AERMOD were uploaded to the Air Dispersion Modeling and Risk Assessment Tool (ADMRT) program in the Hotspots Analysis and Reporting Program Version 2 (HARP 2) (CARB 2015). ADMRT post-processing was used to assess the potential for excess cancer risk and chronic non-cancer effects using the most recent health effects data from the California EPA Office of Environmental Health Hazard Assessment (OEHHA). ADMRT site parameters were set for mandatory minimum exposure pathways for carcinogenic risk. The deposition rate was set to 0.02 m/s. Risk reports were generated for carcinogenic risk, non-carcinogenic chronic risk and non-carcinogenic acute risk. Site parameters are included in the HARP output files.

4.3. RISK CHARACTERIZATION

For permitting and CEQA purposes, SJVAPCD has set the level of significance for carcinogenic risk at 20 in one million, which is understood as the possibility of causing twenty additional cancer cases in a population of one million people (SJVAPCD 2015b). The level of significance for chronic and acute non-cancer risk is a hazard index of one (SJVAPCD 2015c).

HARP 2 post-processing was used to assess the potential for the following: excess cancer risk, acute non-cancer effects, and chronic non-cancer effects. Total cancer risk was predicted for inhalation and non-inhalation pathways at each receptor. The hazard index is computed by endpoint as the sum of the hazard indices for all relevant pollutants, the highest of which is designated as the total hazard index.

The carcinogenic risk predicted at the potentially impacted receptors does not exceed the significance level of twenty in one million (20×10^{-6}). The health hazard index (HI) for chronic and acute non-cancer risk is below the significance level of 1.0 at all modeled receptors. The excess cancer risk, acute non-cancer HI, and chronic non-cancer HI for the maximum modeled receptor are provided in **Table 4-3**. The HARP2 output files for cancer, acute, and chronic risks are provided in electronic format on **Appendix B.**

As shown below in **Table 4-3,** the maximum predicted cancer risk is 19.04E-06. Cancer risks are primarily attributable to emissions of naphthalene and DPM through the inhalation pathway. Carcinogenic risks are tabulated by pollutant in **Table 4-4**.

The maximum predicted acute non-cancer hazard index is 0.232. Acute risks are primarily attributable to emissions of ammonia, which affects the respiratory system. Acute risks are tabulated by pollutant in **Table 4-5**.

The maximum predicted chronic non-cancer hazard index is 0.124. Chronic risks, tabulated by pollutant in **Table 4-6**, are primarily attributable to emissions of ammonia, which affects the respiratory system.

Table 4-3. Risk Predicted By HARP

	Maximum Lifetime Excess Cancer Risk	Maximum Non-Cancer Chronic Hazard Index	Maximum Non-Cancer Acute Hazard Index
Construction	3.90E-06	2.28E-03	0.00E+00
Operational	15.14E-06	1.21E-01	2.32E-01
Total	19.04E-06	1.24E-01	2.32E-01
Receptor #, Name	1, On-Site Residence	1, On-Site Residence	1, On-Site Residence
UTM Easting (m)	686398.00	686398.00	686398.00
UTM Northing (m)	4131962.13	4131962.13	4131962.13

Table 4-4. Risk by Pollutant – Maximum Cancer Risk at Receptor #1

CHEM	INHAL	SOIL	DERM	MOTHER	WATER	FISH	CROP	BEEF	DAIRY	PIG	CHICK	EGG	TOTAL
Naphthalene	4.86E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.86E-06
DieselExhPM	3.94E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.94E-06
Acrylonitrile	2.25E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E-06
TetraClEthane	1.35E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-06
Benzyl Chloride	1.20E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-06
DBCP	1.17E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-06
EDB	9.59E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.59E-07
Arsenic	6.08E-08	4.12E-07	1.75E-08	0.00E+00	0.00E+00	0.00E+00	3.91E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.81E-07
Perc	7.63E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.63E-07
p-DiClBenzene	4.75E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.75E-07
Cr(VI)	1.85E-07	2.42E-09	8.51E-11	0.00E+00	0.00E+00	0.00E+00	1.20E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.07E-07
1,4-Dioxane	2.60E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.60E-07
Benzene	1.64E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.64E-07
1,1,2TriClEthan	1.32E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-07
Acetaldehyde	1.12E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E-07
EDC	7.14E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.14E-08
Formaldehyde	6.15E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.15E-08
CCl4	2.98E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.98E-08
Ethyl Benzene	2.72E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.72E-08
TCE	1.53E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-08
Chloroform	8.42E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.42E-09
Lead	4.66E-10	5.10E-09	1.09E-10	8.48E-11	0.00E+00	0.00E+00	1.54E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.30E-09
Nickel	3.29E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.29E-09
SUM	1.81E-05	4.19E-07	1.77E-08	8.48E-11	0.00E+00	0.00E+00	5.13E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E-05

Table 4-5. Risk by Pollutant – Maximum Acute Noncancer Risk at Receptor #1

CHEM	CV	CNS	IMMUN	KIDNEY	GILV	REPRO /DEVEL	RESP	SKIN	EYE	BONE /TEETH	ENDO	BLOOD	ODOR	GENERAL	MAX
NH3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E-01	0.00E+00	2.21E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E-01
Benzene	0.00E+00	0.00E+00	5.78E-03	0.00E+00	0.00E+00	5.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.78E-03	0.00E+00	0.00E+00	5.78E-03
Arsenic	5.29E-03	5.29E-03	0.00E+00	0.00E+00	0.00E+00	5.29E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.29E-03
Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.88E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.88E-03
SULFATES	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.01E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.01E-03
Benzyl Chloride	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-03	0.00E+00	2.53E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.53E-03
Nickel	0.00E+00	0.00E+00	2.32E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E-03
Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E-03	0.00E+00	2.30E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E-03
Mercury	0.00E+00	4.41E-04	0.00E+00	0.00E+00	0.00E+00	4.41E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.41E-04
MEK	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-04	0.00E+00	4.02E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-04
Chloroform	0.00E+00	2.99E-04	0.00E+00	0.00E+00	0.00E+00	2.99E-04	2.99E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.99E-04
1,4-Dioxane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.97E-04	0.00E+00	2.97E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.97E-04
CS2	0.00E+00	2.41E-04	0.00E+00	0.00E+00	0.00E+00	2.41E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.41E-04
Isopropyl Alcoh	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-04	0.00E+00	2.12E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-04
Perc	0.00E+00	1.53E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-04	0.00E+00	1.53E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E-04
Toluene	0.00E+00	1.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-04	0.00E+00	1.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-04
Copper	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.72E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.72E-05
Vanadium	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.61E-05	0.00E+00	6.61E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.61E-05
Xylenes	0.00E+00	4.19E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.19E-05	0.00E+00	4.19E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.19E-05
Styrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-05	1.84E-05	0.00E+00	1.84E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-05
CCl4	0.00E+00	1.06E-05	0.00E+00	0.00E+00	1.06E-05	1.06E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-05
SUM	5.29E-03	6.59E-03	8.10E-03	0.00E+00	1.06E-05	1.21E-02	2.31E-01	0.00E+00	2.32E-01	0.00E+00	0.00E+00	5.78E-03	0.00E+00	0.00E+00	2.32E-01

Table 4-6. Risk by Pollutant – Maximum Chronic Noncancer Risk at Receptor #1

CHEM	CV	CNS	IMMUN	KIDNEY	GILV	REPRO/ DEVEL	RESP	SKIN	EYE	BONE/ TEETH	ENDO	BLOOD	ODOR	GENERAL	MAX
NH3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.85E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.85E-02
Arsenic	5.67E-02	5.67E-02	0.00E+00	0.00E+00	0.00E+00	5.67E-02	5.67E-02	5.67E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.67E-02
EDB	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E-03
Naphthalene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.75E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.75E-03
Manganese	0.00E+00	4.61E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.61E-03
Perc	0.00E+00	0.00E+00	0.00E+00	1.10E-03	1.10E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-03
Benzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.78E-04	0.00E+00	0.00E+00	5.78E-04
Acrylonitrile	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.75E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.75E-04
Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.44E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.44E-04
Mercury	0.00E+00	2.97E-04	0.00E+00	2.97E-04	0.00E+00	2.97E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.97E-04
Nickel	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.46E-06	2.73E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.73E-04	0.00E+00	0.00E+00	2.73E-04
DieselExhPM	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.37E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.37E-03
Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.45E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.45E-05
Vinyl Acetate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.52E-05
CS2	0.00E+00	2.13E-05	0.00E+00	0.00E+00	0.00E+00	2.13E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.13E-05
p-DiClBenzene	0.00E+00	1.57E-05	0.00E+00	1.57E-05	1.57E-05	0.00E+00	1.57E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-05
Toluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.52E-05
Xylenes	0.00E+00	1.47E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-05	0.00E+00	1.47E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E-05
Selenium	6.14E-06	6.14E-06	0.00E+00	0.00E+00	6.14E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.14E-06
Cr(VI)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.45E-06	0.00E+00	0.00E+00	5.45E-06
CCl4	0.00E+00	5.24E-06	0.00E+00	0.00E+00	5.24E-06	5.24E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.24E-06
Styrene	0.00E+00	5.15E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.15E-06
TCE	0.00E+00	3.84E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.84E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.84E-06
Chlorobenzn	0.00E+00	0.00E+00	0.00E+00	3.68E-06	3.68E-06	3.68E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.68E-06
1,4-Dioxane	3.40E-06	0.00E+00	0.00E+00	3.40E-06	3.40E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.40E-06
EDC	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.62E-06
Ethyl Benzene	0.00E+00	0.00E+00	0.00E+00	1.65E-06	1.65E-06	1.65E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-06	0.00E+00	0.00E+00	0.00E+00	1.65E-06
Chloroform	0.00E+00	0.00E+00	0.00E+00	1.56E-06	1.56E-06	1.56E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-06
Isopropyl Alcoh	0.00E+00	0.00E+00	0.00E+00	1.05E-06	0.00E+00	1.05E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-06
Hexane	0.00E+00	5.42E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.42E-07
Ethyl Chloride	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.02E-08	6.02E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.02E-08
SUM	5.67E-02	6.16E-02	0.00E+00	1.42E-03	1.14E-03	6.21E-02	1.24E-01	5.67E-02	3.38E-05	0.00E+00	1.65E-06	8.56E-04	0.00E+00	0.00E+00	1.24E-01

5. CONCLUSIONS

In accordance with the *Guide for Assessing and Mitigating Air Quality Impacts* (SJVAPCD 2015a) and San Joaquin Valley Air Pollution Control District policies (SJVAPCD 2015b; SJVAPCD 2016c), the unmitigated potential health risk attributable to the Silva Dairy Farms facility for chronic and acute carcinogenic and non- carcinogenic risk is determined to be less than significant based on the following conclusion:

- Potential chronic carcinogenic risk from the proposed facility is *below* the significance level of twenty in one million at each of the modeled receptors.
- The hazard index for the potential chronic non-cancer risk from the proposed facility is *below* the significance level of 1.0 at each of the modeled receptors.
- The hazard index for the potential acute non-cancer risk from the proposed facility is *below* the significance level of 1.0 at each of the modeled receptors.

Additionally, the ambient air quality impact is determined to be less than significant based on the following conclusions:

- The average daily emissions for construction and operational activities associated with this Project would not exceed 100 pounds per day for any criteria pollutant or ammonia.

6. REFERENCES

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APPENDIX A: EMISSION ESTIMATION WORKSHEETS

Rev. January 6, 2020

Pre-Project Facility Information

1. Does this facility house Holstein or Jersey cows? Holstein
   Most facilities house Holstein cows unless explicitly stated on the PTO or application.
2. Does the facility have an anaerobic treatment lagoon? no
3. Does the facility land apply liquid manure? yes
   Answering "yes" assumes worst case.
4. Does the facility land apply solid manure? yes
   Answering "yes" assumes worst case.
5. Is any scraped manure sent to a lagoon/storage pond? no
   Answering "yes" assumes worst case.

Pre-Project Herd Size

Herd	Flushed Freestalls	Scraped Freestalls	Flushed Corrals	Scraped Corrals	Total # of Animals
Milk Cows	2,420				2,420
Dry Cows	425				425
Support Stock (Heifers, Calves, and Bulls)	920			1,040	1,960
Large Heifers					0
Medium Heifers					0
Small Heifers					0
Bulls					0

	Calf Hutches				Calf Corrals		
	Aboveground Flushed	Aboveground Scraped	On-Ground Flushed	On-Ground Scraped	Flushed	Scraped	Total # of Calves
Calves	400						400

Total Herd Summary

Total Milk Cows	2,420
Total Mature Cows	2,845
Support Stock (Heifers, Calves, and Bulls)	1,960
Total Calves	400
Total Dairy Head	5,205

Pre-Project Silage Information

Feed Type	Max # Open Piles	Max Height (ft)	Max Width (ft)
Corn			
Alfalfa			
Wheat			

Post-Project Facility Information

1. Does this facility house Holstein or Jersey cows? Holstein
   Most facilities house Holstein cows unless explicitly stated on the PTO or application.
2. Does the facility have an anaerobic treatment lagoon? no
3. Does the facility land apply liquid manure? yes
   Answering "yes" assumes worst case.
4. Does the facility land apply solid manure? yes
   Answering "yes" assumes worst case.
5. Is any scraped manure sent to a lagoon/storage pond? no
   Answering "yes" assumes worst case.
6. Does this project result in an increase or relocation of uncovered surface area for any lagoon/storage pond? yes

NOTE: An increase in total lagoon/storage pond surface area may result in an increase in H2S emissions. The District's Technical Services Division may need to conduct H2S modeling.

Post-Project Herd Size

Herd	Flushed Freestalls	Scraped Freestalls	Flushed Corrals	Scraped Corrals	Total # of Animals
Milk Cows	4,000				4,000
Dry Cows	500				500
Support Stock (Heifers, Calves, and Bulls)	2,200			200	2,400
Large Heifers					0
Medium Heifers					0
Small Heifers					0
Bulls					0

	Calf Hutches				Calf Corrals		
	Aboveground Flushed	Aboveground Scraped	On-Ground Flushed	On-Ground Scraped	Flushed	Scraped	Total # of Calves
Calves	400						400

Total Herd Summary

Total Milk Cows	4,000
Total Mature Cows	4,500
Support Stock (Heifers, Calves, and Bulls)	2,400
Total Calves	400
Total Dairy Head	7,300

Post-Project Silage Information

Feed Type	Max # Open Piles	Max Height (ft)	Max Width (ft)
Corn			
Alfalfa			
Wheat			

The HRA/AAQA for the Silva Dairy Farms project Expansion was completed using permit application herd numbers and housing information submitted to the SJVAPCD (received by SJVAPCD on May 24, 2021, Project N-1212052, Facility ID: N-6120).

VOC Mitigation Measures and Control Efficiencies

Milking Parlor				
Measure Proposed?		Mitigation Measure(s) per Emissions Point	VOC Control Efficiency (%)	
Pre-Project	Post-Project		Pre-Project	Post-Project
		Enteric Emissions Mitigations		
☑	☑	(D) Feed according to NRC guidelines	10%	10%
		Total Control Efficiency	10%	10%
		Milking Parlor Floor Mitigations		
☑	☑	(D) Feed according to NRC guidelines	10%	10%
☑	☑	(D) Flush or hose milk parlor immediately prior to, immediately after, or during each milking. Note: If selected for dairies > 999 milk cows, control efficiency is already included in EF.	0%	0%
		Total Control Efficiency	10%	10%

Cow Housing				
Measure Proposed?		Mitigation Measure(s) per Emissions Point	VOC Control Efficiency (%)	
Pre-Project	Post-Project		Pre-Project	Post-Project
		Enteric Emissions Mitigations		
☑	☑	Feed according to NRC guidelines	10%	10%
		Total Control Efficiency	10%	10%
		Corrals/Pens Mitigations		
☑	☑	Feed according to NRC guidelines	10%	10%
☑	☑	Inspect water pipes and troughs and repair leaks at least once every seven days. Note: If selected for dairies > 999 milk cows, CE is already included in EF.	0%	0%
☐	☑	**Dairies:** Clean manure from corrals at least four times per year with at least 60 days between cleaning, or clean corrals at least once between April and July and at least once between September and December. Note: If selected for dairies > 999 milk cows, CE is already included in EF. Note: No additional control given for increased cleaning frequency (e.g. BACT requirement). **Heifer/Calf Ranches:** Scrape corrals twice a year with at least 90 days between cleanings, excluding in-corral mounds. Note: No additional control given for increased cleaning frequency (e.g. BACT requirement).	0%	0%
☐	☑	Scrape, vacuum, or flush concrete lanes in corrals at least once every day for mature cows and every seven days for support stock, or clean concrete lanes such that the depth of manure does not exceed 12 inches at any point or time. Note: No additional control given for increased cleaning frequency (e.g. BACT requirement).	0%	10%
☐	☐	Implement one of the following: 1) slope the surface of the corrals at least 3% where the available space for each animal is 400 sq ft or less and slope the surface of the corrals at least 1.5% where the available space for each animal is more than 400 sq ft; 2) maintain corrals to ensure proper drainage preventing water from standing more than 48 hrs; 3) harrow, rake, or scrape pens sufficiently to maintain a dry surface. Note: If selected for dairies > 999 milk cows, CE already included in EF.	0%	0%
☐	☐	Install shade structures such that they are constructed with a light permeable roofing material. Note: If selected for dairies > 999 milk cows, the control efficiency will be 5% since the EF used includes a partial control for this measure.	0%	5%
☐	☑	Install all shade structures uphill of any slope in the corral. Note: If selected for dairies > 999 milk cows, the control efficiency will be 5% since the EF used includes a partial control for this measure.		
☐	☐	Clean manure from under corral shades at least once every 14 days, when weather permits access into corral. Note: If selected for dairies > 999 milk cows, the control efficiency will be 5% since the EF used includes a partial control for this measure.		
☐	☐	Install shade structure so that the structure has a North/South orientation. Note: If selected for dairies > 999 milk cows, the control efficiency will be 5% since the EF used includes a partial control for this measure.		
☑	☑	Manage corrals such that the manure depth in the corral does not exceed 12 inches at any time or point, except for in-corral mounding. Manure depth may exceed 12 inches when corrals become inaccessible due to rain events. The manure facility must resume management of the manure depth of 12 inches or lower immediately upon the corral becoming accessible. Note: If selected for dairies > 999 milk cows, control efficiency is already included in EF.	0%	0%
☐	☑	Knockdown fence line manure build-up prior to it exceeding a height of 12 inches at any time or point. Manure depth may exceed 12 inches when corrals become inaccessible due to rain events. The facility must resume management of the manure depth of 12 inches or lower immediately upon the corral becoming accessible.	0%	10%
☐	☑	Use lime or a similar absorbent material in the corral according to the manufacturer's recommendation to minimize moisture in the corrals.	0%	10%
☐	☐	Apply thymol to the corral soil in accordance with the manufacturer's recommendation.	0%	0%
		Total Control Efficiency	10.00%	37.67%
		Bedding Mitigations		
☑	☑	Feed according to NRC guidelines	10%	10%
☐	☐	Use non-manure-based bedding and non-separated solids based bedding for at least 90% of the bedding material, by weight, for freestalls (e.g. rubber mats, almond shells, sand, or waterbeds).	0%	0%

☐	☑	For a large dairy (1,000 milk cows or larger) or a heifer/calf ranch - Remove manure that is not dry from individual cow freestall beds or rake, harrow, scrape, or grade freestall bedding at least once every 7 days.	0%	10%
☐	☐	(D) For a medium dairy only (500 to 999 milk cows) - Remove manure that is not dry from individual cow freestall beds or rake, harrow, scrape, or grade freestall bedding at least once every 14 days.	0%	0%
		Total Control Efficiency	10.00%	19.00%
		Lanes Mitigations		
☑	☑	Feed according to NRC guidelines	10%	10%
☑	☑	Pave feedlanes, where present, for a width of at least 8 feet along the corral side of the feedlane fence for milk and dry cows and at least 6 feet along the corral side of the feedlane for heifers. Note: No control efficiency at this time.	0%	0%
☐	☑	**Dairies**: Flush, scrape, or vacuum freestall flush lanes immediately prior to or after, or during each milking; or flush or scrape freestall flush lanes at least 3 times per day. **Heifer/Calf Ranches:** Vacuum, scrape, or flush freestalls at least once every seven days.	0%	10%
☐	☐	(D) Have no animals in exercise pens or corrals at any time.	0%	0%
		Total Control Efficiency	10.00%	19.00%

Liquid Manure Handling				
Measure Proposed?		**Mitigation Measure(s) per Emissions Point**	**VOC Control Efficiency (%)**	
Pre-Project	Post-Project		Pre-Project	Post-Project
		Lagoons/Storage Ponds Mitigations		
☑	☑	Feed according to NRC guidelines	10%	10%
☐	☐	Use phototropic lagoon	0%	0%
☐	☐	Use an anaerobic treatment lagoon designed according to NRCS Guideline No. 359, or aerobic treatment lagoon, or mechanically aerated lagoon, or covered lagoon digester vented to a control device with minimum 95% control	0%	0%
☑	☑	Remove solids from the waste system with a solid separator system, prior to the waste entering the lagoon. Note: If selected for dairies > 999 milk cows, control efficiency is already included in EF.	0%	0%
☐	☐	Maintain lagoon pH between 6.5 and 7.5	0%	0%
		Total Control Efficiency	10.00%	10.00%
		Liquid Manure Land Application Mitigations		
☑	☑	Feed according to NRC guidelines	10%	10%
☐	☐	Only apply liquid manure that has been treated with an anaerobic or aerobic treatment lagoon, aerobic lagoon, or digester system	0%	0%
☑	☑	Allow liquid manure to stand in the fields for no more than 24 hours after irrigation. Note: If selected for dairies > 999 milk cows, control efficiency is already included in EF.	0%	0%
☐	☐	Apply liquid/slurry manure via injection with drag hose or similar apparatus	0%	0%
		Total Control Efficiency	10.00%	10.00%

Solid Manure Handling				
Measure Proposed?		**Mitigation Measure(s) per Emissions Point**	**VOC Control Efficiency (%)**	
Pre-Project	Post-Project		Pre-Project	Post-Project
		Solid Manure Storage Mitigations		
☑	☑	Feed according to NRC guidelines	10%	10%
☐	☐	**LARGE CAFO ONLY**: Within 72 hours of removal from housing, either a) remove dry manure from the facility, or b) cover dry manure outside the housing with a weatherproof covering from October through May, except for times when wind events remove the covering, not to exceed 24 hours per event.	0%	0%
		Total Control Efficiency	10.00%	10.00%
		Separated Solids Piles Mitigations		
☑	☑	Feed according to NRC guidelines	10%	10%
☐	☑	**LARGE CAFO ONLY**: Within 72 hours of removal from the drying process, either a) remove separated solids from the facility, or b) cover separated solids outside the housing with a weatherproof covering from October through May, except for times when wind events remove the covering, not to exceed 24 hours per event.	0%	10%
		Total Control Efficiency	10.00%	19.00%
		Solid Manure Land Application Mitigations		
☑	☑	Feed according to NRC guidelines	10%	10%
☑	☑	Incorporate all solid manure within 72 hours of land application. Note: If selected for dairies > 999 milk cows, control efficiency is already included in EF. Note: No additional control given for rapid manure incorporation (e.g. BACT requirement).	0%	0%
☐	☐	Only apply solid manure that has been treated with an anaerobic treatment lagoon, aerobic lagoon or digester system.	0%	0%
☐	☐	Apply no solid manure with a moisture content of more than 50%	0%	0%
		Total Control Efficiency	10.00%	10.00%

Silage and TMR				
Measure Proposed?		**Mitigation Measure(s) per Emissions Point**	**VOC Control Efficiency (%)**	
Pre-Project	Post-Project		Pre-Project	Post-Project
		Corn/Alfalfa/Wheat Silage Mitigations		
		1. Utilize a sealed feed storage system (e.g. Ag-Bag) for bagged silage, or 2. Cover the surface of silage piles, except for the area where feed is being removed from the pile, with a plastic tarp that is at least 5 mils thick (0.005 inches), multiple plastic tarps with a cumulative thickness of at least 5 mils (0.005 inches), or an oxygen barrier film covered with a UV resistant material within 72 hours of last delivery of material to the pile, and implement one of the following:		

☑	☑	a) build silage piles such that the average bulk density is at least 44 lb/cu-ft for corn silage and 40 lb/cu-ft for other silage types, as measured in accordance with Section 7.10 of Rule 4570, b) when creating a silage pile, adjust filling parameters to assure a calculated average bulk density of at least 44 lb/cu-ft for corn silage and at least 40 lb/cu-ft for other silage types, using a spreadsheet approved by the District, c) harvest silage crop at > or = 65% moisture for corn; and >= 60% moisture for alfalfa/grass and other silage crops; manage silage material delivery such that no more than 6 inches of materials are uncompacted on top of the pile; and incorporate the applicable Theoretical Length of Chop (TLC) and roller opening for the crop being harvested. For dairies - implement two of the following: For heifer/calf ranches - implement one of the following: Manage Exposed Silage. a) manage silage piles such that only one silage pile has an uncovered face and the uncovered face has a total exposed surface area of less than 2,150 sq. ft., or b) manage multiple uncovered silage piles such that the total exposed surface area of all silage piles is less than 4,300 sq ft. Maintain Silage Working Face. a) use a shaver/facer to remove silage from the silage pile, or b) maintain a smooth vertical surface on the working face of the silage pile Silage Additive: a) inoculate silage with homolactic acid bacteria in accordance with manufacturer recommendations to achieve a concentration of at least 100,000 colony forming units per gram of wet forage or apply proprionic acid, benzoic acid, sorbic acid, sodium benzoate, or potassium sorbate at a rate specified by the manufacturer to reduce yeast counts when forming silage pile; or b) apply other additives at specified rates that have been demonstrated to reduce alcohol concentrations in silage and/or VOC emissions from silage and have been approved by the District and EPA.	39.0%	39.0%
		Total Control Efficiency*	39.00%	39.00%

*Assumes 25% control for density mitigation measures and 10% each for the two optional measures, resulting in an overall control of 39%. The same conservative control efficiency will be applied to the sealed feed storage system (Ag-Bag).

		TMR Mitigations		
☑	☑	(D) Push feed so that it is within 3 feet of feedlane fence within 2 hrs of putting out the feed or use a feed trough or other feeding structure designed to maintain feed within reach of the cows.	10%	10%
☑	☑	(D) Begin feeding total mixed rations within 2 hrs of grinding and mixing rations. Note: If selected for dairies > 999 milk cows, control efficiency already included in EF.	0%	0%
☑	☑	Feed steam-flaked, dry rolled, cracked or ground corn or other ground cereal grains.	10%	10%
☐	☑	Remove uneaten wet feed from feed bunks within 24 hrs after then end of a rain event.	0%	10%
☐	☐	(D) For total mixed rations that contain at least 30% by weight of silage, feed animals total mixed rations that contain at least 45% moisture.	0%	0%
☑	☑	Feed according to NRC guidelines. Note: If selected for dairies, control efficiency already included in EF.	0%	0%
		Total Control Efficiency	19.00%	27.10%

Ammonia Mitigation Measures and Control Efficiencies

Milking Parlor				
Measure Proposed?		Mitigation Measure(s) per Emissions Point	NH3 Control Efficiency (%)	
Pre-Project	Post-Project		Pre-Project	Post-Project
		Milking Parlor Floor Mitigations		
☑	☑	Feed according to NRC guidelines	28%	28%
		Total Control Efficiency	28%	28%

Cow Housing				
Measure Proposed?		Mitigation Measure(s) per Emissions Point	NH3 Control Efficiency (%)	
Pre-Project	Post-Project		Pre-Project	Post-Project
		Corrals/Pens Mitigations		
☑	☑	Feed according to NRC guidelines	28%	28%
☐	☑	Clean manure from corrals at least four times per year with at least 60 days between cleaning, or clean corrals at least once between April and July and at least once between September and December. **OR** Use lime or a similar absorbent material in the corral according to the manufacturer's recommendation to minimize moisture in the corrals. **OR** Apply thymol to the corral soil in accordance with the manufacturer's recommendation.	0%	50%
		Total Control Efficiency	28%	64%
		Bedding Mitigations		
☑	☑	Feed according to NRC guidelines	28%	28%
☑	☑	Use non-manure-based bedding and non-separated solids based bedding for at least 90% of the bedding material, by weight, for freestalls (e.g. rubber mats, almond shells, sand, or waterbeds). **OR** For a large dairy only (1,000 milk cows or larger) - Remove manure that is not dry from individual cow freestall beds or rake, harrow, scrape, or grade freestall bedding at least once every 7 days. **OR** For a medium dairy only (500 to 999 milk cows) - Remove manure that is not dry from individual cow freestall beds or rake, harrow, scrape, or grade freestall bedding at least once every 14 days.	47.7%	47.7%
		Total Control Efficiency	62.34%	62.34%
		Lanes Mitigations		
☑	☑	Feed according to NRC guidelines	28%	28%
		Total Control Efficiency	28%	28%

Liquid Manure Handling				
Measure Proposed?		Mitigation Measure(s) per Emissions Point	NH3 Control Efficiency (%)	
Pre-Project	Post-Project		Pre-Project	Post-Project
		Lagoons/Storage Ponds Mitigations		
☑	☑	Feed according to NRC guidelines	28%	28%
☑	☑	Use phototropic lagoon **OR** Remove solids from the waste system with a solid separator system, prior to the waste entering the lagoon.	80%	80%
		Total Control Efficiency	85.6%	85.6%
		Liquid Manure Land Application Mitigations		
☑	☑	Feed according to NRC guidelines	28%	28%
☐	☐	Only apply liquid manure that has been treated with an anaerobic treatment lagoon	0%	0%
		Total Control Efficiency	28.00%	28.00%

Solid Manure Handling				
Measure Proposed?		Mitigation Measure(s) per Emissions Point	NH3 Control Efficiency (%)	
Pre-Project	Post-Project		Pre-Project	Post-Project
		Solid Manure Land Application Mitigations		
☑	☑	Feed according to NRC guidelines	28%	28%
☐	☐	Incorporate all solid manure within 72 hours of land application. **AND** Only apply solid manure that has been treated with an anaerobic treatment lagoon, aerobic lagoon or digester system. **AND** Apply no solid manure with a moisture content of more than 50%	0%	0%
		Total Control Efficiency	28.00%	28.00%

Control Measure	PM10 Control Efficiency
Shaded corrals (milk and dry cows)	16.7%
Shaded corrals (heifers and bulls)	8.3%
Downwind shelterbelts	12.5%
Upwind shelterbelts	10%
Freestall with no exercise pens and non-manure based bedding	90%
Freestall with no exercise pens and manure based bedding	80%
Fibrous layer in dusty areas (i.e. hay, etc.)	10%
Bi-weekly corral/exercise pen scraping and/or manure removal using a pull type manure harvesting equipment in morning hours when moisture in air except during periods of rainy weather	15%
Sprinkling of open corrals/exercise pens	12.5%
Feeding young stock (heifers and calves) near dusk	10%

Pre-Project PM10 Mitigation Measures

Pre-Project PM10 Mitigation Measures

	Housing Name(s) or #(s)	Type of Housing	Type of cow	Total # of cows in Each Housing Structure(s)	Maximum Design Capacity of Each Structure	# of Combined Housing Structures in row	Shaded Corrals	Downwind Shelterbelts	Upwind Shelterbelts	No exercise pens, non-manure bedding	No exercise pens, manure bedding	Fibrous layer	Bi-weekly scraping Corrals/Pens	Sprinkling Corrals/Pens	Feed Young Stock Near Dusk
1	Freestall Barn 1	freestall	milk cows	806	806	1	☐	☐	☐	☐	☑	☐	☑	☐	☐
2	Freestall Barn 2	freestall	milk cows	807	807	1	☐	☐	☐	☐	☑	☐	☑	☐	☐
3	Freestall Barn 3	freestall	milk cows	807	807	1	☐	☐	☐	☐	☐	☐	☑	☐	☐
4	Freestall Barn 4	freestall	support stock	320	320	1	☐	☐	☐	☐	☐	☐	☑	☐	☐
5	Freestall Barn 5	freestall	dry cows	225	225	1	☐	☐	☐	☐	☐	☐	☑	☐	☐
6	Freestall Barn 6	freestall	dry cows	200	200	1	☐	☐	☐	☐	☐	☐	☑	☐	☐
7	Freestall Barn 6	freestall	support stock	600	600	1	☐	☐	☐	☐	☐	☐	☑	☐	☐
8	Corral 1	open corral	support stock	200	200	1	☐	☐	☐	☐	☐	☐	☑	☐	☐
9	Corral 2	open corral	support stock	220	220	1	☐	☐	☐	☐	☐	☐	☑	☐	☐
10	Corral 3	open corral	support stock	220	220	1	☐	☐	☐	☐	☐	☐	☑	☐	☐
11	Corral 4	open corral	support stock	133	133	1	☐	☐	☐	☐	☐	☐	☑	☐	☐
12	Corral 5	open corral	support stock	133	133	1	☐	☐	☐	☐	☐	☐	☑	☐	☐
13	Corral 6	open corral	support stock	134	134	1	☐	☐	☐	☐	☐	☐	☑	☐	☐
14	Calf Hutches	aboveground flushed hutches	calves	400	400	1	☐	☐	☐	☐	☐	☐	☑	☐	☐
15							☐	☐	☐	☐	☐	☐	☐	☐	☐
16							☐	☐	☐	☐	☐	☐	☐	☐	☐
			Pre-Project Total # of Cows	5,205											

Pre-Project PM10 Control Efficiencies and Emission Factors

	Housing Name(s) or #(s)	Type of Housing	Type of cow	Total # of cows in Each Housing Structure(s)	Maximum Design Capacity of Each Structure	Uncontrolled EF (lb/hd-yr)	Shaded Corrals	Downwind Shelterbelts	Upwind Shelterbelts	No exercise pens, non-manure bedding	No exercise pens, manure bedding	Fibrous layer	Bi-weekly scraping Corrals/Pens	Sprinkling Corrals/Pens	Feed Young Stock Near Dusk	Controlled EF (lb/hd-yr)
1	Freestall Barn 1	freestall	milk cows	806	806	1.370					80%		15%			0.23
2	Freestall Barn 2	freestall	milk cows	807	807	1.370					80%		15%			0.23
3	Freestall Barn 3	freestall	milk cows	807	807	1.370							15%			1.17
4	Freestall Barn 4	freestall	support stock	320	320	1.370							15%			1.17
5	Freestall Barn 5	freestall	dry cows	225	225	1.370							15%			1.17
6	Freestall Barn 6	freestall	dry cows	200	200	1.370							15%			1.17
7	Freestall Barn 6	freestall	support stock	600	600	1.370							15%			1.17
8	Corral 1	open corral	support stock	200	200	10.550							15%			8.97
9	Corral 2	open corral	support stock	220	220	10.550							15%			8.97
10	Corral 3	open corral	support stock	220	220	10.550							15%			8.97
11	Corral 4	open corral	support stock	133	133	10.550							15%			8.97
12	Corral 5	open corral	support stock	133	133	10.550							15%			8.97
13	Corral 6	open corral	support stock	134	134	10.550							15%			8.97
14	Calf Hutches	aboveground flushed hutches	calves	400	400	0.069							15%			0.06
15																
16																
			Pre-Project Total # of Cows	5,205												

Post-Project PM10 Mitigation Measures

Post-Project PM10 Mitigation Measures

	Housing Name(s) or #(s)	Type of Housing	Type of cow	Total # of cows in Each Housing Structure(s)	Maximum Design Capacity of Each Structure	# of Combined Housing Structures in row	Shaded Corrals	Downwind Shelterbelts	Upwind Shelterbelts	No exercise pens, non-manure bedding	No exercise pens, manure bedding	Fibrous layer	Bi-weekly scraping Corrals/Pens	Sprinkling Corrals/Pens	Feed Young Stock Near Dusk
1	Freestall Barn 1	freestall	milk cows	800	800	1	☐	☐	☐	☐	☑	☐	☑	☐	☐
2	Freestall Barn 2	freestall	milk cows	800	800	1	☐	☐	☐	☐	☑	☐	☑	☐	☐
3	Freestall Barn 3	freestall	milk cows	800	800	1	☐	☐	☐	☐	☑	☐	☑	☐	☐
4	Freestall Barn 4	freestall	milk cows	320	320	1	☐	☐	☐	☐	☑	☐	☑	☐	☐
5	Freestall Barn 5	freestall	support stock	200	200	1	☐	☐	☐	☐	☑	☐	☑	☐	☐
6	Freestall Barn 6	freestall	dry cows	500	500	1	☐	☐	☐	☐	☐	☐	☑	☐	☐
7	Freestall Barn 6	freestall	support stock	300	300	1	☐	☐	☐	☐	☐	☐	☑	☐	☐
8	Corral 1	open corral	support stock	60	60	1	☐	☐	☐	☐	☐	☐	☑	☐	☐
9	Corral 2	open corral	support stock	40	40	1	☐	☐	☐	☐	☐	☐	☑	☐	☐
10	Corral 3	open corral	support stock	35	35	1	☐	☐	☐	☐	☐	☐	☑	☐	☐
11	Calf Hutches	aboveground flushed hutches	calves	400	400	1	☐	☐	☐	☐	☐	☐	☑	☐	☐
12							☐	☐	☐	☐	☐	☐	☐	☐	☐
13							☐	☐	☐	☐	☐	☐	☐	☐	☐
14							☐	☐	☐	☐	☐	☐	☐	☐	☐
15							☐	☐	☐	☐	☐	☐	☐	☐	☐
16							☐	☐	☐	☐	☐	☐	☐	☐	☐
17							☐	☐	☐	☐	☐	☐	☐	☐	☐
18							☐	☐	☐	☐	☐	☐	☐	☐	☐
19							☐	☐	☐	☐	☐	☐	☐	☐	☐
20							☐	☐	☐	☐	☐	☐	☐	☐	☐
21							☐	☐	☐	☐	☐	☐	☐	☐	☐
22							☐	☐	☐	☐	☐	☐	☐	☐	☐
23							☐	☐	☐	☐	☐	☐	☐	☐	☐
24							☐	☐	☐	☐	☐	☐	☐	☐	☐
25							☐	☐	☐	☐	☐	☐	☐	☐	☐
26							☐	☐	☐	☐	☐	☐	☐	☐	☐
27							☐	☐	☐	☐	☐	☐	☐	☐	☐
28							☐	☐	☐	☐	☐	☐	☐	☐	☐
29							☐	☐	☐	☐	☐	☐	☐	☐	☐
30							☐	☐	☐	☐	☐	☐	☐	☐	☐
31							☐	☐	☐	☐	☐	☐	☐	☐	☐
32							☐	☐	☐	☐	☐	☐	☐	☐	☐
33							☐	☐	☐	☐	☐	☐	☐	☐	☐
34							☐	☐	☐	☐	☐	☐	☐	☐	☐
35							☐	☐	☐	☐	☐	☐	☐	☐	☐
36							☐	☐	☐	☐	☐	☐	☐	☐	☐
37							☐	☐	☐	☐	☐	☐	☐	☐	☐
38							☐	☐	☐	☐	☐	☐	☐	☐	☐
39							☐	☐	☐	☐	☐	☐	☐	☐	☐
40							☐	☐	☐	☐	☐	☐	☐	☐	☐

Post-Project PM10 Mitigation Measures for New Housing Units at an Expanding Dairy

	Housing Name(s) or #(s)	Type of Housing	Type of cow	Total # of cows in Each Housing Structure(s)	Maximum Design Capacity of Each Structure	# of Combined Housing Structures in row	Shaded Corrals	Downwind Shelterbelts	Upwind Shelterbelts	No exercise pens, non-manure bedding	No exercise pens, manure bedding	Fibrous layer	Bi-weekly scraping Corrals/Pens	Sprinkling Corrals/Pens	Feed Young Stock Near Dusk
1	Freestall Barn 7	freestall	milk cows	800	800	1	☐	☐	☐	☐	☑	☐	☑	☐	☐
2	Freestall Barn 8	freestall	milk cows	480	480	1	☐	☐	☐	☐	☑	☐	☑	☐	☐
3	Freestall Barn 9	freestall	support stock	200	200	1	☐	☐	☐	☐	☑	☐	☑	☐	☐
4	Freestall Barn 10	freestall	support stock	600	600	1	☐	☐	☐	☐	☑	☐	☑	☐	☐
5	Freestall Barn 11	freestall	support stock	200	200	1	☐	☐	☐	☐	☑	☐	☑	☐	☐
6	Corral 7	open corral	support stock	35	35	1	☐	☐	☐	☐	☐	☐	☑	☐	☐
7	Corral 8	open corral	support stock	30	30	1	☐	☐	☐	☐	☐	☐	☑	☐	☐
8	Loafing Barn 1	loafing barn	support stock	400	400	1	☐	☐	☐	☐	☑	☐	☑	☐	☐
9	Loafing Barn 2	loafing barn	support stock	300	300	1	☐	☐	☐	☐	☑	☐	☑	☐	☐
10							☐	☐	☐	☐	☐	☐	☐	☐	☐
11							☐	☐	☐	☐	☐	☐	☐	☐	☐
12							☐	☐	☐	☐	☐	☐	☐	☐	☐
13							☐	☐	☐	☐	☐	☐	☐	☐	☐
14							☐	☐	☐	☐	☐	☐	☐	☐	☐

Post-Project Total # of Cows	7,300	(The post-project total includes	dairy cows already on-site and	new cows from the expansion.)

Post-Project PM10 Control Efficiencies and Emission Factors

	Housing Name(s) or #(s)	Type of Housing	Type of cow	Total # of cows in Each Housing Structure(s)	Maximum Design Capacity of Each Structure	Uncontrolled EF (lb/hd-yr)	Shaded Corrals	Downwind Shelterbelts	Upwind Shelterbelts	No exercise pens, non-manure bedding	No exercise pens, manure bedding	Fibrous layer	Bi-weekly scraping Corrals/Pens	Sprinkling Corrals/Pens	Feed Young Stock Near Dusk	Controlled EF (lb/hd-yr)
1	Freestall Barn 1	freestall	milk cows	800	800	1.370					80%		15%			0.23
2	Freestall Barn 2	freestall	milk cows	800	800	1.370					80%		15%			0.23
3	Freestall Barn 3	freestall	milk cows	800	800	1.370					80%		15%			0.23
4	Freestall Barn 4	freestall	milk cows	320	320	1.370					80%		15%			0.23
5	Freestall Barn 5	freestall	support stock	200	200	1.370					80%		15%			0.23
6	Freestall Barn 6	freestall	dry cows	500	500	1.370							15%			1.17
7	Freestall Barn 6	freestall	support stock	300	300	1.370							15%			1.17
8	Corral 1	open corral	support stock	60	60	10.550							15%			8.97
9	Corral 2	open corral	support stock	40	40	10.550							15%			8.97
10	Corral 3	open corral	support stock	35	35	10.550							15%			8.97
11	Calf Hutches	aboveground flushed hutches	calves	400	400	0.069							15%			0.06
12																
13																
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Post-Project PM10 Control Efficiencies and Emission Factors for New Housing Emissions Units

	Housing Name(s) or #(s)	Type of Housing	Type of cow	Total # of cows in Each Housing Structure(s)	Maximum Design Capacity of Each Structure	Uncontrolled EF (lb/hd-yr)	Shaded Corrals	Downwind Shelterbelts	Upwind Shelterbelts	No exercise pens, non-manure bedding	No exercise pens, manure bedding	Fibrous layer	Bi-weekly scraping Corrals/Pens	Sprinkling Corrals/Pens	Feed Young Stock Near Dusk	Controlled EF (lb/hd-yr)
1	Freestall Barn 7	freestall	milk cows	800	800	1.370					80%		15%			0.23
2	Freestall Barn 8	freestall	milk cows	480	480	1.370					80%		15%			0.23
3	Freestall Barn 9	freestall	support stock	200	200	1.370					80%		15%			0.23
4	Freestall Barn 10	freestall	support stock	600	600	1.370					80%		15%			0.23
5	Freestall Barn 11	freestall	support stock	200	200	1.370					80%		15%			0.23
6	Corral 7	open corral	support stock	35	35	10.550							15%			8.97
7	Corral 8	open corral	support stock	30	30	10.550							15%			8.97
8	Loafing Barn 1	loafing barn	support stock	400	400	5.280					80%		15%			0.90
9	Loafing Barn 2	loafing barn	support stock	300	300	5.280					80%		15%			0.90
10																
11																
12																
13																
14																

Increase in Emissions

SSIPE (lb/yr)							
	NOx	SOx	PM10	CO	VOC	NH3	H2S
Milking Parlor	0	0	0	0	632	216	0
Cow Housing	0	0	-7,644	0	9,165	-11,144	0
Liquid Manure	0	0	0	0	5,245	14,802	N/A
Solid Manure	0	0	0	0	842	4,909	0
Feed Handling	0	0	0	0	11,305	0	0
Total	**0**	**0**	**-7,644**	**0**	**27,189**	**8,783**	**N/A**

Total Daily Change in Emissions (lb/day)							
	NOx	SOx	PM10	CO	VOC	NH3	H2S
Milking Parlor	0.0	0.0	0.0	0.0	1.70	0.60	0.0
Cow Housing	0.0	0.0	-20.90	0.0	25.20	-30.60	0.0
Liquid Manure	0.0	0.0	0.0	0.0	14.30	40.60	N/A
Solid Manure	0.0	0.0	0.0	0.0	2.40	13.40	0.0
Feed Handling	0.0	0.0	0.0	0.0	31.00	0.00	0.0
Total	**0.0**	**0.0**	**-20.9**	**0.0**	**74.60**	**24.00**	**N/A**

Total Annual Change in Non-Fugitive Emissions (Major Source Emissions) (lb/yr)							
	NOx	SOx	PM10	CO	VOC	NH3	H2S
Milking Parlor	0	0	0	0	0	0	0
Cow Housing	0	0	0	0	0	0	0
Liquid Manure	0	0	0	0	2,524	0	N/A
Solid Manure	0	0	0	0	0	0	0
Feed Handling	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**2,524**	**0**	**N/A**

Name	Cow Housing Summary			
Applicability	Use this spreadsheet to enter data from the Engineer's Dairy Calculator. Entries here will be linked to other worksheets. After completion, proceed to RMR worksheet for further entries.			
Author or updater	Matthew Cegielski	*Last Update*	September 24, 2018	
Facility:	Silva Dairy		0	Not Set
ID#:				
Project #:				

*Notes:

Potential to Emit - Cow Housing

Housing Name(s) or #(s)	Type of Cow	# of Cows	VOC (lb/hr)	VOC (lb/yr)	NH_3 (lb/hr)	NH_3 (lb/yr)	PM_{10} (lb/hr)	PM_{10} (lb/yr)
Freestall Barn 1	Milk	800	-0.19	-1657.00	-1.40	-12284.00	0.00	-2.00
Freestall Barn 2	Milk	800	-0.19	-1668.00	-1.41	-12320.00	0.00	-2.00
Freestall Barn 3	Milk	800	-0.19	-1668.00	-1.41	-12320.00	-0.09	-754.00
Freestall Barn 4	Milk	320	0.15	1341.00	0.43	3722.00	-0.03	-298.00
Freestall Barn 5	Support Stock	200	-0.07	-603.00	-0.35	-3020.00	-0.03	-215.00
Freestall Barn 6	Dry/Support Stock	800	-0.04	-363.00	-0.26	-2351.00	0.00	1.00
Freestall Barn 7	Milk	800	0.81	7112.00	1.93	16903.00	0.02	186.00
Freestall Barn 8	Milk	480	0.49	4267.00	1.16	10142.00	0.01	112.00
Freestall Barn 9	Support Stock	200	0.09	774.00	0.13	1107.00	0.00	47.00
Freestall Barn 10	Support Stock	600	0.27	2322.00	0.38	3322.00	0.02	140.00
Freestall Barn 11	Support Stock	200	0.09	774.00	0.13	1107.00	0.00	47.00
Corral 1	Support Stock	60	-0.08	-708.00	-0.18	-1567.00	-0.14	-1256.00
Corral 2	Support Stock	40	-0.10	-879.00	-0.21	-1868.00	-0.18	-1614.00
Corral 3	Support Stock	35	-0.10	-899.00	-0.22	-1895.00	-0.19	-1659.00
Corral 7	Support Stock	35	0.02	135.00	0.02	194.00	0.04	314.00
Corral 8	Support Stock	30	0.0125	116	0.0208	166	0.0292	269
Loafing Barn 1	Support Stock	400	0.1750	1,548	0.2542	2,214	0.0417	359
Loafing Barn 2	Support Stock	300	-0.0792	-719	-0.2458	-2,137	-0.3833	-3,319
Calf Hutches	Calves	400	-0.0042	-60	-0.0292	-259	0.0000	0

Copy and paste values from the corresponding table in the Engineer Dairy Calculator's RMR Summary worksheet. Paste values only with matched destination formatting. Ensure the same names are lined up by row number. Zero and null entries will be highlighted in red after entry.

SSIPE RMR Summary							
	PM10 lb/hr	PM10 lb/yr	VOC lb/hr	VOC lb/yr	NH3 lb/hr	NH3 lb/yr	H2S lb/yr
Milking Parlor	-	-	0.07	632	0.02	216	-
Cow Housing	-0.9	-7,644	1.05	9,165	-1.27	-11,144	-
Liquid Manure	-	-	0.60	5,245	1.69	14,802	-
Solid Manure	-	-	0.10	842	0.56	4,909	-
Feed Handling	-	-	1.29	11,305	-	-	-
Lagoon/Storage Pond	-	-	0.29	2,555	0.26	2,300	230
Land Application (Liquid)	-	-	0.31	2,701	1.42	12,447	-
Land Application (Solid)	-	-	0.06	511	0.30	2,592	-
Solid Manure Storage	-	-	0.03	292	0.26	2,300	-

SSIPE Total Herd Summary	
Change in Milk Cows	1,580
Change in Dairy Head	2,095
Change in Dairy Head (Flushed)	2,935

PM_{10} based Agricultural Emissions from Operations generating Dust from Livestock Soil

Use this spreadsheet when the emissions are from a Feedlot Soil sources or Cow Housing and the PM_{10} rates are known (e.g. Dairy operations). Ammonia and PM_{10} Emission rates linked to Cow Housing worksheet. No entries required on this worksheet. Zero and null entries will be highlighted in red after entry.

Author or updater	Matthew Cegielski
Last Update	September 24, 2018
Facility:	Silva Dairy
ID#:	0
Project #:	0

Formula

Emission are calculated by the multiplication of the PM_{10} Rates and the Emission Factors.

			Freestall Barn 1		Freestall Barn 2		Freestall Barn 3		Freestall Barn 4		Freestall Barn 5	
			lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr
PM_{10} Emissions Rates			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Substances	**CAS#**	**Dust* lb/lb PM_{10}**	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**
Aluminum	**7429905**	4.66E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Antimony	**7440360**	1.90E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Arsenic	**7440382**	1.60E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Barium	**7440393**	4.69E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bromine	**7726956**	4.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium	**7440473**	1.40E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Copper	**7440508**	1.32E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexavalent Chromium**	**18540299**	7.00E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lead	**7439921**	3.50E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Manganese	**7439965**	7.59E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mercury	**7439976**	4.00E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nickel	**7440020**	7.00E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phosphorus	**7723140**	4.01E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Selenium	**7782492**	1.00E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sulfates	**9960**	7.28E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vanadium	**7440622**	3.00E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zinc	**7440666**	3.42E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	**7664417**		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.25E-01	3.72E+03	0.00E+00	0.00E+00

	Freestall Barn 6		Freestall Barn 7		Freestall Barn 8		Freestall Barn 9		Freestall Barn 10	
	lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr
PM_{10} Emissions Rates	4.17E-03	1.00E+00	0.02	186.00	0.01	112.00	4.17E-03	4.70E+01	1.67E-02	1.40E+02
Substances	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**
Aluminum	1.94E-04	4.66E-02	9.71E-04	8.67E+00	5.83E-04	5.22E+00	1.94E-04	2.19E+00	7.77E-04	6.53E+00
Antimony	7.92E-08	1.90E-05	3.96E-07	3.53E-03	2.38E-07	2.13E-03	7.92E-08	8.93E-04	3.17E-07	2.66E-03
Arsenic	6.67E-08	1.60E-05	3.33E-07	2.98E-03	2.00E-07	1.79E-03	6.67E-08	7.52E-04	2.67E-07	2.24E-03
Barium	1.95E-06	4.69E-04	9.77E-06	8.72E-02	5.86E-06	5.25E-02	1.95E-06	2.20E-02	7.82E-06	6.57E-02
Bromine	1.83E-07	4.40E-05	9.17E-07	8.18E-03	5.50E-07	4.93E-03	1.83E-07	2.07E-03	7.33E-07	6.16E-03
Chromium	5.83E-08	1.40E-05	2.92E-07	2.60E-03	1.75E-07	1.57E-03	5.83E-08	6.58E-04	2.33E-07	1.96E-03
Copper	5.50E-07	1.32E-04	2.75E-06	2.46E-02	1.65E-06	1.48E-02	5.50E-07	6.20E-03	2.20E-06	1.85E-02
Hexavalent Chromium**	2.92E-09	7.00E-07	1.46E-08	1.30E-04	8.75E-09	7.84E-05	2.92E-09	3.29E-05	1.17E-08	9.80E-05
Lead	1.46E-07	3.50E-05	7.29E-07	6.51E-03	4.38E-07	3.92E-03	1.46E-07	1.65E-03	5.83E-07	4.90E-03
Manganese	3.16E-06	7.59E-04	1.58E-05	1.41E-01	9.49E-06	8.50E-02	3.16E-06	3.57E-02	1.27E-05	1.06E-01
Mercury	1.67E-08	4.00E-06	8.33E-08	7.44E-04	5.00E-08	4.48E-04	1.67E-08	1.88E-04	6.67E-08	5.60E-04
Nickel	2.92E-08	7.00E-06	1.46E-07	1.30E-03	8.75E-08	7.84E-04	2.92E-08	3.29E-04	1.17E-07	9.80E-04
Phosphorus	1.67E-04	4.01E-02	8.36E-04	7.47E+00	5.02E-04	4.50E+00	1.67E-04	1.89E+00	6.69E-04	5.62E+00
Selenium	4.17E-09	1.00E-06	2.08E-08	1.86E-04	1.25E-08	1.12E-04	4.17E-09	4.70E-05	1.67E-08	1.40E-04
Sulfates	3.03E-05	7.28E-03	1.52E-04	1.35E+00	9.10E-05	8.16E-01	3.03E-05	3.42E-01	1.21E-04	1.02E+00
Vanadium	1.25E-07	3.00E-05	6.25E-07	5.58E-03	3.75E-07	3.36E-03	1.25E-07	1.41E-03	5.00E-07	4.20E-03
Zinc	1.43E-06	3.42E-04	7.13E-06	6.36E-02	4.28E-06	3.83E-02	1.43E-06	1.61E-02	5.70E-06	4.79E-02
Ammonia	0.00E+00	0.00E+00	1.93E+00	1.69E+04	1.16E+00	1.01E+04	1.25E-01	1.11E+03	3.79E-01	3.32E+03

	Freestall Barn 11		Corral 1		Corral 2		Corral 3		Corral 7	
	lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr
PM_{10} Emissions Rates	4.17E-03	4.70E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-02	3.14E+02
Substances	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**
Aluminum	1.94E-04	2.19E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E-03	1.46E+01
Antimony	7.92E-08	8.93E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.13E-07	5.97E-03
Arsenic	6.67E-08	7.52E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.00E-07	5.02E-03
Barium	1.95E-06	2.20E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E-05	1.47E-01
Bromine	1.83E-07	2.07E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-06	1.38E-02
Chromium	5.83E-08	6.58E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.25E-07	4.40E-03
Copper	5.50E-07	6.20E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.95E-06	4.14E-02
Hexavalent Chromium**	2.92E-09	3.29E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.63E-08	2.20E-04
Lead	1.46E-07	1.65E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.31E-06	1.10E-02
Manganese	3.16E-06	3.57E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.85E-05	2.38E-01
Mercury	1.67E-08	1.88E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.50E-07	1.26E-03
Nickel	2.92E-08	3.29E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.63E-07	2.20E-03
Phosphorus	1.67E-04	1.89E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-03	1.26E+01
Selenium	4.17E-09	4.70E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-08	3.14E-04
Sulfates	3.03E-05	3.42E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.73E-04	2.29E+00
Vanadium	1.25E-07	1.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E-06	9.42E-03
Zinc	1.43E-06	1.61E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-05	1.07E-01
Ammonia	1.25E-01	1.11E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.08E-02	1.94E+02

	Corral 8		Loafing Barn 1		Loafing Barn 2		Calf Hutches	
	lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr
PM_{10} Emissions Rates	2.92E-02	2.69E+02	4.17E-02	3.59E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Substances	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**
Aluminum	1.36E-03	1.25E+01	1.94E-03	1.67E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Antimony	5.54E-07	5.11E-03	7.92E-07	6.82E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Arsenic	4.67E-07	4.30E-03	6.67E-07	5.74E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Barium	1.37E-05	1.26E-01	1.95E-05	1.68E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bromine	1.28E-06	1.18E-02	1.83E-06	1.58E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromium	4.08E-07	3.77E-03	5.83E-07	5.03E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Copper	3.85E-06	3.55E-02	5.50E-06	4.74E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexavalent Chromium**	2.04E-08	1.88E-04	2.92E-08	2.51E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lead	1.02E-06	9.42E-03	1.46E-06	1.26E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Manganese	2.21E-05	2.04E-01	3.16E-05	2.72E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mercury	1.17E-07	1.08E-03	1.67E-07	1.44E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nickel	2.04E-07	1.88E-03	2.92E-07	2.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Phosphorus	1.17E-03	1.08E+01	1.67E-03	1.44E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Selenium	2.92E-08	2.69E-04	4.17E-08	3.59E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sulfates	2.12E-04	1.96E+00	3.03E-04	2.61E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vanadium	8.75E-07	8.07E-03	1.25E-06	1.08E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zinc	9.98E-06	9.20E-02	1.43E-05	1.23E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ammonia	2.08E-02	1.66E+02	2.54E-01	2.21E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Agricultural Miscellaneous Emissions from Dairy Operations (Cow Housing)

Use this spreadsheet to characterize the miscellanous emissions from Dairy sources when VOC rates are known. VOC emission rates linked to Cow Housing worksheet. No entries required on this worksheet. Zero and null entries will be highlighted in red after entry.

Author or updater	Matthew Cegielski
Last Update	September 24, 2018
Facility:	Silva Dairy
ID#:	0
Project #:	0

Formula

Emissions are calculated by the multiplication of the VOC Rates, and Emission Factors.

			Freestall Barn 1		Freestall Barn 2		Freestall Barn 3		Freestall Barn 4	
			lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr
VOC Emission Rates			0.00E+00	0.0	0.00E+00	0.0	0.00E+00	0.0	1.54E-01	1,341.0
Substances	**CAS#**	**Volatiles (lb/lb VOC)***	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**
1,1,2,2-Tetrachloroethane	79345	8.73E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-06	1.17E-02
1,1,2-Trichloroethane	79005	2.26E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.48E-05	3.03E-01
1,2,3-Trichloropropane	96184	2.76E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.26E-05	3.70E-01
1,2,4-Trichlorobenzene	120821	7.79E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-04	1.04E+00
1,2-Dibromo-3-chloropropane	96128	4.94E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.62E-06	6.62E-02
1,2-Dichlorobenzene	95501	5.48E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.45E-05	7.35E-01
1,3-Dichlorobenzene	541731	4.90E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.55E-05	6.57E-01
1,4 Dioxane	123911	1.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-04	1.89E+00
1,4-Dichlorobenzene	106467	5.19E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.00E-05	6.96E-01
Acetaldehyde	75070	2.41E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.72E-04	3.23E+00
Acrylonitrile	107131	2.43E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.75E-05	3.26E-01
Benzene	71432	3.19E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.92E-05	4.28E-01
Benzyl chloride	100447	2.89E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.46E-05	3.88E-01
Butyraldehyde	123728	1.14E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E-05	1.53E-01
Carbon Disulfide	75150	2.49E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.84E-04	3.34E+00
Carbon tetrachloride	56235	5.87E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.05E-06	7.87E-02
Chlorobenzene	108907	2.72E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.19E-05	3.65E-01
Chloroform	67663	1.31E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.02E-05	1.76E-01
Chloromethane	74873	7.93E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.22E-04	1.06E+00
Crotonaldehyde	4170303	1.41E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-05	1.89E-01
Cyclohexane	110827	6.83E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-03	9.16E+00
Ethyl Chloride	75003	2.39E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.68E-05	3.20E-01
Ethylbenzene	100414	3.47E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.35E-05	4.65E-01
Ethylene Dibromide (EDB)	106934	3.06E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.72E-05	4.10E-01
Ethylene Dichloride (EDC)	107062	5.89E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.08E-06	7.90E-02
Formaldehyde	50000	3.98E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.14E-05	5.34E-01
Hexane	110543	8.12E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E-04	1.09E+00
Isopropyl Alchol	67630	1.62E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-04	2.17E+00
Isopropylbenzene (Cumene)	98828	5.61E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.65E-06	7.52E-02
Methyl Ethyl Ketone (2-butanone)	78933	1.46E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E-03	1.96E+01
Methyl Isobutyl Ketone	108101	7.09E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-04	9.51E-01
Napthalene	91203	1.16E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-04	1.56E+00
Perchloroethylene	127184	6.51E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-04	8.73E-01
Styrene	100425	3.59E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.53E-05	4.81E-01
t-1,4-Dichloro-2-butene	764410	8.92E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.38E-04	1.20E+00
Toluene	108883	1.07E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E-04	1.43E+00
Trichlorofluoromethane*	75694	1.08E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-08	1.45E-04
Vinyl acetate	108054	1.97E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.04E-04	2.64E+00
Xylenes	1330207	1.80E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.78E-04	2.41E+00

	Freestall Barn 5		Freestall Barn 6		Freestall Barn 7		Freestall Barn 8	
	lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr
VOC Emission Rates	0.00E+00	0.0	0.00E+00	0.0	0.81	7112.00	0.49	4267.00
Substances	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**
1,1,2,2-Tetrachloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.09E-06	6.21E-02	4.26E-06	3.73E-02
1,1,2-Trichloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-04	1.61E+00	1.10E-04	9.64E-01
1,2,3-Trichloropropane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.24E-04	1.96E+00	1.35E-04	1.18E+00
1,2,4-Trichlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.33E-04	5.54E+00	3.80E-04	3.32E+00
1,2-Dibromo-3-chloropropane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.01E-05	3.51E-01	2.41E-05	2.11E-01
1,2-Dichlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.45E-04	3.90E+00	2.67E-04	2.34E+00
1,3-Dichlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.98E-04	3.48E+00	2.39E-04	2.09E+00
1,4 Dioxane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-03	1.00E+01	6.87E-04	6.02E+00
1,4-Dichlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E-04	3.69E+00	2.53E-04	2.21E+00
Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-03	1.71E+01	1.17E-03	1.03E+01
Acrylonitrile	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E-04	1.73E+00	1.18E-04	1.04E+00
Benzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.59E-04	2.27E+00	1.56E-04	1.36E+00
Benzyl chloride	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.35E-04	2.06E+00	1.41E-04	1.23E+00
Butyraldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.26E-05	8.11E-01	5.56E-05	4.86E-01
Carbon Disulfide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.02E-03	1.77E+01	1.21E-03	1.06E+01
Carbon tetrachloride	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.77E-05	4.17E-01	2.86E-05	2.50E-01
Chlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E-04	1.93E+00	1.33E-04	1.16E+00
Chloroform	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.06E-04	9.32E-01	6.39E-05	5.59E-01
Chloromethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.44E-04	5.64E+00	3.87E-04	3.38E+00
Crotonaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-04	1.00E+00	6.87E-05	6.02E-01
Cyclohexane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.55E-03	4.86E+01	3.33E-03	2.91E+01
Ethyl Chloride	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.94E-04	1.70E+00	1.17E-04	1.02E+00
Ethylbenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.82E-04	2.47E+00	1.69E-04	1.48E+00
Ethylene Dibromide (EDB)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-04	2.18E+00	1.49E-04	1.31E+00
Ethylene Dichloride (EDC)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.79E-05	4.19E-01	2.87E-05	2.51E-01
Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.23E-04	2.83E+00	1.94E-04	1.70E+00
Hexane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.60E-04	5.77E+00	3.96E-04	3.46E+00
Isopropyl Alchol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-03	1.15E+01	7.90E-04	6.91E+00
Isopropylbenzene (Cumene)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.56E-05	3.99E-01	2.73E-05	2.39E-01
Methyl Ethyl Ketone (2-butanone)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E-02	1.04E+02	7.12E-03	6.23E+01
Methyl Isobutyl Ketone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.76E-04	5.04E+00	3.46E-04	3.03E+00
Napthalene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.43E-04	8.25E+00	5.66E-04	4.95E+00
Perchloroethylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.29E-04	4.63E+00	3.17E-04	2.78E+00
Styrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.92E-04	2.55E+00	1.75E-04	1.53E+00
t-1,4-Dichloro-2-butene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.25E-04	6.34E+00	4.35E-04	3.81E+00
Toluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.69E-04	7.61E+00	5.22E-04	4.57E+00
Trichlorofluoromethane*	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.78E-08	7.68E-04	5.27E-08	4.61E-04
Vinyl acetate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-03	1.40E+01	9.60E-04	8.41E+00
Xylenes	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-03	1.28E+01	8.78E-04	7.68E+00

	Freestall Barn 9		Freestall Barn 10		Freestall Barn 11		Corral 1	
	lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr
VOC Emission Rates	8.75E-02	774.0	2.67E-01	2322	8.75E-02	774.0	0.00E+00	0.0
Substances	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**
1,1,2,2-Tetrachloroethane	7.64E-07	6.76E-03	2.33E-06	2.03E-02	7.64E-07	6.76E-03	0.00E+00	0.00E+00
1,1,2-Trichloroethane	1.98E-05	1.75E-01	6.03E-05	5.25E-01	1.98E-05	1.75E-01	0.00E+00	0.00E+00
1,2,3-Trichloropropane	2.42E-05	2.14E-01	7.36E-05	6.41E-01	2.42E-05	2.14E-01	0.00E+00	0.00E+00
1,2,4-Trichlorobenzene	6.82E-05	6.03E-01	2.08E-04	1.81E+00	6.82E-05	6.03E-01	0.00E+00	0.00E+00
1,2-Dibromo-3-chloropropane	4.32E-06	3.82E-02	1.32E-05	1.15E-01	4.32E-06	3.82E-02	0.00E+00	0.00E+00
1,2-Dichlorobenzene	4.80E-05	4.24E-01	1.46E-04	1.27E+00	4.80E-05	4.24E-01	0.00E+00	0.00E+00
1,3-Dichlorobenzene	4.29E-05	3.79E-01	1.31E-04	1.14E+00	4.29E-05	3.79E-01	0.00E+00	0.00E+00
1,4 Dioxane	1.23E-04	1.09E+00	3.76E-04	3.27E+00	1.23E-04	1.09E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene	4.54E-05	4.02E-01	1.38E-04	1.21E+00	4.54E-05	4.02E-01	0.00E+00	0.00E+00
Acetaldehyde	2.11E-04	1.87E+00	6.43E-04	5.60E+00	2.11E-04	1.87E+00	0.00E+00	0.00E+00
Acrylonitrile	2.13E-05	1.88E-01	6.48E-05	5.64E-01	2.13E-05	1.88E-01	0.00E+00	0.00E+00
Benzene	2.79E-05	2.47E-01	8.51E-05	7.41E-01	2.79E-05	2.47E-01	0.00E+00	0.00E+00
Benzyl chloride	2.53E-05	2.24E-01	7.71E-05	6.71E-01	2.53E-05	2.24E-01	0.00E+00	0.00E+00
Butyraldehyde	9.98E-06	8.82E-02	3.04E-05	2.65E-01	9.98E-06	8.82E-02	0.00E+00	0.00E+00
Carbon Disulfide	2.18E-04	1.93E+00	6.64E-04	5.78E+00	2.18E-04	1.93E+00	0.00E+00	0.00E+00
Carbon tetrachloride	5.14E-06	4.54E-02	1.57E-05	1.36E-01	5.14E-06	4.54E-02	0.00E+00	0.00E+00
Chlorobenzene	2.38E-05	2.11E-01	7.25E-05	6.32E-01	2.38E-05	2.11E-01	0.00E+00	0.00E+00
Chloroform	1.15E-05	1.01E-01	3.49E-05	3.04E-01	1.15E-05	1.01E-01	0.00E+00	0.00E+00
Chloromethane	6.94E-05	6.14E-01	2.11E-04	1.84E+00	6.94E-05	6.14E-01	0.00E+00	0.00E+00
Crotonaldehyde	1.23E-05	1.09E-01	3.76E-05	3.27E-01	1.23E-05	1.09E-01	0.00E+00	0.00E+00
Cyclohexane	5.98E-04	5.29E+00	1.82E-03	1.59E+01	5.98E-04	5.29E+00	0.00E+00	0.00E+00
Ethyl Chloride	2.09E-05	1.85E-01	6.37E-05	5.55E-01	2.09E-05	1.85E-01	0.00E+00	0.00E+00
Ethylbenzene	3.04E-05	2.69E-01	9.25E-05	8.06E-01	3.04E-05	2.69E-01	0.00E+00	0.00E+00
Ethylene Dibromide (EDB)	2.68E-05	2.37E-01	8.16E-05	7.11E-01	2.68E-05	2.37E-01	0.00E+00	0.00E+00
Ethylene Dichloride (EDC)	5.15E-06	4.56E-02	1.57E-05	1.37E-01	5.15E-06	4.56E-02	0.00E+00	0.00E+00
Formaldehyde	3.48E-05	3.08E-01	1.06E-04	9.24E-01	3.48E-05	3.08E-01	0.00E+00	0.00E+00
Hexane	7.11E-05	6.28E-01	2.17E-04	1.89E+00	7.11E-05	6.28E-01	0.00E+00	0.00E+00
Isopropyl Alchol	1.42E-04	1.25E+00	4.32E-04	3.76E+00	1.42E-04	1.25E+00	0.00E+00	0.00E+00
Isopropylbenzene (Cumene)	4.91E-06	4.34E-02	1.50E-05	1.30E-01	4.91E-06	4.34E-02	0.00E+00	0.00E+00
Methyl Ethyl Ketone (2-butanone)	1.28E-03	1.13E+01	3.89E-03	3.39E+01	1.28E-03	1.13E+01	0.00E+00	0.00E+00
Methyl Isobutyl Ketone	6.20E-05	5.49E-01	1.89E-04	1.65E+00	6.20E-05	5.49E-01	0.00E+00	0.00E+00
Napthalene	1.02E-04	8.98E-01	3.09E-04	2.69E+00	1.02E-04	8.98E-01	0.00E+00	0.00E+00
Perchloroethylene	5.70E-05	5.04E-01	1.74E-04	1.51E+00	5.70E-05	5.04E-01	0.00E+00	0.00E+00
Styrene	3.14E-05	2.78E-01	9.57E-05	8.34E-01	3.14E-05	2.78E-01	0.00E+00	0.00E+00
t-1,4-Dichloro-2-butene	7.81E-05	6.90E-01	2.38E-04	2.07E+00	7.81E-05	6.90E-01	0.00E+00	0.00E+00
Toluene	9.36E-05	8.28E-01	2.85E-04	2.48E+00	9.36E-05	8.28E-01	0.00E+00	0.00E+00
Trichlorofluoromethane*	9.45E-09	8.36E-05	2.88E-08	2.51E-04	9.45E-09	8.36E-05	0.00E+00	0.00E+00
Vinyl acetate	1.72E-04	1.52E+00	5.25E-04	4.57E+00	1.72E-04	1.52E+00	0.00E+00	0.00E+00
Xylenes	1.58E-04	1.39E+00	4.80E-04	4.18E+00	1.58E-04	1.39E+00	0.00E+00	0.00E+00

	Corral 2		Corral 3		Corral 7		Corral 8	
	lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr
VOC Emission Rates	0.00E+00	0.0	0.00E+00	0.0	1.67E-02	135.0	1.25E-02	116.0
Substances	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**
1,1,2,2-Tetrachloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.46E-07	1.18E-03	1.09E-07	1.01E-03
1,1,2-Trichloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E-06	3.05E-02	2.83E-06	2.62E-02
1,2,3-Trichloropropane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.60E-06	3.73E-02	3.45E-06	3.20E-02
1,2,4-Trichlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-05	1.05E-01	9.74E-06	9.04E-02
1,2-Dibromo-3-chloropropane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.23E-07	6.67E-03	6.18E-07	5.73E-03
1,2-Dichlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.13E-06	7.40E-02	6.85E-06	6.36E-02
1,3-Dichlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.17E-06	6.62E-02	6.13E-06	5.68E-02
1,4 Dioxane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.35E-05	1.90E-01	1.76E-05	1.64E-01
1,4-Dichlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.65E-06	7.01E-02	6.49E-06	6.02E-02
Acetaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.02E-05	3.25E-01	3.01E-05	2.80E-01
Acrylonitrile	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.05E-06	3.28E-02	3.04E-06	2.82E-02
Benzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.32E-06	4.31E-02	3.99E-06	3.70E-02
Benzyl chloride	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.82E-06	3.90E-02	3.61E-06	3.35E-02
Butyraldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E-06	1.54E-02	1.43E-06	1.32E-02
Carbon Disulfide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.15E-05	3.36E-01	3.11E-05	2.89E-01
Carbon tetrachloride	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.78E-07	7.92E-03	7.34E-07	6.81E-03
Chlorobenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.53E-06	3.67E-02	3.40E-06	3.16E-02
Chloroform	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.18E-06	1.77E-02	1.64E-06	1.52E-02
Chloromethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-05	1.07E-01	9.91E-06	9.20E-02
Crotonaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.35E-06	1.90E-02	1.76E-06	1.64E-02
Cyclohexane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-04	9.22E-01	8.54E-05	7.92E-01
Ethyl Chloride	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.98E-06	3.23E-02	2.99E-06	2.77E-02
Ethylbenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.78E-06	4.68E-02	4.34E-06	4.03E-02
Ethylene Dibromide (EDB)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E-06	4.13E-02	3.83E-06	3.55E-02
Ethylene Dichloride (EDC)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.82E-07	7.95E-03	7.36E-07	6.83E-03
Formaldehyde	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-06	5.37E-02	4.98E-06	4.62E-02
Hexane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.35E-05	1.10E-01	1.02E-05	9.42E-02
Isopropyl Alchol	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E-05	2.19E-01	2.03E-05	1.88E-01
Isopropylbenzene (Cumene)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.35E-07	7.57E-03	7.01E-07	6.51E-03
Methyl Ethyl Ketone (2-butanone)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-04	1.97E+00	1.83E-04	1.69E+00
Methyl Isobutyl Ketone	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E-05	9.57E-02	8.86E-06	8.22E-02
Napthalene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-05	1.57E-01	1.45E-05	1.35E-01
Perchloroethylene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.09E-05	8.79E-02	8.14E-06	7.55E-02
Styrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.98E-06	4.85E-02	4.49E-06	4.16E-02
t-1,4-Dichloro-2-butene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-05	1.20E-01	1.12E-05	1.03E-01
Toluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E-05	1.44E-01	1.34E-05	1.24E-01
Trichlorofluoromethane*	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E-09	1.46E-05	1.35E-09	1.25E-05
Vinyl acetate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E-05	2.66E-01	2.46E-05	2.29E-01
Xylenes	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-05	2.43E-01	2.25E-05	2.09E-01

	Loafing Barn 1		Loafing Barn 2		Calf Hutches	
	lb/hr	lb/yr	lb/hr	lb/yr	lb/hr	lb/yr
VOC Emission Rates	1.75E-01	1,548.0	0.00E+00	0.0	0.00E+00	0.0
Substances	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**	**LB/HR**	**LB/YR**
1,1,2,2-Tetrachloroethane	1.53E-06	1.35E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1,2-Trichloroethane	3.96E-05	3.50E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,3-Trichloropropane	4.83E-05	4.27E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2,4-Trichlorobenzene	1.36E-04	1.21E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-Dibromo-3-chloropropane	8.65E-06	7.65E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-Dichlorobenzene	9.59E-05	8.48E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,3-Dichlorobenzene	8.58E-05	7.59E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,4 Dioxane	2.47E-04	2.18E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,4-Dichlorobenzene	9.08E-05	8.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acetaldehyde	4.22E-04	3.73E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Acrylonitrile	4.25E-05	3.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	5.58E-05	4.94E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzyl chloride	5.06E-05	4.47E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Butyraldehyde	2.00E-05	1.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon Disulfide	4.36E-04	3.85E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon tetrachloride	1.03E-05	9.09E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chlorobenzene	4.76E-05	4.21E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroform	2.29E-05	2.03E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloromethane	1.39E-04	1.23E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Crotonaldehyde	2.47E-05	2.18E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cyclohexane	1.20E-03	1.06E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethyl Chloride	4.18E-05	3.70E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	6.07E-05	5.37E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylene Dibromide (EDB)	5.36E-05	4.74E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylene Dichloride (EDC)	1.03E-05	9.12E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Formaldehyde	6.97E-05	6.16E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hexane	1.42E-04	1.26E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Isopropyl Alchol	2.84E-04	2.51E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Isopropylbenzene (Cumene)	9.82E-06	8.68E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl Ethyl Ketone (2-butanone)	2.56E-03	2.26E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Methyl Isobutyl Ketone	1.24E-04	1.10E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Napthalene	2.03E-04	1.80E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Perchloroethylene	1.14E-04	1.01E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Styrene	6.28E-05	5.56E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
t-1,4-Dichloro-2-butene	1.56E-04	1.38E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	1.87E-04	1.66E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Trichlorofluoromethane*	1.89E-08	1.67E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl acetate	3.45E-04	3.05E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Xylenes	3.15E-04	2.79E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Name	Agricultural Miscellaneous Emissions from Dairy Operations (Milk Parlors)					
Applicability	Use this spreadsheet to characterize the miscellanous emissions from Dairy sources when VOC rates are known. VOC emission rates linked to RMR worksheet. Enter VOC and NH_3 rates if there is more than one Milk Parlor.					
Author or updater	Matthew Cegielski		*Last Update*	August 26, 2016		
Facility:	Silva Dairy					
ID#:	0					
Project #:	0					
More than one Milk Parlor?	N		**Formula**			
Inputs	VOC lb/yr	NH_3 lb/yr	Select N or Y from the dropdown. If there is more than one Milk Parlor, enter VOC and NH_3 rates. Toxic emissions are calculated by the multiplication of the VOC Rates and Emission Factors.			
Milk Parlor 1	632	216				
Milk Parlor 2			lb/hr	lb/yr	lb/hr	lb/yr
VOC Emission Rates			**7.21E-02**	**6.32E+02**	**0.00E+00**	**0.00E+00**

Substances	CAS#	Toxic EF's (lb/lb VOC)*	LB/HR	LB/YR	LB/HR	LB/YR
1,1,2,2-Tetrachloroethane	**79345**	8.73E-06	6.30E-07	5.52E-03	0.00E+00	0.00E+00
1,1,2-Trichloroethane	**79005**	2.26E-04	1.63E-05	1.43E-01	0.00E+00	0.00E+00
1,2,3-Trichloropropane	**96184**	2.76E-04	1.99E-05	1.74E-01	0.00E+00	0.00E+00
1,2,4-Trichlorobenzene	**120821**	7.79E-04	5.62E-05	4.92E-01	0.00E+00	0.00E+00
1,2-Dibromo-3-chloropropane	**96128**	4.94E-05	3.56E-06	3.12E-02	0.00E+00	0.00E+00
1,2-Dichlorobenzene	**95501**	5.48E-04	3.95E-05	3.46E-01	0.00E+00	0.00E+00
1,3-Dichlorobenzene	**541731**	4.90E-04	3.54E-05	3.10E-01	0.00E+00	0.00E+00
1,4 Dioxane	**123911**	1.41E-03	1.02E-04	8.91E-01	0.00E+00	0.00E+00
1,4-Dichlorobenzene	**106467**	5.19E-04	3.74E-05	3.28E-01	0.00E+00	0.00E+00
Acetaldehyde	**75070**	2.41E-03	1.74E-04	1.52E+00	0.00E+00	0.00E+00
Acrylonitrile	**107131**	2.43E-04	1.75E-05	1.54E-01	0.00E+00	0.00E+00
Benzene	**71432**	3.19E-04	2.30E-05	2.02E-01	0.00E+00	0.00E+00
Benzyl chloride	**100447**	2.89E-04	2.09E-05	1.83E-01	0.00E+00	0.00E+00
Butyraldehyde	**123728**	1.14E-04	8.22E-06	7.20E-02	0.00E+00	0.00E+00
Carbon Disulfide	**75150**	2.49E-03	1.80E-04	1.57E+00	0.00E+00	0.00E+00
Carbon tetrachloride	**56235**	5.87E-05	4.23E-06	3.71E-02	0.00E+00	0.00E+00
Chlorobenzene	**108907**	2.72E-04	1.96E-05	1.72E-01	0.00E+00	0.00E+00
Chloroform	**67663**	1.31E-04	9.45E-06	8.28E-02	0.00E+00	0.00E+00
Chloromethane	**74873**	7.93E-04	5.72E-05	5.01E-01	0.00E+00	0.00E+00
Crotonaldehyde	**4170303**	1.41E-04	1.02E-05	8.91E-02	0.00E+00	0.00E+00
Cyclohexane	**110827**	6.83E-03	4.93E-04	4.32E+00	0.00E+00	0.00E+00
Ethyl Chloride	**75003**	2.39E-04	1.72E-05	1.51E-01	0.00E+00	0.00E+00
Ethylbenzene	**100414**	3.47E-04	2.50E-05	2.19E-01	0.00E+00	0.00E+00
Ethylene Dibromide (EDB)	**106934**	3.06E-04	2.21E-05	1.93E-01	0.00E+00	0.00E+00
Ethylene Dichloride (EDC)	**107062**	5.89E-05	4.25E-06	3.72E-02	0.00E+00	0.00E+00
Formaldehyde	**50000**	3.98E-04	2.87E-05	2.52E-01	0.00E+00	0.00E+00
Hexane	**110543**	8.12E-04	5.86E-05	5.13E-01	0.00E+00	0.00E+00
Isopropyl Alchol	**67630**	1.62E-03	1.17E-04	1.02E+00	0.00E+00	0.00E+00
Isopropylbenzene (Cumene)	**98828**	5.61E-05	4.05E-06	3.55E-02	0.00E+00	0.00E+00
Methyl Ethyl Ketone (2-butanone)	**78933**	1.46E-02	1.05E-03	9.23E+00	0.00E+00	0.00E+00
Methyl Isobutyl Ketone	**108101**	7.09E-04	5.12E-05	4.48E-01	0.00E+00	0.00E+00
Napthalene	**91203**	1.16E-03	8.37E-05	7.33E-01	0.00E+00	0.00E+00
Perchloroethylene	**127184**	6.51E-04	4.70E-05	4.11E-01	0.00E+00	0.00E+00
Styrene	**100425**	3.59E-04	2.59E-05	2.27E-01	0.00E+00	0.00E+00
t-1,4-Dichloro-2-butene	**764410**	8.92E-04	6.44E-05	5.64E-01	0.00E+00	0.00E+00
Toluene	**108883**	1.07E-03	7.72E-05	6.76E-01	0.00E+00	0.00E+00
Trichlorofluoromethane*	**75694**	1.08E-07	7.79E-09	6.83E-05	0.00E+00	0.00E+00
Vinyl acetate	**108054**	1.97E-03	1.42E-04	1.25E+00	0.00E+00	0.00E+00
Xylenes	**1330207**	1.80E-03	1.30E-04	1.14E+00	0.00E+00	0.00E+00
Ammonia	**7664417**		2.47E-02	2.16E+02	0.00E+00	0.0

Name	Agricultural Lagoon Emissions from Dairy Operations
Applicability	Use this spreadsheet when the emissions are from a Dairy Lagoon sources and the VOC rates are known. The VOC rates are linked to the RMR worksheet cells VOC rates in 'Lagoon/Storage Pond row'. Enter values into the Lagoon area calculator on the right to determine area fraction(s). Total ammonia value is linked to the RMR worksheet cells, 'Lagoon/Storage Pond'. Individual Lagoon values are calculated by multiplying the total lagoon ammonia by their area fraction. Entries required in yellow areas, output in gray areas.

Author or updater	Matthew Cegielski	*Last Update*	September 12, 2018
Facility:	Silva Dairy		
ID#:	0		
Project #:	0		

Inputs	lb/hr	lb/yr	**Formula**
VOC Rate	0.29	2,555	Emissions are calculated by the multiplication of the VOC rates, area fracton, and emission factors.

			Lagoon Area Fraction		**0.33**		**0.22**		**0.45**	
Substances	**CAS#**	**Emissions Factors lb/VOC***	**LB/HR**	**LB/YR**	**Lagoon LB/HR**	**Lagoon LB/YR**	**Lagoon 2 LB/HR**	**Lagoon 2 LB/YR**	**Lagoon 3 LB/HR**	**Lagoon 3 LB/YR**
1,1,2,2-Tetrachloroethane	**79345**	3.44E-02	1.00E-02	8.78E+01	3.35E-03	2.93E+01	2.19E-03	1.91E+01	4.49E-03	3.94E+01
1,1,2-Trichloroethane	**79005**	7.94E-03	2.32E-03	2.03E+01	7.73E-04	6.77E+00	5.05E-04	4.42E+00	1.04E-03	9.09E+00
1,2,4-Trimethylbenzene	**95636**	2.94E-02	8.57E-03	7.51E+01	2.86E-03	2.51E+01	1.87E-03	1.64E+01	3.84E-03	3.36E+01
1,2-Dichlorobenzene	**95501**	6.25E-02	1.82E-02	1.60E+02	6.09E-03	5.33E+01	3.97E-03	3.48E+01	8.17E-03	7.15E+01
1,3-Dichlorobenzene	**541731**	4.94E-02	1.44E-02	1.26E+02	4.81E-03	4.21E+01	3.14E-03	2.75E+01	6.45E-03	5.65E+01
1,3-Dichloropropene	**542756**	7.44E-03	2.17E-03	1.90E+01	7.24E-04	6.35E+00	4.73E-04	4.14E+00	9.72E-04	8.51E+00
1,4 Dioxane	**123911**	2.50E-02	7.29E-03	6.39E+01	2.44E-03	2.13E+01	1.59E-03	1.39E+01	3.27E-03	2.86E+01
1,4-Dichloro-2-butene	**764410**	6.88E-02	2.01E-02	1.76E+02	6.70E-03	5.87E+01	4.37E-03	3.83E+01	8.98E-03	7.87E+01
1,4-Dichlorobenzene	**106467**	5.19E-02	1.51E-02	1.33E+02	5.05E-03	4.43E+01	3.30E-03	2.89E+01	6.78E-03	5.94E+01
Acetaldehyde	**75070**	1.56E-02	4.56E-03	3.99E+01	1.52E-03	1.33E+01	9.94E-04	8.70E+00	2.04E-03	1.79E+01
Acrylonitrile	**107131**	7.31E-03	2.13E-03	1.87E+01	7.12E-04	6.24E+00	4.65E-04	4.07E+00	9.56E-04	8.37E+00
Benzene	**71432**	2.88E-03	8.39E-04	7.35E+00	2.80E-04	2.45E+00	1.83E-04	1.60E+00	3.76E-04	3.29E+00
Benzyl chloride	**100447**	3.13E-02	9.11E-03	7.98E+01	3.04E-03	2.67E+01	1.99E-03	1.74E+01	4.08E-03	3.58E+01
Carbon disulfide	**75150**	3.94E-02	1.15E-02	1.01E+02	3.84E-03	3.36E+01	2.50E-03	2.19E+01	5.15E-03	4.51E+01
Chlorobenzene	**108907**	1.31E-02	3.83E-03	3.35E+01	1.28E-03	1.12E+01	8.35E-04	7.31E+00	1.72E-03	1.50E+01
Cumene	**98828**	1.94E-02	5.65E-03	4.95E+01	1.89E-03	1.65E+01	1.23E-03	1.08E+01	2.53E-03	2.22E+01
Cyclohexane	**110827**	8.19E-03	2.39E-03	2.09E+01	7.97E-04	6.99E+00	5.21E-04	4.56E+00	1.07E-03	9.37E+00
Ethyl Chloride	**75003**	4.63E-03	1.35E-03	1.18E+01	4.50E-04	3.95E+00	2.94E-04	2.58E+00	6.04E-04	5.29E+00
Ethylbenzene	**100414**	1.00E-02	2.92E-03	2.56E+01	9.74E-04	8.53E+00	6.36E-04	5.57E+00	1.31E-03	1.14E+01
Ethylene Dibromide (EDB)	**106934**	1.44E-02	4.19E-03	3.67E+01	1.40E-03	1.23E+01	9.14E-04	8.01E+00	1.88E-03	1.65E+01
Ethylene Dichloride (EDC)	**107062**	4.06E-03	1.18E-03	1.04E+01	3.96E-04	3.47E+00	2.58E-04	2.26E+00	5.31E-04	4.65E+00
Formaldehyde	**50000**	8.13E-03	2.37E-03	2.08E+01	7.91E-04	6.93E+00	5.17E-04	4.53E+00	1.06E-03	9.30E+00
Hexane	**110543**	4.31E-03	1.26E-03	1.10E+01	4.20E-04	3.68E+00	2.74E-04	2.40E+00	5.64E-04	4.94E+00
Isopropyl Alchol	**67630**	7.50E-03	2.19E-03	1.92E+01	7.31E-04	6.40E+00	4.77E-04	4.18E+00	9.80E-04	8.59E+00
Methyl Ethyl Ketone	**78933**	1.38E-02	4.01E-03	3.51E+01	1.34E-03	1.17E+01	8.74E-04	7.66E+00	1.80E-03	1.57E+01
Methyl Isobutyl Ketone	**108101**	1.13E-02	3.30E-03	2.89E+01	1.10E-03	9.65E+00	7.19E-04	6.30E+00	1.48E-03	1.29E+01
Napthalene	**91203**	1.88E-01	5.47E-02	4.79E+02	1.83E-02	1.60E+02	1.19E-02	1.04E+02	2.45E-02	2.15E+02
Perchloroethylene	**127184**	1.75E-01	5.10E-02	4.47E+02	1.70E-02	1.49E+02	1.11E-02	9.75E+01	2.29E-02	2.00E+02
Styrene	**100425**	1.63E-02	4.74E-03	4.15E+01	1.58E-03	1.39E+01	1.03E-03	9.05E+00	2.12E-03	1.86E+01
Toluene	**108883**	1.25E-02	3.65E-03	3.19E+01	1.22E-03	1.07E+01	7.95E-04	6.96E+00	1.63E-03	1.43E+01
Trichloroethylene	**79016**	1.12E-02	3.26E-03	2.86E+01	1.09E-03	9.55E+00	7.11E-04	6.23E+00	1.46E-03	1.28E+01
Xylenes	**1330207**	1.88E-02	5.47E-03	4.79E+01	1.83E-03	1.60E+01	1.19E-03	1.04E+01	2.45E-03	2.15E+01
Ammonia	**7664417**				8.766E-02	7.679E+02	5.723E-02	5.013E+02	1.176E-01	1.030E+03

Table 1. Truck Travel: Diesel Particulate Matter Increased Emissions

Type of Vehicles	Source	Round Trip Distance (mi)	Emission Factor (g/mi)	Increase in Trucks/Year	Emissions (lb/yr)	Emissions (lb/day)
Milk Tankers	MTT	0.52	0.02	730	1.25E-02	3.43E-05
Commodity Delivery	CTT	0.67	0.02	730	1.62E-02	4.44E-05
Manure Transport	SMTT1	0.77	0.02	408	1.04E-02	7.64E-05
Manure Transport	SMTT2	0.04	0.02	408	5.55E-04	4.09E-06
Silage Hauling	STT	0.73	0.02	125	3.04E-03	2.43E-05
Quarter Mile Off Site	QMTT	0.25	0.02	1993	1.65E-02	4.52E-05

Note 1: Running emission factors for vehicle category "T7 Single Other Class 8" were obtained from the EMFAC2021 Web Database for Merced County (2023) with an Aggregate Fleet Mix Traveling 10 MPH.
Note 2: Increases in trucks/yr is from the Initial Study, page 17

Table 2. Truck Idling: Diesel Particulate Matter Increased Emissions

Type of Vehicles	Source	Emission Factor (g/hr-vehicle)	Minutes Idling/Truck	Increase in Trucks/Year	Emissions (lb/yr)	Emissions (lb/day)
Milk Tankers	MTI	0.002	15	730	8.81E-04	2.41E-06
Commodity Delivery	CTI	0.002	15	730	8.81E-04	2.41E-06
Manure Transport	SMTI1-2	0.002	15	815	9.84E-04	3.62E-06
Silage Hauling	STI	0.002	15	125	1.51E-04	1.21E-06

Note 1: Running emission factors for vehicle category "T7 Single Other Class 8" were obtained from the EMFAC2021 Web Database for Merced County (2023) with an Aggregate Fleet Mix Idling.
Note 2: Increases in trucks/yr is from the Initial Study, page 17

Table 3. Tractors: Diesel Particulate Matter Increased Emissions

	Source (# Volume Sources)	HP	Load Factor	Hours/day	Days/year	Emission Factor (g/hp-hr)	Emissions (lb/yr)	Emissions (lb/day)
Feed Loading	FLT	231	0.37	2.0	365	1.49E-02	2.05E+00	5.62E-03
Bedding Delivery	FBDT1-6	148	0.37	4.2	12	1.49E-02	7.50E-03	6.25E-04
Manure Scraping	MST1-2	148	0.37	2.0	12	1.49E-02	3.60E-03	3.00E-04
Manure Loading	MLT1-2	192	0.37	3.0	10	1.49E-02	7.01E-03	7.01E-04
Feed Delivery	FBDT1-6	170	0.37	2.0	365	1.49E-02	4.14E-03	1.13E-05

Note1 : Emissions based on EPA's *Nonroad Compression-Ignition* Engines - Exhaust Emission Standards for the appropriate year and HP
https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100OA05.pdf

Note 2: Increase in hours/day was provided by the project applicant

Table 4. Truck Travel: NOx Increased Emissions

	Source	Round Trip Distance (mi)	Emission Factor (g/mi)	Increase in Trucks/Year	Emissions (lb/yr)	Emissions (lb/day)
Milk Tankers	MTT	0.52	6.64	730	5.54E+00	1.52E-02
Commodity Delivery	CTT	0.67	6.64	730	7.16E+00	1.96E-02
Manure Transport	SMTT1	0.77	6.64	408	4.58E+00	3.37E-02
Manure Transport	SMTT2	0.04	6.64	408	2.45E-01	1.81E-03
Silage Hauling	STT	0.73	6.64	125	1.34E+00	1.07E-02

Note 1: Running emission factors for vehicle category "T7 Single Other Class 8" were obtained from the EMFAC2021 Web Database for Merced County (2023) with an Aggregate Fleet Mix Traveling 10 MPH.
Note 2: Increases in trucks/yr is from the Initial Study, page 23

Table 5. Truck Idling: NOx Increased Emissions

Type of Vehicles	Source	Emission Factor (g/hr-vehicle)	Minutes Idling/Truck	Increase in Trucks/Year	Emissions (lb/yr)	Emissions (lb/day)
Milk Tankers	MTI	0.94	15	730	3.80E-01	1.04E-03
Commodity Delivery	CTI	0.94	15	730	3.80E-01	1.04E-03
Manure Transport	SMTI1-2	0.94	15	815	4.24E-01	1.56E-03
Silage Hauling	STI	0.94	15	125	6.51E-02	5.20E-04

Note 1: Running emission factors for vehicle category "T7 Single Other Class 8" were obtained from the EMFAC2021 Web Database for Merced County (2023) with an Aggregate Fleet Mix Idling.
Note 2: Increases in trucks/yr is from the Initial Study, page 23

Table 6. Tractors: NOx Increased Emissions

	Source (# Volume Sources)	HP	Load Factor	Hours/day	Days/Year	Emission Factor (g/hp-hr)	Emissions (lb/yr)	Emissions (lb/day)
Feed Loading	FLT	231	0.37	2.0	365	2.98E-01	4.103E+01	1.12E-01
Bedding Delivery	FBDT1-6	148	0.37	4.2	12	2.98E-01	1.50E-01	1.25E-02
Manure Scraping	MS1-2	148	0.37	2.0	12	2.98E-01	8.64E-01	7.20E-02
Manure Loading	MLT1-2	192	0.37	3.0	10	2.98E-01	1.40E+00	1.40E-01
Feed Delivery	FBDT1-6	170	0.37	2.0	365	2.98E-01	3.02E+01	8.27E-02

Note1 : Emissions based on EPA's *Nonroad Compression-Ignition* Engines - Exhaust Emission Standards for the appropriate year and HP https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100OA05.pdf
Note 2: Increase in hours/day was provided by the project applicant
Note 3: Load factors from CalEEMod's Appendix D Table 3.3 *OFFROAD Default Horsepower and Load Factors*

Table 7. Truck Travel: SOx Increased Emissions

Type of Vehicles	Source	Round Trip Distance (mi)	Emission Factor (g/mi)	Increase in Trucks/Year	Emissions (lb/yr)	Emissions (lb/day)
Milk Tankers	MTT	0.52	0.03	730	2.45E-02	6.71E-05
Commodity Delivery	CTT	0.67	0.03	730	3.17E-02	8.68E-05
Manure Transport	SMTT1	0.77	0.03	408	2.03E-02	1.49E-04
Manure Transport	SMTT2	0.04	0.03	408	1.08E-03	7.99E-06
Silage Hauling	STT	0.73	0.03	125	5.93E-03	4.75E-05

Note 1: Running emission factors for vehicle category "T7 Single Other Class 8" were obtained from the EMFAC2021 Web Database for Merced County (2023) with an Aggregate Fleet Mix Traveling 10 MPH.
Note 2: Increases in trucks/yr is from the Initial Study, page 23

Table 8. Truck Idling: SOx Increased Emissions

Type of Vehicles	Source	Emission Factor (g/hr-vehicle)	Minutes Idling/Truck	Increase in Trucks/Year	Emissions (lb/yr)	Emissions (lb/day)
Milk Tankers	MTI	0.002	15	730	7.51E-04	2.06E-06
Commodity Delivery	CTI	0.002	15	730	7.51E-04	2.06E-06
Manure Transport	SMTI1-2	0.002	15	815	8.39E-04	3.09E-06
Silage Hauling	STI	0.002	15	125	1.29E-04	1.03E-06

Note 1: Running emission factors for vehicle category "T7 Single Other Class 8" were obtained from the EMFAC2021 Web Database for Merced County (2023) with an Aggregate Fleet Mix Idling.
Note 2: Increases in trucks/yr is from the Initial Study, page 23

Table 9. Tractors: SOx Increase Emissions

	Source (# Volume Sources)	HP	Load Factor	Hours/day	Days/Year	Emission Factor (g/hp-hr)	Emissions (lb/yr)	Emissions (lb/day)
Feed Loading	FLT	231	0.37	2.0	365	5.00E-03	6.88E-01	1.88E-03
Bedding Delivery	FBDT1-6	148	0.37	4.2	12	5.00E-03	2.52E-03	2.10E-04
Manure Scraping	MS1-2	148	0.37	2.0	12	5.00E-03	1.45E-02	1.21E-03
Manure Loading	MLT1-2	192	0.37	3.0	10	5.00E-03	2.35E-02	2.35E-03
Feed Delivery	FBDT1-6	170	0.37	2.0	365	5.00E-03	5.06E-01	1.39E-03

Note1 : Emissions based on CalEEmod's Appendix D, dafualts for the appropriate year and HP
Note 2: Increase in hours/day was provided by the project applicant
Note 3: Load factors from CalEEMod's Appendix D Table 3.3 *OFFROAD Default Horsepower and Load Factors*

Table 10. Truck Travel: CO Increased Emissions

Type of Vehicles	Source	Round Trip Distance (mi)	Emission Factor (g/mi)	Increase in Trucks/Year	Emissions (lb/year)	Emissions (lb/day)
Milk Tankers	MTT	0.52	1.03	730	8.60E-01	2.36E-03
Commodity Delivery	CTT	0.67	1.03	730	1.11E+00	3.05E-03
Manure Transport	SMTT1	0.77	1.03	408	7.12E-01	5.24E-03
Manure Transport	SMTT2	0.04	1.03	408	3.81E-02	2.80E-04
Silage Hauling	STT	0.73	1.03	125	2.08E-01	1.67E-03

Note 1: Running emission factors for vehicle category "T7 Single Other Class 8" were obtained from the EMFAC2021 Web Database for Merced County (2023) with an Aggregate Fleet Mix Travelir
Note 2: Increases in trucks/yr is from the Initial Study, page 23

Table 11. Truck Idling: CO Increased Emissions

Type of Vehicles	Source	Emission Factor (g/hr-vehicle)	Minutes Idling/Truck	Increase in Trucks/Year	Emissions (lb/yr)	Emissions (lb/day)
Milk Tankers	MTI	1.08	15	730	4.36E-01	1.19E-03
Commodity Delivery	CTI	1.08	15	730	4.36E-01	1.19E-03
Manure Transport	SMTI1-2	1.08	15	815	4.86E-01	1.79E-03
Silage Hauling	STI	1.08	15	125	7.46E-02	5.97E-04

Note 1: Running emission factors for vehicle category "T7 Single Other Class 8" were obtained from the EMFAC2021 Web Database for Merced County (2023) with an Aggregate Fleet Mix Idling.
Note 2: Increases in trucks/yr is from the Initial Study, page 23

Table 12. Tractors: CO Increase Emissions

	Source (# Volume Sources)	HP	Load Factor	Hours/day	Days/Year	Emission Factor (g/hp-hr)	Emissions (lb/yr)	Emissions (lb/day)
Feed Loading	FLT	231	0.37	2.0	365	2.61E+00	3.59E+02	9.84E-01
Bedding Delivery	FBDT1-6	148	0.37	4.2	12	3.73E+00	1.88E+00	1.56E-01
Manure Scraping	MS1-2	148	0.37	2.0	12	3.73E+00	1.08E+01	9.00E-01
Manure Loading	MLT1-2	192	0.37	3.0	10	3.73E+00	1.75E+01	1.75E+00
Feed Delivery	FBDT1-6	170	0.37	2.0	365	2.61E+00	2.64E+02	7.24E-01

Note1 : Emissions based on EPA's *Nonroad Compression-Ignition* Engines - Exhaust Emission Standards for the appropriate year and HP
https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100OA05.pdf
Note 2: Increase in hours/day was provided by the project applicant
Note 3: Load factors from CalEEMod's Appendix D Table 3.3 *OFFROAD Default Horsepower and Load Factors*

Table 13. Truck Travel: VOC Increased Emissions

Type of Vehicles	Source	Round Trip Distance (mi)	Emission Factor (g/mi)	Increase in Trucks/Year	Emissions (lb/year)	Emissions (lb/day)
Milk Tankers	MTT	0.52	0.13	730	1.09E-01	2.99E-04
Commodity Delivery	CTT	0.67	0.13	730	1.41E-01	3.87E-04
Manure Transport	SMTT1	0.77	0.13	408	9.05E-02	6.66E-04
Manure Transport	SMTT2	0.04	0.13	408	4.84E-03	3.56E-05
Silage Hauling	STT	0.73	0.13	125	2.65E-02	2.12E-04

Note 1: Running emission factors for vehicle category "T7 Single Other Class 8" were obtained from the EMFAC2021 Web Database for Merced County (2023) with an Aggregate Fleet Mix Travelir
Note 2: Increases in trucks/yr is from the Initial Study, page 23

Table 14. Truck Idling: VOC Increased Emissions

Type of Vehicles	Source	Emission Factor (g/hr-vehicle)	Minutes Idling/Truck	Increase in Trucks/Year	Emissions (lb/yr)	Emissions (lb/day)
Milk Tankers	MTI	2.00	15	730	8.06E-01	2.21E-03
Commodity Delivery	CTI	2.00	15	730	8.06E-01	2.21E-03
Manure Transport	SMTI1-2	2.00	15	815	9.00E-01	3.31E-03
Silage Hauling	STI	2.00	15	125	1.38E-01	1.10E-03

Note 1: Running emission factors for vehicle category "T7 Single Other Class 8" were obtained from the EMFAC2021 Web Database for Merced County (2023) with an Aggregate Fleet Mix Idling.
Note 2: Increases in trucks/yr is from the Initial Study, page 23

Table 15. Tractors: VOC Increase Emissions

	Source (# Volume Sources)	HP	Load Factor	Hours/day	Days/Year	Emission Factor (g/hp-hr)	Emissions (lb/yr)	Emissions (lb/day)
Feed Loading	FLT	231	0.37	2.0	365	2.01E-01	2.76E+01	7.57E-02
Bedding Delivery	FBDT1-6	148	0.37	4.2	12	2.01E-01	1.01E-01	8.43E-03
Manure Scraping	MS1-2	148	0.37	2.0	12	2.01E-01	5.82E-01	4.85E-02
Manure Loading	MLT1-2	192	0.37	3.0	10	1.71E-01	8.03E-01	8.03E-02
Feed Delivery	FBDT1-6	170	0.37	2.0	365	1.71E-01	1.73E+01	4.74E-02

Note1 : Emissions based on CalEEmod's Appendix D, dafualts for the appropriate year and HP
Note 2: Increase in hours/day was provided by the project applicant
Note 3: Load factors from CalEEMod's Appendix D Table 3.3 *OFFROAD Default Horsepower and Load Factors*

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	98.70	1000sqft	2.27	98,700.00	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 and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Construction occurs during 6-month period

Trips and VMT -

Demolition -

Grading -

Vehicle Trips - Operational emissions not calculated.

Consumer Products - Operational emissions not calculated.

Area Coating - Operational emissions not calculated.

Landscape Equipment - Operational emissions not calculated.

Energy Use - Operational emissions not calculated.

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Water And Wastewater - Operational emissions not calculated.

Solid Waste - Operational emissions not calculated.

Construction Off-road Equipment Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	220.00	101.00
tblConstructionPhase	PhaseEndDate	12/12/2024	6/28/2024
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblEnergyUse	LightingElect	2.70	0.00
tblEnergyUse	NT24E	4.16	0.00
tblEnergyUse	NT24NG	3.84	0.00
tblEnergyUse	T24E	1.75	0.00
tblEnergyUse	T24NG	16.86	0.00
tblLandscapeEquipment	NumberSummerDays	180	0
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	122.39	0.00
tblVehicleTrips	ST_TR	6.42	0.00
tblVehicleTrips	SU_TR	5.09	0.00
tblVehicleTrips	WD_TR	3.93	0.00
tblWater	IndoorWaterUseRate	22,824,375.00	0.00

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.1116	0.8917	0.9863	2.0100e-003	0.0620	0.0363	0.0983	0.0202	0.0346	0.0548	0.0000	172.2656	172.2656	0.0283	2.9300e-003	173.8475
Maximum	**0.1116**	**0.8917**	**0.9863**	**2.0100e-003**	**0.0620**	**0.0363**	**0.0983**	**0.0202**	**0.0346**	**0.0548**	**0.0000**	**172.2656**	**172.2656**	**0.0283**	**2.9300e-003**	**173.8475**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.1116	0.8917	0.9863	2.0100e-003	0.0443	0.0363	0.0807	0.0133	0.0346	0.0479	0.0000	172.2654	172.2654	0.0283	2.9300e-003	173.8474
Maximum	**0.1116**	**0.8917**	**0.9863**	**2.0100e-003**	**0.0443**	**0.0363**	**0.0807**	**0.0133**	**0.0346**	**0.0479**	**0.0000**	**172.2654**	**172.2654**	**0.0283**	**2.9300e-003**	**173.8474**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**28.45**	**0.00**	**17.93**	**34.16**	**0.00**	**12.61**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2024	3-31-2024	0.5026	0.5026
2	4-1-2024	6-30-2024	0.4897	0.4897
		Highest	0.5026	0.5026

2.2 Overall Operational

Unmitigated Operational

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	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	N20	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	Demolition	Demolition	1/1/2024	1/26/2024	5	20	
2	Site Preparation	Site Preparation	1/27/2024	1/31/2024	5	3	
3	Grading	Grading	2/1/2024	2/8/2024	5	6	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Building Construction	Building Construction	2/9/2024	6/28/2024	5	101	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 6

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Grading	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	41.00	16.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	49.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2024

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					5.2700e-003	0.0000	5.2700e-003	8.0000e-004	0.0000	8.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0144	0.1389	0.1349	2.4000e-004		6.3100e-003	6.3100e-003		5.8900e-003	5.8900e-003	0.0000	21.0916	21.0916	5.3400e-003	0.0000	21.2250
Total	**0.0144**	**0.1389**	**0.1349**	**2.4000e-004**	**5.2700e-003**	**6.3100e-003**	**0.0116**	**8.0000e-004**	**5.8900e-003**	**6.6900e-003**	**0.0000**	**21.0916**	**21.0916**	**5.3400e-003**	**0.0000**	**21.2250**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2024

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	5.0000e-005	3.0100e-003	6.5000e-004	1.0000e-005	4.2000e-004	3.0000e-005	4.5000e-004	1.2000e-004	3.0000e-005	1.4000e-004	0.0000	1.3431	1.3431	0.0000	2.1000e-004	1.4061
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	5.7000e-004	4.2000e-004	5.0600e-003	1.0000e-005	1.6100e-003	1.0000e-005	1.6200e-003	4.3000e-004	1.0000e-005	4.4000e-004	0.0000	1.2820	1.2820	3.0000e-005	4.0000e-005	1.2935
Total	**6.2000e-004**	**3.4300e-003**	**5.7100e-003**	**2.0000e-005**	**2.0300e-003**	**4.0000e-005**	**2.0700e-003**	**5.5000e-004**	**4.0000e-005**	**5.8000e-004**	**0.0000**	**2.6251**	**2.6251**	**3.0000e-005**	**2.5000e-004**	**2.6996**

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					2.0500e-003	0.0000	2.0500e-003	3.1000e-004	0.0000	3.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0144	0.1389	0.1349	2.4000e-004		6.3100e-003	6.3100e-003		5.8900e-003	5.8900e-003	0.0000	21.0915	21.0915	5.3400e-003	0.0000	21.2250
Total	**0.0144**	**0.1389**	**0.1349**	**2.4000e-004**	**2.0500e-003**	**6.3100e-003**	**8.3600e-003**	**3.1000e-004**	**5.8900e-003**	**6.2000e-003**	**0.0000**	**21.0915**	**21.0915**	**5.3400e-003**	**0.0000**	**21.2250**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2024

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	5.0000e-005	3.0100e-003	6.5000e-004	1.0000e-005	4.2000e-004	3.0000e-005	4.5000e-004	1.2000e-004	3.0000e-005	1.4000e-004	0.0000	1.3431	1.3431	0.0000	2.1000e-004	1.4061
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	5.7000e-004	4.2000e-004	5.0600e-003	1.0000e-005	1.6100e-003	1.0000e-005	1.6200e-003	4.3000e-004	1.0000e-005	4.4000e-004	0.0000	1.2820	1.2820	3.0000e-005	4.0000e-005	1.2935
Total	**6.2000e-004**	**3.4300e-003**	**5.7100e-003**	**2.0000e-005**	**2.0300e-003**	**4.0000e-005**	**2.0700e-003**	**5.5000e-004**	**4.0000e-005**	**5.8000e-004**	**0.0000**	**2.6251**	**2.6251**	**3.0000e-005**	**2.5000e-004**	**2.6996**

3.3 Site Preparation - 2024

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					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8600e-003	0.0197	0.0144	4.0000e-005		7.5000e-004	7.5000e-004		6.9000e-004	6.9000e-004	0.0000	3.2300	3.2300	1.0400e-003	0.0000	3.2561
Total	**1.8600e-003**	**0.0197**	**0.0144**	**4.0000e-005**	**2.3900e-003**	**7.5000e-004**	**3.1400e-003**	**2.6000e-004**	**6.9000e-004**	**9.5000e-004**	**0.0000**	**3.2300**	**3.2300**	**1.0400e-003**	**0.0000**	**3.2561**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2024

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	4.7000e-004	0.0000	1.5000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1183	0.1183	0.0000	0.0000	0.1194
Total	**5.0000e-005**	**4.0000e-005**	**4.7000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1183**	**0.1183**	**0.0000**	**0.0000**	**0.1194**

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					9.3000e-004	0.0000	9.3000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8600e-003	0.0197	0.0144	4.0000e-005		7.5000e-004	7.5000e-004		6.9000e-004	6.9000e-004	0.0000	3.2300	3.2300	1.0400e-003	0.0000	3.2561
Total	**1.8600e-003**	**0.0197**	**0.0144**	**4.0000e-005**	**9.3000e-004**	**7.5000e-004**	**1.6800e-003**	**1.0000e-004**	**6.9000e-004**	**7.9000e-004**	**0.0000**	**3.2300**	**3.2300**	**1.0400e-003**	**0.0000**	**3.2561**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2024

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	4.7000e-004	0.0000	1.5000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1183	0.1183	0.0000	0.0000	0.1194
Total	**5.0000e-005**	**4.0000e-005**	**4.7000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1183**	**0.1183**	**0.0000**	**0.0000**	**0.1194**

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0213	0.0000	0.0213	0.0103	0.0000	0.0103	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9000e-003	0.0415	0.0261	6.0000e-005		1.7200e-003	1.7200e-003		1.5800e-003	1.5800e-003	0.0000	5.4311	5.4311	1.7600e-003	0.0000	5.4750
Total	**3.9000e-003**	**0.0415**	**0.0261**	**6.0000e-005**	**0.0213**	**1.7200e-003**	**0.0230**	**0.0103**	**1.5800e-003**	**0.0119**	**0.0000**	**5.4311**	**5.4311**	**1.7600e-003**	**0.0000**	**5.4750**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	1.0000e-004	1.1700e-003	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2958	0.2958	1.0000e-005	1.0000e-005	0.2985
Total	**1.3000e-004**	**1.0000e-004**	**1.1700e-003**	**0.0000**	**3.7000e-004**	**0.0000**	**3.7000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2958**	**0.2958**	**1.0000e-005**	**1.0000e-005**	**0.2985**

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					8.2900e-003	0.0000	8.2900e-003	4.0100e-003	0.0000	4.0100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9000e-003	0.0415	0.0261	6.0000e-005		1.7200e-003	1.7200e-003		1.5800e-003	1.5800e-003	0.0000	5.4311	5.4311	1.7600e-003	0.0000	5.4750
Total	**3.9000e-003**	**0.0415**	**0.0261**	**6.0000e-005**	**8.2900e-003**	**1.7200e-003**	**0.0100**	**4.0100e-003**	**1.5800e-003**	**5.5900e-003**	**0.0000**	**5.4311**	**5.4311**	**1.7600e-003**	**0.0000**	**5.4750**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	1.0000e-004	1.1700e-003	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.2958	0.2958	1.0000e-005	1.0000e-005	0.2985
Total	**1.3000e-004**	**1.0000e-004**	**1.1700e-003**	**0.0000**	**3.7000e-004**	**0.0000**	**3.7000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.2958**	**0.2958**	**1.0000e-005**	**1.0000e-005**	**0.2985**

3.5 Building Construction - 2024

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	0.0807	0.6476	0.7121	1.2600e-003		0.0272	0.0272		0.0260	0.0260	0.0000	104.8955	104.8955	0.0195	0.0000	105.3840
Total	**0.0807**	**0.6476**	**0.7121**	**1.2600e-003**		**0.0272**	**0.0272**		**0.0260**	**0.0260**	**0.0000**	**104.8955**	**104.8955**	**0.0195**	**0.0000**	**105.3840**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

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	8.8000e-004	0.0339	0.0110	1.5000e-004	4.8400e-003	2.2000e-004	5.0500e-003	1.4000e-003	2.1000e-004	1.6100e-003	0.0000	14.1600	14.1600	5.0000e-005	2.1000e-003	14.7882
Worker	9.1100e-003	6.7000e-003	0.0805	2.2000e-004	0.0257	1.4000e-004	0.0258	6.8200e-003	1.3000e-004	6.9500e-003	0.0000	20.4182	20.4182	5.5000e-004	5.7000e-004	20.6017
Total	**9.9900e-003**	**0.0406**	**0.0916**	**3.7000e-004**	**0.0305**	**3.6000e-004**	**0.0309**	**8.2200e-003**	**3.4000e-004**	**8.5600e-003**	**0.0000**	**34.5781**	**34.5781**	**6.0000e-004**	**2.6700e-003**	**35.3899**

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	0.0807	0.6476	0.7121	1.2600e-003		0.0272	0.0272		0.0260	0.0260	0.0000	104.8954	104.8954	0.0195	0.0000	105.3838
Total	**0.0807**	**0.6476**	**0.7121**	**1.2600e-003**		**0.0272**	**0.0272**		**0.0260**	**0.0260**	**0.0000**	**104.8954**	**104.8954**	**0.0195**	**0.0000**	**105.3838**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

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	8.8000e-004	0.0339	0.0110	1.5000e-004	4.8400e-003	2.2000e-004	5.0500e-003	1.4000e-003	2.1000e-004	1.6100e-003	0.0000	14.1600	14.1600	5.0000e-005	2.1000e-003	14.7882
Worker	9.1100e-003	6.7000e-003	0.0805	2.2000e-004	0.0257	1.4000e-004	0.0258	6.8200e-003	1.3000e-004	6.9500e-003	0.0000	20.4182	20.4182	5.5000e-004	5.7000e-004	20.6017
Total	**9.9900e-003**	**0.0406**	**0.0916**	**3.7000e-004**	**0.0305**	**3.6000e-004**	**0.0309**	**8.2200e-003**	**3.4000e-004**	**8.5600e-003**	**0.0000**	**34.5781**	**34.5781**	**6.0000e-004**	**2.6700e-003**	**35.3899**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy 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 Heavy Industry	0.515533	0.047958	0.156749	0.151796	0.029800	0.007258	0.013970	0.049021	0.000803	0.000458	0.021477	0.002201	0.002977

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Mitigated

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy 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 Heavy 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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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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
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

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	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**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	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**

7.0 Water Detail

7.1 Mitigation Measures Water

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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 Heavy Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

11.0 Vegetation

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Silva Dairy - Milk Parlor

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	22.04	1000sqft	0.51	22,040.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	49
Climate Zone	3			**Operational Year**	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Construction occurs during 3-month period

Trips and VMT -

Demolition -

Grading -

Vehicle Trips - Operational emissions not calculated.

Consumer Products - Operational emissions not calculated.

Area Coating - Operational emissions not calculated.

Landscape Equipment - Operational emissions not calculated.

Energy Use - Operational emissions not calculated.

Silva Dairy - Milk Parlor - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Water And Wastewater - Operational emissions not calculated.

Solid Waste - Operational emissions not calculated.

Construction Off-road Equipment Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	100.00	61.00
tblConstructionPhase	PhaseEndDate	6/6/2025	2/28/2025
tblConstructionPhase	PhaseEndDate	1/17/2025	1/3/2025
tblConstructionPhase	PhaseEndDate	1/15/2025	1/1/2025
tblConstructionPhase	PhaseStartDate	1/18/2025	1/4/2025
tblConstructionPhase	PhaseStartDate	1/16/2025	1/2/2025
tblConstructionPhase	PhaseStartDate	1/15/2025	1/1/2025
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblEnergyUse	LightingElect	2.70	0.00
tblEnergyUse	NT24E	4.16	0.00
tblEnergyUse	NT24NG	3.84	0.00
tblEnergyUse	T24E	1.75	0.00
tblEnergyUse	T24NG	16.86	0.00
tblLandscapeEquipment	NumberSummerDays	180	0
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	27.33	0.00
tblVehicleTrips	ST_TR	6.42	0.00
tblVehicleTrips	SU_TR	5.09	0.00
tblVehicleTrips	WD_TR	3.93	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblWater	IndoorWaterUseRate	5,096,750.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.0129	0.1247	0.1557	2.8000e-004	8.4200e-003	5.2900e-003	0.0137	3.3600e-003	4.8700e-003	8.2300e-003	0.0000	24.9160	24.9160	7.0800e-003	2.5000e-004	25.1681
Maximum	**0.0129**	**0.1247**	**0.1557**	**2.8000e-004**	**8.4200e-003**	**5.2900e-003**	**0.0137**	**3.3600e-003**	**4.8700e-003**	**8.2300e-003**	**0.0000**	**24.9160**	**24.9160**	**7.0800e-003**	**2.5000e-004**	**25.1681**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.0129	0.1247	0.1557	2.8000e-004	5.0200e-003	5.2900e-003	0.0103	1.7800e-003	4.8700e-003	6.6500e-003	0.0000	24.9160	24.9160	7.0800e-003	2.5000e-004	25.1681
Maximum	**0.0129**	**0.1247**	**0.1557**	**2.8000e-004**	**5.0200e-003**	**5.2900e-003**	**0.0103**	**1.7800e-003**	**4.8700e-003**	**6.6500e-003**	**0.0000**	**24.9160**	**24.9160**	**7.0800e-003**	**2.5000e-004**	**25.1681**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**40.38**	**0.00**	**24.80**	**47.02**	**0.00**	**19.20**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2025**	**3-31-2025**	0.1343	0.1343
		Highest	0.1343	0.1343

2.2 Overall Operational

Unmitigated Operational

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	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	N20	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	1/1/2025	1/1/2025	5	1	
2	Grading	Grading	1/2/2025	1/3/2025	5	2	
3	Building Construction	Building Construction	1/4/2025	2/28/2025	5	61	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	9.00	4.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2025

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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2000e-004	2.4000e-003	1.9100e-003	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.4274	0.4274	1.4000e-004	0.0000	0.4309
Total	**2.2000e-004**	**2.4000e-003**	**1.9100e-003**	**0.0000**	**2.7000e-004**	**8.0000e-005**	**3.5000e-004**	**3.0000e-005**	**8.0000e-005**	**1.1000e-004**	**0.0000**	**0.4274**	**0.4274**	**1.4000e-004**	**0.0000**	**0.4309**

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	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0238	0.0238	0.0000	0.0000	0.0240
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0238**	**0.0238**	**0.0000**	**0.0000**	**0.0240**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2025

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					1.0000e-004	0.0000	1.0000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2000e-004	2.4000e-003	1.9100e-003	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.4274	0.4274	1.4000e-004	0.0000	0.4309
Total	**2.2000e-004**	**2.4000e-003**	**1.9100e-003**	**0.0000**	**1.0000e-004**	**8.0000e-005**	**1.8000e-004**	**1.0000e-005**	**8.0000e-005**	**9.0000e-005**	**0.0000**	**0.4274**	**0.4274**	**1.4000e-004**	**0.0000**	**0.4309**

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	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0238	0.0238	0.0000	0.0000	0.0240
Total	**1.0000e-005**	**1.0000e-005**	**9.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0238**	**0.0238**	**0.0000**	**0.0000**	**0.0240**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2025

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					5.3100e-003	0.0000	5.3100e-003	2.5700e-003	0.0000	2.5700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.3000e-004	8.7300e-003	5.3900e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.2000e-004	3.2000e-004	0.0000	1.2380	1.2380	4.0000e-004	0.0000	1.2480
Total	**8.3000e-004**	**8.7300e-003**	**5.3900e-003**	**1.0000e-005**	**5.3100e-003**	**3.5000e-004**	**5.6600e-003**	**2.5700e-003**	**3.2000e-004**	**2.8900e-003**	**0.0000**	**1.2380**	**1.2380**	**4.0000e-004**	**0.0000**	**1.2480**

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	2.8000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0762	0.0762	0.0000	0.0000	0.0769
Total	**3.0000e-005**	**2.0000e-005**	**2.8000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0762**	**0.0762**	**0.0000**	**0.0000**	**0.0769**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2025

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					2.0700e-003	0.0000	2.0700e-003	1.0000e-003	0.0000	1.0000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.3000e-004	8.7300e-003	5.3900e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.2000e-004	3.2000e-004	0.0000	1.2380	1.2380	4.0000e-004	0.0000	1.2480
Total	**8.3000e-004**	**8.7300e-003**	**5.3900e-003**	**1.0000e-005**	**2.0700e-003**	**3.5000e-004**	**2.4200e-003**	**1.0000e-003**	**3.2000e-004**	**1.3200e-003**	**0.0000**	**1.2380**	**1.2380**	**4.0000e-004**	**0.0000**	**1.2480**

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	2.8000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0762	0.0762	0.0000	0.0000	0.0769
Total	**3.0000e-005**	**2.0000e-005**	**2.8000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0762**	**0.0762**	**0.0000**	**0.0000**	**0.0769**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

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	0.0110	0.1096	0.1406	2.3000e-004		4.8300e-003	4.8300e-003		4.4400e-003	4.4400e-003	0.0000	20.0591	20.0591	6.4900e-003	0.0000	20.2213
Total	**0.0110**	**0.1096**	**0.1406**	**2.3000e-004**		**4.8300e-003**	**4.8300e-003**		**4.4400e-003**	**4.4400e-003**	**0.0000**	**20.0591**	**20.0591**	**6.4900e-003**	**0.0000**	**20.2213**

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	8.0000e-005	3.3400e-003	1.0600e-003	1.0000e-005	4.8000e-004	2.0000e-005	5.0000e-004	1.4000e-004	2.0000e-005	1.6000e-004	0.0000	1.3769	1.3769	0.0000	2.0000e-004	1.4379
Worker	7.3000e-004	5.1000e-004	6.3800e-003	2.0000e-005	2.2300e-003	1.0000e-005	2.2400e-003	5.9000e-004	1.0000e-005	6.0000e-004	0.0000	1.7145	1.7145	4.0000e-005	5.0000e-005	1.7291
Total	**8.1000e-004**	**3.8500e-003**	**7.4400e-003**	**3.0000e-005**	**2.7100e-003**	**3.0000e-005**	**2.7400e-003**	**7.3000e-004**	**3.0000e-005**	**7.6000e-004**	**0.0000**	**3.0914**	**3.0914**	**4.0000e-005**	**2.5000e-004**	**3.1670**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

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	0.0110	0.1096	0.1406	2.3000e-004		4.8300e-003	4.8300e-003		4.4400e-003	4.4400e-003	0.0000	20.0591	20.0591	6.4900e-003	0.0000	20.2213
Total	**0.0110**	**0.1096**	**0.1406**	**2.3000e-004**		**4.8300e-003**	**4.8300e-003**		**4.4400e-003**	**4.4400e-003**	**0.0000**	**20.0591**	**20.0591**	**6.4900e-003**	**0.0000**	**20.2213**

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	8.0000e-005	3.3400e-003	1.0600e-003	1.0000e-005	4.8000e-004	2.0000e-005	5.0000e-004	1.4000e-004	2.0000e-005	1.6000e-004	0.0000	1.3769	1.3769	0.0000	2.0000e-004	1.4379
Worker	7.3000e-004	5.1000e-004	6.3800e-003	2.0000e-005	2.2300e-003	1.0000e-005	2.2400e-003	5.9000e-004	1.0000e-005	6.0000e-004	0.0000	1.7145	1.7145	4.0000e-005	5.0000e-005	1.7291
Total	**8.1000e-004**	**3.8500e-003**	**7.4400e-003**	**3.0000e-005**	**2.7100e-003**	**3.0000e-005**	**2.7400e-003**	**7.3000e-004**	**3.0000e-005**	**7.6000e-004**	**0.0000**	**3.0914**	**3.0914**	**4.0000e-005**	**2.5000e-004**	**3.1670**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy 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 Heavy Industry	0.523140	0.047841	0.156254	0.146076	0.028387	0.007025	0.014133	0.049672	0.000816	0.000458	0.021177	0.002172	0.002848

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Mitigated

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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
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

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	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**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	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**

7.0 Water Detail

7.1 Mitigation Measures Water

Silva Dairy - Milk Parlor - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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 Heavy Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

11.0 Vegetation

Silva Dairy - Shop and Commodity Barn - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Silva Dairy - Shop and Commodity Barn

Merced County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	46.40	1000sqft	1.07	46,400.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	49
Climate Zone	3			**Operational Year**	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Construction occurs during 4-month period

Trips and VMT -

Demolition -

Grading -

Vehicle Trips - Operational emissions not calculated.

Consumer Products - Operational emissions not calculated.

Area Coating - Operational emissions not calculated.

Landscape Equipment - Operational emissions not calculated.

Energy Use - Operational emissions not calculated.

Silva Dairy - Shop and Commodity Barn - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Water And Wastewater - Operational emissions not calculated.

Solid Waste - Operational emissions not calculated.

Construction Off-road Equipment Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	200.00	61.00
tblConstructionPhase	PhaseEndDate	6/16/2025	12/31/2024
tblConstructionPhase	PhaseEndDate	9/9/2024	10/7/2024
tblConstructionPhase	PhaseEndDate	9/3/2024	10/1/2024
tblConstructionPhase	PhaseStartDate	9/10/2024	10/8/2024
tblConstructionPhase	PhaseStartDate	9/4/2024	10/2/2024
tblConstructionPhase	PhaseStartDate	9/1/2024	9/28/2024
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblEnergyUse	LightingElect	2.70	0.00
tblEnergyUse	NT24E	4.16	0.00
tblEnergyUse	NT24NG	3.84	0.00
tblEnergyUse	T24E	1.75	0.00
tblEnergyUse	T24NG	16.86	0.00
tblLandscapeEquipment	NumberSummerDays	180	0
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	57.54	0.00
tblVehicleTrips	ST_TR	6.42	0.00
tblVehicleTrips	SU_TR	5.09	0.00
tblVehicleTrips	WD_TR	3.93	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblWater	IndoorWaterUseRate	10,730,000.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0650	0.5307	0.5732	1.1100e-003	0.0354	0.0218	0.0572	0.0134	0.0208	0.0342	0.0000	94.1780	94.1780	0.0164	1.0000e-003	94.8862
Maximum	**0.0650**	**0.5307**	**0.5732**	**1.1100e-003**	**0.0354**	**0.0218**	**0.0572**	**0.0134**	**0.0208**	**0.0342**	**0.0000**	**94.1780**	**94.1780**	**0.0164**	**1.0000e-003**	**94.8862**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0650	0.5307	0.5732	1.1100e-003	0.0205	0.0218	0.0423	7.0200e-003	0.0208	0.0278	0.0000	94.1779	94.1779	0.0164	1.0000e-003	94.8861
Maximum	**0.0650**	**0.5307**	**0.5732**	**1.1100e-003**	**0.0205**	**0.0218**	**0.0423**	**7.0200e-003**	**0.0208**	**0.0278**	**0.0000**	**94.1779**	**94.1779**	**0.0164**	**1.0000e-003**	**94.8861**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**42.19**	**0.00**	**26.10**	**47.61**	**0.00**	**18.69**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**9-1-2024**	**9-30-2024**	0.1649	0.1649
		Highest	0.1649	0.1649

2.2 Overall Operational

Unmitigated Operational

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	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	N20	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	Demolition	Demolition	9/1/2024	9/27/2024	5	20	
2	Site Preparation	Site Preparation	9/28/2024	10/1/2024	5	2	
3	Grading	Grading	10/2/2024	10/7/2024	5	4	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Building Construction	Building Construction	10/8/2024	12/31/2024	5	61	

Acres of Grading (Site Preparation Phase): 1.88

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Welders	3	8.00	46	0.45
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Grading	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	19.00	8.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	37.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2024

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					4.0400e-003	0.0000	4.0400e-003	6.1000e-004	0.0000	6.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0144	0.1389	0.1349	2.4000e-004		6.3100e-003	6.3100e-003		5.8900e-003	5.8900e-003	0.0000	21.0916	21.0916	5.3400e-003	0.0000	21.2250
Total	**0.0144**	**0.1389**	**0.1349**	**2.4000e-004**	**4.0400e-003**	**6.3100e-003**	**0.0104**	**6.1000e-004**	**5.8900e-003**	**6.5000e-003**	**0.0000**	**21.0916**	**21.0916**	**5.3400e-003**	**0.0000**	**21.2250**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2024

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	4.0000e-005	2.2800e-003	4.9000e-004	1.0000e-005	3.2000e-004	2.0000e-005	3.4000e-004	9.0000e-005	2.0000e-005	1.1000e-004	0.0000	1.0142	1.0142	0.0000	1.6000e-004	1.0618
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	5.7000e-004	4.2000e-004	5.0600e-003	1.0000e-005	1.6100e-003	1.0000e-005	1.6200e-003	4.3000e-004	1.0000e-005	4.4000e-004	0.0000	1.2820	1.2820	3.0000e-005	4.0000e-005	1.2935
Total	**6.1000e-004**	**2.7000e-003**	**5.5500e-003**	**2.0000e-005**	**1.9300e-003**	**3.0000e-005**	**1.9600e-003**	**5.2000e-004**	**3.0000e-005**	**5.5000e-004**	**0.0000**	**2.2962**	**2.2962**	**3.0000e-005**	**2.0000e-004**	**2.3553**

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					1.5700e-003	0.0000	1.5700e-003	2.4000e-004	0.0000	2.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0144	0.1389	0.1349	2.4000e-004		6.3100e-003	6.3100e-003		5.8900e-003	5.8900e-003	0.0000	21.0915	21.0915	5.3400e-003	0.0000	21.2250
Total	**0.0144**	**0.1389**	**0.1349**	**2.4000e-004**	**1.5700e-003**	**6.3100e-003**	**7.8800e-003**	**2.4000e-004**	**5.8900e-003**	**6.1300e-003**	**0.0000**	**21.0915**	**21.0915**	**5.3400e-003**	**0.0000**	**21.2250**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2024

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	4.0000e-005	2.2800e-003	4.9000e-004	1.0000e-005	3.2000e-004	2.0000e-005	3.4000e-004	9.0000e-005	2.0000e-005	1.1000e-004	0.0000	1.0142	1.0142	0.0000	1.6000e-004	1.0618
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	5.7000e-004	4.2000e-004	5.0600e-003	1.0000e-005	1.6100e-003	1.0000e-005	1.6200e-003	4.3000e-004	1.0000e-005	4.4000e-004	0.0000	1.2820	1.2820	3.0000e-005	4.0000e-005	1.2935
Total	**6.1000e-004**	**2.7000e-003**	**5.5500e-003**	**2.0000e-005**	**1.9300e-003**	**3.0000e-005**	**1.9600e-003**	**5.2000e-004**	**3.0000e-005**	**5.5000e-004**	**0.0000**	**2.2962**	**2.2962**	**3.0000e-005**	**2.0000e-004**	**2.3553**

3.3 Site Preparation - 2024

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					6.2700e-003	0.0000	6.2700e-003	3.0000e-003	0.0000	3.0000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1100e-003	0.0118	6.6300e-003	2.0000e-005		4.8000e-004	4.8000e-004		4.4000e-004	4.4000e-004	0.0000	1.5113	1.5113	4.9000e-004	0.0000	1.5235
Total	**1.1100e-003**	**0.0118**	**6.6300e-003**	**2.0000e-005**	**6.2700e-003**	**4.8000e-004**	**6.7500e-003**	**3.0000e-003**	**4.4000e-004**	**3.4400e-003**	**0.0000**	**1.5113**	**1.5113**	**4.9000e-004**	**0.0000**	**1.5235**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.1000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0789	0.0789	0.0000	0.0000	0.0796
Total	**4.0000e-005**	**3.0000e-005**	**3.1000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0789**	**0.0789**	**0.0000**	**0.0000**	**0.0796**

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					2.4400e-003	0.0000	2.4400e-003	1.1700e-003	0.0000	1.1700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1100e-003	0.0118	6.6300e-003	2.0000e-005		4.8000e-004	4.8000e-004		4.4000e-004	4.4000e-004	0.0000	1.5113	1.5113	4.9000e-004	0.0000	1.5235
Total	**1.1100e-003**	**0.0118**	**6.6300e-003**	**2.0000e-005**	**2.4400e-003**	**4.8000e-004**	**2.9200e-003**	**1.1700e-003**	**4.4000e-004**	**1.6100e-003**	**0.0000**	**1.5113**	**1.5113**	**4.9000e-004**	**0.0000**	**1.5235**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.1000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0789	0.0789	0.0000	0.0000	0.0796
Total	**4.0000e-005**	**3.0000e-005**	**3.1000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0789**	**0.0789**	**0.0000**	**0.0000**	**0.0796**

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0142	0.0000	0.0142	6.8500e-003	0.0000	6.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6000e-003	0.0276	0.0174	4.0000e-005		1.1400e-003	1.1400e-003		1.0500e-003	1.0500e-003	0.0000	3.6207	3.6207	1.1700e-003	0.0000	3.6500
Total	**2.6000e-003**	**0.0276**	**0.0174**	**4.0000e-005**	**0.0142**	**1.1400e-003**	**0.0153**	**6.8500e-003**	**1.0500e-003**	**7.9000e-003**	**0.0000**	**3.6207**	**3.6207**	**1.1700e-003**	**0.0000**	**3.6500**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2024

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	7.8000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.1972	0.1972	1.0000e-005	1.0000e-005	0.1990
Total	**9.0000e-005**	**6.0000e-005**	**7.8000e-004**	**0.0000**	**2.5000e-004**	**0.0000**	**2.5000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.1972**	**0.1972**	**1.0000e-005**	**1.0000e-005**	**0.1990**

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					5.5200e-003	0.0000	5.5200e-003	2.6700e-003	0.0000	2.6700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6000e-003	0.0276	0.0174	4.0000e-005		1.1400e-003	1.1400e-003		1.0500e-003	1.0500e-003	0.0000	3.6207	3.6207	1.1700e-003	0.0000	3.6500
Total	**2.6000e-003**	**0.0276**	**0.0174**	**4.0000e-005**	**5.5200e-003**	**1.1400e-003**	**6.6600e-003**	**2.6700e-003**	**1.0500e-003**	**3.7200e-003**	**0.0000**	**3.6207**	**3.6207**	**1.1700e-003**	**0.0000**	**3.6500**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2024

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	7.8000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.1972	0.1972	1.0000e-005	1.0000e-005	0.1990
Total	**9.0000e-005**	**6.0000e-005**	**7.8000e-004**	**0.0000**	**2.5000e-004**	**0.0000**	**2.5000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.1972**	**0.1972**	**1.0000e-005**	**1.0000e-005**	**0.1990**

3.5 Building Construction - 2024

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	0.0433	0.3375	0.3818	6.7000e-004		0.0137	0.0137		0.0133	0.0133	0.0000	55.3914	55.3914	9.2200e-003	0.0000	55.6221
Total	**0.0433**	**0.3375**	**0.3818**	**6.7000e-004**		**0.0137**	**0.0137**		**0.0133**	**0.0133**	**0.0000**	**55.3914**	**55.3914**	**9.2200e-003**	**0.0000**	**55.6221**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

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	2.7000e-004	0.0102	3.3300e-003	4.0000e-005	1.4600e-003	7.0000e-005	1.5300e-003	4.2000e-004	6.0000e-005	4.8000e-004	0.0000	4.2760	4.2760	2.0000e-005	6.4000e-004	4.4658
Worker	2.5500e-003	1.8800e-003	0.0225	6.0000e-005	7.1900e-003	4.0000e-005	7.2200e-003	1.9100e-003	4.0000e-005	1.9500e-003	0.0000	5.7147	5.7147	1.5000e-004	1.6000e-004	5.7661
Total	**2.8200e-003**	**0.0121**	**0.0259**	**1.0000e-004**	**8.6500e-003**	**1.1000e-004**	**8.7500e-003**	**2.3300e-003**	**1.0000e-004**	**2.4300e-003**	**0.0000**	**9.9908**	**9.9908**	**1.7000e-004**	**8.0000e-004**	**10.2318**

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	0.0433	0.3375	0.3818	6.7000e-004		0.0137	0.0137		0.0133	0.0133	0.0000	55.3914	55.3914	9.2200e-003	0.0000	55.6220
Total	**0.0433**	**0.3375**	**0.3818**	**6.7000e-004**		**0.0137**	**0.0137**		**0.0133**	**0.0133**	**0.0000**	**55.3914**	**55.3914**	**9.2200e-003**	**0.0000**	**55.6220**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

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	2.7000e-004	0.0102	3.3300e-003	4.0000e-005	1.4600e-003	7.0000e-005	1.5300e-003	4.2000e-004	6.0000e-005	4.8000e-004	0.0000	4.2760	4.2760	2.0000e-005	6.4000e-004	4.4658
Worker	2.5500e-003	1.8800e-003	0.0225	6.0000e-005	7.1900e-003	4.0000e-005	7.2200e-003	1.9100e-003	4.0000e-005	1.9500e-003	0.0000	5.7147	5.7147	1.5000e-004	1.6000e-004	5.7661
Total	**2.8200e-003**	**0.0121**	**0.0259**	**1.0000e-004**	**8.6500e-003**	**1.1000e-004**	**8.7500e-003**	**2.3300e-003**	**1.0000e-004**	**2.4300e-003**	**0.0000**	**9.9908**	**9.9908**	**1.7000e-004**	**8.0000e-004**	**10.2318**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy 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 Heavy Industry	0.523140	0.047841	0.156254	0.146076	0.028387	0.007025	0.014133	0.049672	0.000816	0.000458	0.021177	0.002172	0.002848

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Mitigated

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

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

Silva Dairy - Shop and Commodity Barn - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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
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

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	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**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	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**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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 Heavy Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Silva Dairy - Waste Water Ponds

Merced County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	17.33	1000sqft	0.40	17,325.00	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 and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Construction occurs during 2-month period

Trips and VMT -

Demolition -

Grading -

Vehicle Trips - Operational emissions not calculated.

Consumer Products - Operational emissions not calculated.

Area Coating - Operational emissions not calculated.

Landscape Equipment - Operational emissions not calculated.

Energy Use - Operational emissions not calculated.

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Water And Wastewater - Operational emissions not calculated.

Solid Waste - Operational emissions not calculated.

Construction Off-road Equipment Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	100.00	42.00
tblConstructionPhase	PhaseEndDate	11/20/2024	8/30/2024
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblEnergyUse	LightingElect	2.70	0.00
tblEnergyUse	NT24E	4.16	0.00
tblEnergyUse	NT24NG	3.84	0.00
tblEnergyUse	T24E	1.75	0.00
tblEnergyUse	T24NG	16.86	0.00
tblLandscapeEquipment	NumberSummerDays	180	0
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	21.48	0.00
tblVehicleTrips	ST_TR	6.42	0.00
tblVehicleTrips	SU_TR	5.09	0.00
tblVehicleTrips	WD_TR	3.93	0.00
tblWater	IndoorWaterUseRate	4,005,250.00	0.00

2.0 Emissions Summary

Silva Dairy - Waste Water Ponds - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0144	0.1411	0.1629	2.9000e-004	7.9100e-003	6.4600e-003	0.0144	3.2300e-003	5.9400e-003	9.1700e-003	0.0000	25.3736	25.3736	7.3900e-003	2.1000e-004	25.6202
Maximum	**0.0144**	**0.1411**	**0.1629**	**2.9000e-004**	**7.9100e-003**	**6.4600e-003**	**0.0144**	**3.2300e-003**	**5.9400e-003**	**9.1700e-003**	**0.0000**	**25.3736**	**25.3736**	**7.3900e-003**	**2.1000e-004**	**25.6202**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.0144	0.1411	0.1629	2.9000e-004	4.5100e-003	6.4600e-003	0.0110	1.6400e-003	5.9400e-003	7.5800e-003	0.0000	25.3735	25.3735	7.3900e-003	2.1000e-004	25.6201
Maximum	**0.0144**	**0.1411**	**0.1629**	**2.9000e-004**	**4.5100e-003**	**6.4600e-003**	**0.0110**	**1.6400e-003**	**5.9400e-003**	**7.5800e-003**	**0.0000**	**25.3735**	**25.3735**	**7.3900e-003**	**2.1000e-004**	**25.6201**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**42.98**	**0.00**	**23.73**	**49.23**	**0.00**	**17.34**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Silva Dairy - Waste Water Ponds - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	7-1-2024	9-30-2024	0.1496	0.1496
		Highest	0.1496	0.1496

2.2 Overall Operational

Unmitigated Operational

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	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	N20	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	7/1/2024	7/1/2024	5	1	
2	Grading	Grading	7/2/2024	7/3/2024	5	2	
3	Building Construction	Building Construction	7/4/2024	8/30/2024	5	42	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	7.00	3.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5000e-004	2.8000e-003	1.9500e-003	0.0000		1.0000e-004	1.0000e-004		9.0000e-005	9.0000e-005	0.0000	0.4274	0.4274	1.4000e-004	0.0000	0.4309
Total	**2.5000e-004**	**2.8000e-003**	**1.9500e-003**	**0.0000**	**2.7000e-004**	**1.0000e-004**	**3.7000e-004**	**3.0000e-005**	**9.0000e-005**	**1.2000e-004**	**0.0000**	**0.4274**	**0.4274**	**1.4000e-004**	**0.0000**	**0.4309**

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	0.0247	0.0247	0.0000	0.0000	0.0249
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**	**0.0247**	**0.0247**	**0.0000**	**0.0000**	**0.0249**

Silva Dairy - Waste Water Ponds - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

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					1.0000e-004	0.0000	1.0000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5000e-004	2.8000e-003	1.9500e-003	0.0000		1.0000e-004	1.0000e-004		9.0000e-005	9.0000e-005	0.0000	0.4274	0.4274	1.4000e-004	0.0000	0.4309
Total	**2.5000e-004**	**2.8000e-003**	**1.9500e-003**	**0.0000**	**1.0000e-004**	**1.0000e-004**	**2.0000e-004**	**1.0000e-005**	**9.0000e-005**	**1.0000e-004**	**0.0000**	**0.4274**	**0.4274**	**1.4000e-004**	**0.0000**	**0.4309**

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	0.0247	0.0247	0.0000	0.0000	0.0249
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**	**0.0247**	**0.0247**	**0.0000**	**0.0000**	**0.0249**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

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					5.3100e-003	0.0000	5.3100e-003	2.5700e-003	0.0000	2.5700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.1000e-004	9.7300e-003	5.5500e-003	1.0000e-005		4.0000e-004	4.0000e-004		3.7000e-004	3.7000e-004	0.0000	1.2380	1.2380	4.0000e-004	0.0000	1.2480
Total	**9.1000e-004**	**9.7300e-003**	**5.5500e-003**	**1.0000e-005**	**5.3100e-003**	**4.0000e-004**	**5.7100e-003**	**2.5700e-003**	**3.7000e-004**	**2.9400e-003**	**0.0000**	**1.2380**	**1.2380**	**4.0000e-004**	**0.0000**	**1.2480**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.1000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0789	0.0789	0.0000	0.0000	0.0796
Total	**4.0000e-005**	**3.0000e-005**	**3.1000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0789**	**0.0789**	**0.0000**	**0.0000**	**0.0796**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

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					2.0700e-003	0.0000	2.0700e-003	1.0000e-003	0.0000	1.0000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.1000e-004	9.7300e-003	5.5500e-003	1.0000e-005		4.0000e-004	4.0000e-004		3.7000e-004	3.7000e-004	0.0000	1.2380	1.2380	4.0000e-004	0.0000	1.2480
Total	**9.1000e-004**	**9.7300e-003**	**5.5500e-003**	**1.0000e-005**	**2.0700e-003**	**4.0000e-004**	**2.4700e-003**	**1.0000e-003**	**3.7000e-004**	**1.3700e-003**	**0.0000**	**1.2380**	**1.2380**	**4.0000e-004**	**0.0000**	**1.2480**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.1000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0789	0.0789	0.0000	0.0000	0.0796
Total	**4.0000e-005**	**3.0000e-005**	**3.1000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0789**	**0.0789**	**0.0000**	**0.0000**	**0.0796**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

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	0.0125	0.1255	0.1484	2.4000e-004		5.9300e-003	5.9300e-003		5.4600e-003	5.4600e-003	0.0000	21.0509	21.0509	6.8100e-003	0.0000	21.2211
Total	**0.0125**	**0.1255**	**0.1484**	**2.4000e-004**		**5.9300e-003**	**5.9300e-003**		**5.4600e-003**	**5.4600e-003**	**0.0000**	**21.0509**	**21.0509**	**6.8100e-003**	**0.0000**	**21.2211**

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	7.0000e-005	2.6400e-003	8.6000e-004	1.0000e-005	3.8000e-004	2.0000e-005	3.9000e-004	1.1000e-004	2.0000e-005	1.3000e-004	0.0000	1.1041	1.1041	0.0000	1.6000e-004	1.1530
Worker	6.5000e-004	4.8000e-004	5.7200e-003	2.0000e-005	1.8200e-003	1.0000e-005	1.8300e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4496	1.4496	4.0000e-005	4.0000e-005	1.4627
Total	**7.2000e-004**	**3.1200e-003**	**6.5800e-003**	**3.0000e-005**	**2.2000e-003**	**3.0000e-005**	**2.2200e-003**	**5.9000e-004**	**3.0000e-005**	**6.2000e-004**	**0.0000**	**2.5537**	**2.5537**	**4.0000e-005**	**2.0000e-004**	**2.6157**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

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	0.0125	0.1255	0.1484	2.4000e-004		5.9300e-003	5.9300e-003		5.4600e-003	5.4600e-003	0.0000	21.0509	21.0509	6.8100e-003	0.0000	21.2211
Total	**0.0125**	**0.1255**	**0.1484**	**2.4000e-004**		**5.9300e-003**	**5.9300e-003**		**5.4600e-003**	**5.4600e-003**	**0.0000**	**21.0509**	**21.0509**	**6.8100e-003**	**0.0000**	**21.2211**

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	7.0000e-005	2.6400e-003	8.6000e-004	1.0000e-005	3.8000e-004	2.0000e-005	3.9000e-004	1.1000e-004	2.0000e-005	1.3000e-004	0.0000	1.1041	1.1041	0.0000	1.6000e-004	1.1530
Worker	6.5000e-004	4.8000e-004	5.7200e-003	2.0000e-005	1.8200e-003	1.0000e-005	1.8300e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4496	1.4496	4.0000e-005	4.0000e-005	1.4627
Total	**7.2000e-004**	**3.1200e-003**	**6.5800e-003**	**3.0000e-005**	**2.2000e-003**	**3.0000e-005**	**2.2200e-003**	**5.9000e-004**	**3.0000e-005**	**6.2000e-004**	**0.0000**	**2.5537**	**2.5537**	**4.0000e-005**	**2.0000e-004**	**2.6157**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy 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 Heavy Industry	0.515533	0.047958	0.156749	0.151796	0.029800	0.007258	0.013970	0.049021	0.000803	0.000458	0.021477	0.002201	0.002977

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Mitigated

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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
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

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	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**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	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**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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 Heavy Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

11.0 Vegetation

Silva Dairy - FSB9-11 and LB1-2 - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Silva Dairy - FSB9-11 and LB1-2

Merced County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	186.43	1000sqft	4.28	186,432.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	49
Climate Zone	3			**Operational Year**	2026
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Construction occurs during 6-month period

Trips and VMT -

Demolition -

Grading -

Vehicle Trips - Operational emissions not calculated.

Consumer Products - Operational emissions not calculated.

Area Coating - Operational emissions not calculated.

Landscape Equipment - Operational emissions not calculated.

Energy Use - Operational emissions not calculated.

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Water And Wastewater - Operational emissions not calculated.

Solid Waste - Operational emissions not calculated.

Construction Off-road Equipment Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	230.00	113.00
tblConstructionPhase	NumDays	20.00	5.00
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblEnergyUse	LightingElect	2.70	0.00
tblEnergyUse	NT24E	4.16	0.00
tblEnergyUse	NT24NG	3.84	0.00
tblEnergyUse	T24E	1.75	0.00
tblEnergyUse	T24NG	16.86	0.00
tblLandscapeEquipment	NumberSummerDays	180	0
tblLandUse	LandUseSquareFeet	186,430.00	186,432.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	231.17	0.00
tblVehicleTrips	ST_TR	6.42	0.00
tblVehicleTrips	SU_TR	5.09	0.00
tblVehicleTrips	WD_TR	3.93	0.00
tblWater	IndoorWaterUseRate	43,111,937.50	0.00

2.0 Emissions Summary

Silva Dairy - FSB9-11 and LB1-2 - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.1150	0.9634	1.2449	2.6200e-003	0.1454	0.0379	0.1833	0.0571	0.0355	0.0927	0.0000	232.0501	232.0501	0.0404	5.6600e-003	234.7472
Maximum	**0.1150**	**0.9634**	**1.2449**	**2.6200e-003**	**0.1454**	**0.0379**	**0.1833**	**0.0571**	**0.0355**	**0.0927**	**0.0000**	**232.0501**	**232.0501**	**0.0404**	**5.6600e-003**	**234.7472**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.1150	0.9634	1.2449	2.6200e-003	0.0976	0.0379	0.1355	0.0333	0.0355	0.0688	0.0000	232.0499	232.0499	0.0404	5.6600e-003	234.7471
Maximum	**0.1150**	**0.9634**	**1.2449**	**2.6200e-003**	**0.0976**	**0.0379**	**0.1355**	**0.0333**	**0.0355**	**0.0688**	**0.0000**	**232.0499**	**232.0499**	**0.0404**	**5.6600e-003**	**234.7471**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**32.90**	**0.00**	**26.09**	**41.74**	**0.00**	**25.73**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Silva Dairy - FSB9-11 and LB1-2 - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-1-2025	6-30-2025	0.5591	0.5591
2	7-1-2025	9-30-2025	0.5149	0.5149
		Highest	0.5591	0.5591

2.2 Overall Operational

Unmitigated Operational

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	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	N20	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	Demolition	Demolition	4/1/2025	4/7/2025	5	5	
2	Site Preparation	Site Preparation	4/8/2025	4/14/2025	5	5	
3	Grading	Grading	4/15/2025	4/24/2025	5	8	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Building Construction	Building Construction	4/25/2025	9/30/2025	5	113	

Acres of Grading (Site Preparation Phase): 7.5

Acres of Grading (Grading Phase): 8

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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	9.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	78.00	31.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2025

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					9.4000e-004	0.0000	9.4000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2300e-003	0.0480	0.0486	1.0000e-004		2.1300e-003	2.1300e-003		1.9800e-003	1.9800e-003	0.0000	8.4994	8.4994	2.3700e-003	0.0000	8.5588
Total	**5.2300e-003**	**0.0480**	**0.0486**	**1.0000e-004**	**9.4000e-004**	**2.1300e-003**	**3.0700e-003**	**1.4000e-004**	**1.9800e-003**	**2.1200e-003**	**0.0000**	**8.4994**	**8.4994**	**2.3700e-003**	**0.0000**	**8.5588**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2025

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	1.0000e-005	5.5000e-004	1.2000e-004	0.0000	8.0000e-005	1.0000e-005	8.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.2414	0.2414	0.0000	4.0000e-005	0.2528
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	1.5000e-004	1.1000e-004	1.3300e-003	0.0000	4.7000e-004	0.0000	4.7000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3572	0.3572	1.0000e-005	1.0000e-005	0.3602
Total	**1.6000e-004**	**6.6000e-004**	**1.4500e-003**	**0.0000**	**5.5000e-004**	**1.0000e-005**	**5.5000e-004**	**1.4000e-004**	**1.0000e-005**	**1.6000e-004**	**0.0000**	**0.5986**	**0.5986**	**1.0000e-005**	**5.0000e-005**	**0.6130**

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					3.6000e-004	0.0000	3.6000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2300e-003	0.0480	0.0486	1.0000e-004		2.1300e-003	2.1300e-003		1.9800e-003	1.9800e-003	0.0000	8.4994	8.4994	2.3700e-003	0.0000	8.5587
Total	**5.2300e-003**	**0.0480**	**0.0486**	**1.0000e-004**	**3.6000e-004**	**2.1300e-003**	**2.4900e-003**	**6.0000e-005**	**1.9800e-003**	**2.0400e-003**	**0.0000**	**8.4994**	**8.4994**	**2.3700e-003**	**0.0000**	**8.5587**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2025

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	1.0000e-005	5.5000e-004	1.2000e-004	0.0000	8.0000e-005	1.0000e-005	8.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.2414	0.2414	0.0000	4.0000e-005	0.2528
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	1.5000e-004	1.1000e-004	1.3300e-003	0.0000	4.7000e-004	0.0000	4.7000e-004	1.2000e-004	0.0000	1.3000e-004	0.0000	0.3572	0.3572	1.0000e-005	1.0000e-005	0.3602
Total	**1.6000e-004**	**6.6000e-004**	**1.4500e-003**	**0.0000**	**5.5000e-004**	**1.0000e-005**	**5.5000e-004**	**1.4000e-004**	**1.0000e-005**	**1.6000e-004**	**0.0000**	**0.5986**	**0.5986**	**1.0000e-005**	**5.0000e-005**	**0.6130**

3.3 Site Preparation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1800e-003	0.0631	0.0448	1.0000e-004		2.7200e-003	2.7200e-003		2.5000e-003	2.5000e-003	0.0000	8.3668	8.3668	2.7100e-003	0.0000	8.4344
Total	**6.1800e-003**	**0.0631**	**0.0448**	**1.0000e-004**	**0.0491**	**2.7200e-003**	**0.0519**	**0.0253**	**2.5000e-003**	**0.0278**	**0.0000**	**8.3668**	**8.3668**	**2.7100e-003**	**0.0000**	**8.4344**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2025

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	1.8000e-004	1.3000e-004	1.6000e-003	0.0000	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4286	0.4286	1.0000e-005	1.0000e-005	0.4323
Total	**1.8000e-004**	**1.3000e-004**	**1.6000e-003**	**0.0000**	**5.6000e-004**	**0.0000**	**5.6000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.4286**	**0.4286**	**1.0000e-005**	**1.0000e-005**	**0.4323**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0192	0.0000	0.0192	9.8500e-003	0.0000	9.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1800e-003	0.0631	0.0448	1.0000e-004		2.7200e-003	2.7200e-003		2.5000e-003	2.5000e-003	0.0000	8.3667	8.3667	2.7100e-003	0.0000	8.4344
Total	**6.1800e-003**	**0.0631**	**0.0448**	**1.0000e-004**	**0.0192**	**2.7200e-003**	**0.0219**	**9.8500e-003**	**2.5000e-003**	**0.0124**	**0.0000**	**8.3667**	**8.3667**	**2.7100e-003**	**0.0000**	**8.4344**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2025

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	1.8000e-004	1.3000e-004	1.6000e-003	0.0000	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4286	0.4286	1.0000e-005	1.0000e-005	0.4323
Total	**1.8000e-004**	**1.3000e-004**	**1.6000e-003**	**0.0000**	**5.6000e-004**	**0.0000**	**5.6000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.4286**	**0.4286**	**1.0000e-005**	**1.0000e-005**	**0.4323**

3.4 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0283	0.0000	0.0283	0.0137	0.0000	0.0137	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0900e-003	0.0613	0.0582	1.2000e-004		2.4900e-003	2.4900e-003		2.2900e-003	2.2900e-003	0.0000	10.4279	10.4279	3.3700e-003	0.0000	10.5122
Total	**6.0900e-003**	**0.0613**	**0.0582**	**1.2000e-004**	**0.0283**	**2.4900e-003**	**0.0308**	**0.0137**	**2.2900e-003**	**0.0160**	**0.0000**	**10.4279**	**10.4279**	**3.3700e-003**	**0.0000**	**10.5122**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2025

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	2.4000e-004	1.7000e-004	2.1300e-003	1.0000e-005	7.4000e-004	0.0000	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5715	0.5715	1.0000e-005	2.0000e-005	0.5764
Total	**2.4000e-004**	**1.7000e-004**	**2.1300e-003**	**1.0000e-005**	**7.4000e-004**	**0.0000**	**7.5000e-004**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.5715**	**0.5715**	**1.0000e-005**	**2.0000e-005**	**0.5764**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0111	0.0000	0.0111	5.3400e-003	0.0000	5.3400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0900e-003	0.0613	0.0582	1.2000e-004		2.4900e-003	2.4900e-003		2.2900e-003	2.2900e-003	0.0000	10.4279	10.4279	3.3700e-003	0.0000	10.5122
Total	**6.0900e-003**	**0.0613**	**0.0582**	**1.2000e-004**	**0.0111**	**2.4900e-003**	**0.0135**	**5.3400e-003**	**2.2900e-003**	**7.6300e-003**	**0.0000**	**10.4279**	**10.4279**	**3.3700e-003**	**0.0000**	**10.5122**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2025

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	2.4000e-004	1.7000e-004	2.1300e-003	1.0000e-005	7.4000e-004	0.0000	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.5715	0.5715	1.0000e-005	2.0000e-005	0.5764
Total	**2.4000e-004**	**1.7000e-004**	**2.1300e-003**	**1.0000e-005**	**7.4000e-004**	**0.0000**	**7.5000e-004**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.5715**	**0.5715**	**1.0000e-005**	**2.0000e-005**	**0.5764**

3.5 Building Construction - 2025

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	0.0773	0.7045	0.9088	1.5200e-003		0.0298	0.0298		0.0280	0.0280	0.0000	131.0345	131.0345	0.0308	0.0000	131.8046
Total	**0.0773**	**0.7045**	**0.9088**	**1.5200e-003**		**0.0298**	**0.0298**		**0.0280**	**0.0280**	**0.0000**	**131.0345**	**131.0345**	**0.0308**	**0.0000**	**131.8046**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

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	1.8400e-003	0.0732	0.0232	3.1000e-004	0.0105	4.7000e-004	0.0110	3.0300e-003	4.5000e-004	3.4800e-003	0.0000	30.1452	30.1452	1.1000e-004	4.4700e-003	31.4808
Worker	0.0178	0.0125	0.1562	4.6000e-004	0.0547	2.8000e-004	0.0549	0.0145	2.6000e-004	0.0148	0.0000	41.9776	41.9776	1.0400e-003	1.1100e-003	42.3348
Total	**0.0197**	**0.0856**	**0.1794**	**7.7000e-004**	**0.0651**	**7.5000e-004**	**0.0659**	**0.0176**	**7.1000e-004**	**0.0183**	**0.0000**	**72.1228**	**72.1228**	**1.1500e-003**	**5.5800e-003**	**73.8157**

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	0.0773	0.7045	0.9088	1.5200e-003		0.0298	0.0298		0.0280	0.0280	0.0000	131.0343	131.0343	0.0308	0.0000	131.8044
Total	**0.0773**	**0.7045**	**0.9088**	**1.5200e-003**		**0.0298**	**0.0298**		**0.0280**	**0.0280**	**0.0000**	**131.0343**	**131.0343**	**0.0308**	**0.0000**	**131.8044**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

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	1.8400e-003	0.0732	0.0232	3.1000e-004	0.0105	4.7000e-004	0.0110	3.0300e-003	4.5000e-004	3.4800e-003	0.0000	30.1452	30.1452	1.1000e-004	4.4700e-003	31.4808
Worker	0.0178	0.0125	0.1562	4.6000e-004	0.0547	2.8000e-004	0.0549	0.0145	2.6000e-004	0.0148	0.0000	41.9776	41.9776	1.0400e-003	1.1100e-003	42.3348
Total	**0.0197**	**0.0856**	**0.1794**	**7.7000e-004**	**0.0651**	**7.5000e-004**	**0.0659**	**0.0176**	**7.1000e-004**	**0.0183**	**0.0000**	**72.1228**	**72.1228**	**1.1500e-003**	**5.5800e-003**	**73.8157**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy 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 Heavy Industry	0.530302	0.047786	0.155927	0.140874	0.027072	0.006797	0.014220	0.050043	0.000830	0.000457	0.020823	0.002143	0.002726

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Mitigated

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

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

Silva Dairy - FSB9-11 and LB1-2 - Merced County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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
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

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	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**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	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**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	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 Heavy Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

11.0 Vegetation

APPENDIX B: AERMOD AND HARP2 ELECTRONIC FILES