APPENDIX C

Source Apportionment and Community Inventories

Arvin/Lamont CERP

San Joaquin Valley Air Pollution Control District

APPENDIX C
ARVIN/LAMONT SOURCE ATTRIBUTION

STATIONARY SOURCE EMISSIONS INVENTORY

A community emissions inventory is the compilation of criteria pollutant and air toxics emissions data from air pollution sources that are within the community. The stationary source community emissions inventory includes emissions of volatile organic compounds & reactive organic gases (VOC/ROG), oxides of nitrogen (NOx), particulate matter of 2.5 microns (PM2.5), and toxic air contaminants (e.g. diesel PM).

The District has longstanding experience working with regulated facilities and collecting emissions inventory data on an annual basis from these facilities. The District's current criteria emissions inventory reporting processes provides an annual assessment of emissions from permitted facilities in the Valley. The inventory collection process begins early in the calendar year by requesting emissions-related information from stationary sources of pollution for the prior calendar year, using streamlined processes and forms developed over years of experience working with industry. The District then verifies or calculates emissions based on the inventory data received by the regulated facilities in the Valley.

Methodology

The emissions inventory represents actual emissions from stationary sources. The actual emissions are typically based one of the following general quantification methods:

Emissions (ton-pollutant/yr) = Process Rate (ton-throughput/yr)
x Emission Factor (ton-pollutant/ton-throughput)

Emissions (ton-pollutant/yr) = Fuel Use (gal combusted/yr)
x Emission Factor (ton-pollutant/gal combusted)

Emissions (ton-pollutant/yr) = Fuel Use (SCF combusted/yr)
x Emission Factor (SCF combusted)

The District relies on the regulated facility owners and operators to submit accurate process rate and/or fuel use data, and identify the approved emission factors as well identify necessary updates to those emission factors. Emission factors are established based on the best available information, and according to the following overarching data quality hierarchy:

1. Continuous Emissions Monitoring (CEM) on the equipment
2. Periodic source test on the equipment
3. Manufacturer's guarantee on the equipment
4. Continuous measurement for similarly configured emission sources
5. Source testing data for similar emission sources
6. Permitted emission limits and emission factors established during permitting actions and listed on the permit.

7. AP-42 or other state-approved industry derived emission factors.

Stationary Source Facility-Level Emissions Inventories

Based on the emissions inventory gathering process described above, the table below summarizes the emissions inventory for each District permitted facility in the Arvin/Lamont Community for year 2019.

Table Notes:

- The facilities listed below are identified in alphabetical order.
- Not all facilities emit all pollutants
- Facilities first operating in 2019 have no reported inventory for 2019
- Values have been rounded to two decimal places

Table 1: Year 2019 Emissions Inventory for District Permitted Facilities

REGION	ID	Facility Name	NOx (tons/yr.)	ROG (tons/yr.)	PM2.5 (tons/yr.)
S	18	KERN COUNTY GENERAL SERVICES	0.00	0.00	0.00
S	37	KERN OIL & REFINING CO.	50.59	44.27	15.33
S	238	H & S CHEVRON FOOD MART INC	0.06	0.20	0.07
S	333	BENNETT PETROLEUM - DIGIORGIO	0.00	0.00	0.00
S	679	S & S MINI MART, INC	0.00	0.11	0.00
S	866	EDSAL SANDUSKY CORP	0.00	0.59	0.57
S	890	CABALLERO OPERATIONS LLC. - KRAUTER	0.00	0.00	0.00
S	890	CABALLERO OPERATIONS LLC. - VINEYARD	0.00	0.00	0.00
S	890	CABALLERO OPERATIONS LLC. - BANKLINE+SYMONS	0.00	0.00	0.00
S	1137	THE TERMO CO - KNOWLES	0.00	0.59	0.00
S	1137	THE TERMO CO - MTN VIEW	0.57	1.46	0.07
S	1137	THE TERMO CO - BRITE	0.00	1.09	0.00
S	1157	PACIFIC BELL TELEPHONE CO (DBA AT&T CA)	0.02	0.01	0.00
S	1161	PACIFIC BELL TELEPHONE CO (DBA AT&T CA)	0.03	0.00	0.00
S	1529	BENNETT PETROLEUM - MOTT	0.00	0.00	0.00
S	1529	BENNETT PETROLEUM - DIGIORGIO	0.00	0.00	0.00
S	1580	SOUTHERN VALLEY CHEMICAL CO	0.00	0.01	0.00
S	1603	SERGIO'S AUTO BODY & PAINT	0.00	0.02	0.00
S	1647	BLACKBURN OIL CO	0.00	0.38	0.00
S	1688	RUBEN'S AUTO BODY LLC	0.00	0.07	0.01
S	2137	7-ELEVEN INC	0.00	0.36	0.00
S	2247	KERN COUNTY PUBLIC WORKS	0.00	0.00	0.00
S	2257	BLACKBURN OIL CO	0.00	0.03	0.00
S	2286	US OIL & GAS - PIERCY+ALLEN	0.00	0.00	0.00
S	2357	FASTRIP OIL CO	0.00	0.72	0.00
S	2359	JACO HILL CO	0.00	0.34	0.00
S	2372	JACO HILL CO	0.00	0.28	0.00
S	2374	JAMIESON HILL	0.00	0.81	0.00
S	2383	JAMIESON HILL	0.00	1.18	0.00
S	2621	QUALITY MARKET & FUEL	0.06	0.15	0.07
S	2635	CABALLERO OPERATIONS LLC.	0.00	0.01	0.00
S	2729	KERN COUNTY FIRE STATION #51	0.00	0.00	0.00
S	2784	GAS 4 LESS	0.00	0.20	0.00
S	2811	LAMONT PUBLIC UTILITY DIST	0.05	0.00	0.00
S	2841	GRIMMWAY ENTERPRISES INC	0.66	0.41	0.54

REGION	ID	Facility Name	NOx (tons/yr.)	ROG (tons/yr.)	PM2.5 (tons/yr.)
S	2905	RECOLOGY BLOSSOM VALLEY ORGANICS - SOUTH	0.00	71.61	0.63
S	2927	AT&T MOBILITY	0.00	0.00	0.00
S	2961	HUNTER EDISON OIL DEVELOPMENT - TRINO	0.03	0.08	0.00
S	2985	PETRO RESOURCES INC - FH	0.00	0.00	0.00
S	3031	CITY OF ARVIN	0.00	0.01	0.00
S	3036	SEQUOIA EXPLORATION - STOCKTON	0.00	0.10	0.00
S	3036	SEQUOIA EXPLORATION - SIMPSON	0.00	0.00	0.00
S	3036	SEQUOIA EXPLORATION - JEWETT	0.00	0.00	0.00
S	3130	FRANKS CABINET SHOP	0.00	0.00	0.41
S	3197	GRIMMWAY FARMS	0.12	0.05	0.09
S	3331	R & R RESOURCES LLC - TVT	0.00	0.00	0.00
S	3402	LOHGARH SAMRA INC	0.00	0.92	0.00
S	3433	ARVIN SANITARY LANDFILL	1.97	0.36	0.10
S	3629	VEOLIA WATER NORTH AMERICA	0.11	0.01	0.00
S	3914	TS LEASING OPERATIONS INC - WIBLE+HO STRICKLER	0.00	0.12	0.00
S	4035	JOE'S RENTALS	0.00	0.00	0.00
S	4051	BURGER KING #9637/OCEAN ELEVEN INC	0.03	0.00	0.00
S	4162	KERN OIL & REFINING	0.27	0.61	0.02
S	4169	CITY OF ARVIN	0.01	0.00	0.00
S	4182	ARVIN COMMUNITY SERVICES DISTRICT	0.07	0.00	0.01
S	4270	VERIZON WIRELESS - ARVIN	0.00	0.00	0.00
S	5224	DM CAMP & SONS - RANCH #8	0.00	0.00	0.00
S	5225	DM CAMP & SON - RANCH #8 - SECTION 28	0.00	0.00	0.00
S	6637	G3 DAIRY	0.00	0.00	0.00
S	6684	LAMONT PUBLIC UTILITY DISTRICT	0.02	0.00	0.00
S	6758	KIRSCHENMAN ENTERPRISES INC #4	0.00	0.00	0.00
S	6820	DILLON & SONS DBA THE BARN #4	0.00	0.20	0.00
S	7013	EVERGREEN HEALTHCARE - ARVIN	0.04	0.00	0.00
S	7076	PETRO CAPITAL RESOURCES LLC - JEWETT	0.00	0.00	0.00
S	7076	PETRO CAPITAL RESOURCES LLC - RICHARDS	0.13	0.01	0.01
S	7125	ULRICH BARN BUILDERS OF CALIFORNIA	0.00	0.18	0.57
S	7235	GOGO LLC	0.09	0.01	0.00
S	7345	VERIZON WIRELESS (DT LAMONT)	0.00	0.00	0.00
S	7378	EAST TRAVEL PLAZA LLC	0.03	1.91	0.00
S	7452	LAMONT PUBLIC UTILITY DISTRICT	0.06	0.00	0.00
S	7537	VERIZON WIRELESS - NORTH LAMONT	0.00	0.00	0.00
S	7543	PANAMA RANCH	0.00	0.00	0.00

REGION	ID	Facility Name	NOx (tons/yr.)	ROG (tons/yr.)	PM2.5 (tons/yr.)
S	7648	KERN OIL & REFINING CO	0.01	0.00	0.00
S	7832	ANTHONY VINEYARDS INC	0.00	0.00	0.00
S	8167	CHARTER COMMUNICATIONS	0.01	0.00	0.00
S	8312	GRIFFIN RESOURCES LLC - FRICK	0.00	0.00	0.00
S	8334	STENDERUP AG PARTNERS	0.00	0.00	0.00
S	8338	WHEELER RIDGE SHELL STATION	0.00	0.19	0.00
S	8533	TASTEFUL SELECTIONS	0.02	0.00	0.00
S	8573	LAMONT PUBLIC UTILITY DISTRICT	0.01	0.00	0.00
S	8620	LAMONT PUBLIC UTILITIES DISTRICT	0.06	0.00	0.00
S	9035	ARVIN PETROLEUM INC. #47008	0.00	0.84	0.00
S	9091	7 DAYS MINI MART	0.00	0.00	0.00
S	9255	MOUNTAIN VIEW RESOURCES LLC - RICHARDS	0.00	0.00	0.00
S	9255	MOUNTAIN VIEW RESOURCES LLC - TRINIDAD	0.00	0.00	0.00
S	9591	ARVIN COMMUNITY SERVICES DISTRICT	0.00	0.00	0.00
S	9592	ARVIN COMMUNITY SERVICES DISTRICT	0.00	0.00	0.00

Forecasting Emissions - Stationary Sources:

For assessing future growth for the years 2026 and 2031, the CARB used growth and control factors to adjust the current 2017 inventory and project emissions into 2026 and 2031 future years.

Projected emissions were calculated using the 2017 emissions inventory as the base year to project emissions for 2026 and 2031. The 2017 emissions inventory values were used to project emissions by multiplying these emissions by the ratio of the growth factors and control factors for each process. The emissions are projected for each permitted unit and then totaled to grow the facility emissions. The following equation represents the formula for forecasting emissions in a future year from a specific emissions unit (i.e. equipment type):

$$\text{2026 NOx (ton/yr)} = \text{2017 NOx emissions} \times [(\text{2026 NOx GF} \div \text{2017 NOx GF}) \times (\text{2026 NOx CF} \div \text{2017 NOx CF})]$$

Where,
GF= Growth factor
CF = Control factor

Forecasted Stationary Source Emissions Inventories

Based on the forecasting process described above, Tables 2 and 3 below summarize the emissions inventory for each District permitted facility in the Arvin/Lamont Community for years 2026 and 2031.

Table 2: Year 2026 Projected Emissions Inventory for District Permitted Facilities

Region	ID	Facility Name	NOX (tons/yr.)	ROG (tons/yr.)	PM2.5 (tons/yr.)
S	18	KERN COUNTY GENERAL SERVICES	0.00	0.00	0.00
S	37	KERN OIL & REFINING CO.	40.35	41.50	15.35
S	238	H & S CHEVRON FOOD MART INC	0.05	0.14	0.06
S	333	BENNETT PETROLEUM - DIGIORGIO	0.00	0.00	0.00
S	679	S & S MINI MART, INC	0.00	0.08	0.00
S	866	EDSAL SANDUSKY CORP	0.00	0.70	0.68
S	890	CABALLERO OPERATIONS LLC. - KRAUTER	0.00	0.00	0.00
S	890	CABALLERO OPERATIONS LLC. - VINEYARD	0.00	0.00	0.00
S	890	CABALLERO OPERATIONS LLC. - BANKLINE+SYMONS	0.00	0.00	0.00
S	1137	THE TERMO CO - KNOWLES	0.00	0.44	0.00
S	1137	THE TERMO CO - MTN VIEW	0.25	1.09	0.05
S	1137	THE TERMO CO - BRITE	0.00	0.82	0.00
S	1157	PACIFIC BELL TELEPHONE CO (DBA AT&T CA)	0.02	0.01	0.00
S	1161	PACIFIC BELL TELEPHONE CO (DBA AT&T CA)	0.05	0.01	0.00
S	1529	BENNETT PETROLEUM - MOTT	0.00	0.00	0.00
S	1529	BENNETT PETROLEUM - DIGIORGIO	0.00	0.00	0.00
S	1580	SOUTHERN VALLEY CHEMICAL CO	0.00	0.01	0.00
S	1603	SERGIO'S AUTO BODY & PAINT	0.00	0.02	0.00
S	1647	BLACKBURN OIL CO	0.00	0.38	0.00
S	1688	RUBEN'S BODY AND AUTO PAINTING	0.00	0.08	0.02
S	2137	7-ELEVEN, INC	0.00	0.26	0.00
S	2247	KERN COUNTY PUBLIC WORKS	0.00	0.00	0.00
S	2257	BLACKBURN OIL COMPANY	0.00	0.29	0.00
S	2286	US OIL & GAS	0.00	0.00	0.00
S	2357	FASTRIP OIL COMPANY	0.00	0.51	0.00
S	2359	JACO HILL CO	0.00	0.34	0.00
S	2372	JACO HILL COMPANY	0.00	0.43	0.00
S	2374	JAMIESON HILL	0.00	0.81	0.00
S	2383	JAMIESON HILL	0.00	1.40	0.00
S	2621	MARY LAMONT INC.	0.05	0.10	0.06
S	2635	ATLANTIC OIL COMPANY	0.00	0.00	0.00

Region	ID	Facility Name	NOX (tons/yr.)	ROG (tons/yr.)	PM2.5 (tons/yr.)
S	2729	KERN COUNTY FIRE STATION #51	0.00	0.00	0.00
S	2784	GAS 4 LESS	0.00	0.14	0.00
S	2811	LAMONT PUBLIC UTILITY DIST	0.04	0.00	0.00
S	2841	GRIMMWAY ENTERPRISES INC	0.55	0.43	0.57
S	2905	RECOLOGY BLOSSOM VALLEY ORGANICS - SOUTH	0.00	73.23	0.27
S	2927	AT&T MOBILITY	0.00	0.00	0.00
S	2961	HUNTER EDISON OIL DEVELOPMENT	0.01	0.05	0.00
S	2985	PETRO RESOURCES INC - FH	0.00	0.00	0.00
S	3031	CITY OF ARVIN	0.00	0.01	0.00
S	3036	SEQUOIA EXPLORATION - STOCKTON	0.00	0.08	0.00
S	3036	SEQUOIA EXPLORATION - SIMPSON	0.00	0.00	0.00
S	3036	SEQUOIA EXPLORATION - JEWETT	0.00	0.00	0.00
S	3130	FRANKS CABINET SHOP	0.00	0.00	0.40
S	3197	GRIMMWAY FARMS	0.10	0.05	0.10
S	3331	R & R RESOURCES LLC	0.00	0.00	0.00
S	3402	LOHGARH SAMRA INC	0.00	0.64	0.00
S	3433	ARVIN SANITARY LANDFILL	1.28	0.36	0.08
S	3629	VEOLIA WATER NORTH AMERICA	0.10	0.01	0.00
S	3914	TS LEASING OPERATIONS INC	0.00	0.10	0.00
S	4035	JOE'S RENTALS	0.00	0.00	0.00
S	4051	BURGER KING #9637/OCEAN ELEVEN INC	0.04	0.00	0.00
S	4162	KERN OIL & REFINING	0.24	0.65	0.02
S	4169	CITY OF ARVIN	0.01	0.01	0.00
S	4182	ARVIN COMMUNITY SERVICES DISTRICT	0.06	0.00	0.01
S	4270	VERIZON WIRELESS - ARVIN	0.00	0.00	0.00
S	5224	DM CAMP & SONS - RANCH #8	0.00	0.00	0.00
S	5225	DM CAMP & SON - RANCH #8 - SECTION 28	0.00	0.00	0.00
S	6637	G3 DAIRY	0.00	0.00	0.00
S	6684	LAMONT PUBLIC UTILITY DISTRICT	0.02	0.00	0.00
S	6758	KIRSCHENMAN ENTERPRISES INC #4	0.00	0.00	0.00
S	6820	DILLON & SONS DBA THE BARN #4	0.00	0.14	0.00
S	7013	EVERGREEN HEALTHCARE - ARVIN	0.04	0.00	0.00
S	7076	PETRO CAPITAL RESOURCES LLC - JEWETT	0.00	0.00	0.00
S	7076	PETRO CAPITAL RESOURCES LLC - RICHARDS	0.06	0.00	0.01
S	7125	ULRICH BARN BUILDERS OF CALIFORNIA	0.00	0.18	0.57
S	7235	GOGO LLC	0.00	0.00	0.00
S	7345	VERIZON WIRELESS (DT LAMONT)	0.00	0.00	0.00
S	7378	EAST TRAVEL PLAZA, LLC	0.03	1.51	0.00

Region	ID	Facility Name	NOX (tons/yr.)	ROG (tons/yr.)	PM2.5 (tons/yr.)
S	7452	LAMONT PUBLIC UTILITY DISTRICT	0.06	0.00	0.00
S	7537	VERIZON WIRELESS - NORTH LAMONT	0.00	0.00	0.00
S	7543	PANAMA RANCH	0.00	0.00	0.00
S	7648	KERN OIL & REFINING COMPANY	0.01	0.00	0.00
S	7832	ANTHONY VINEYARDS INC	0.00	0.00	0.00
S	8167	CHARTER COMMUNICATIONS	0.01	0.00	0.00
S	8312	GRIFFIN RESOURCES, LLC	0.00	0.00	0.00
S	8334	STENDERUP AG PARTNERS	0.00	0.00	0.00
S	8338	WHEELER RIDGE SHELL STATION	0.00	0.13	0.00
S	8533	TASTEFUL SELECTIONS	0.03	0.00	0.00
S	8573	LAMONT PUBLIC UTILITY DISTRICT	0.08	0.00	0.00
S	8620	LAMONT PUBLIC UTILITIES DISTRICT	0.06	0.00	0.00
S	9035	ARVIN PETROLEUM INC. #47008	0.00	0.59	0.00
S	9091	7 DAYS MINI MART	0.00	0.00	0.00
S	9255	MOUNTAIN VIEW RESOURCES LLC - RICHARDS	0.00	0.00	0.00
S	9255	MOUNTAIN VIEW RESOURCES LLC - TRINIDAD	0.00	0.00	0.00
S	9591	ARVIN COMMUNITY SERVICES DISTRICT	0.00	0.00	0.00
S	9592	ARVIN COMMUNITY SERVICES DISTRICT	0.00	0.00	0.00

Table 3: Year 2031 Projected Emissions Inventory for District Permitted Facilities

Region	ID	Facility Name	NOX (tons/yr.)	ROG (tons/yr.)	PM2.5 (tons/yr.)
S	18	KERN COUNTY GENERAL SERVICES	0.00	0.00	0.00
S	37	KERN OIL & REFINING CO.	35.44	40.35	15.38
S	238	H & S CHEVRON FOOD MART INC	0.05	0.12	0.06
S	333	BENNETT PETROLEUM - DIGIORGIO	0.00	0.00	0.00
S	679	S & S MINI MART, INC	0.00	0.07	0.00
S	866	EDSAL SANDUSKY CORP	0.00	0.76	0.73
S	890	CABALLERO OPERATIONS LLC. - KRAUTER	0.00	0.00	0.00
S	890	CABALLERO OPERATIONS LLC. - VINEYARD	0.00	0.00	0.00
S	890	CABALLERO OPERATIONS LLC. - BANKLINE+SYMONS	0.00	0.00	0.00
S	1137	THE TERMO CO - KNOWLES	0.00	0.38	0.00
S	1137	THE TERMO CO - MTN VIEW	0.21	0.94	0.04
S	1137	THE TERMO CO - BRITE	0.00	0.71	0.00
S	1157	PACIFIC BELL TELEPHONE CO (DBA AT&T CA)	0.02	0.01	0.00
S	1161	PACIFIC BELL TELEPHONE CO (DBA AT&T CA)	0.05	0.01	0.00
S	1529	BENNETT PETROLEUM - MOTT	0.00	0.00	0.00
S	1529	BENNETT PETROLEUM - DIGIORGIO	0.00	0.00	0.00
S	1580	SOUTHERN VALLEY CHEMICAL CO	0.00	0.01	0.00
S	1603	SERGIO'S AUTO BODY & PAINT	0.00	0.02	0.00
S	1647	BLACKBURN OIL CO	0.00	0.38	0.00
S	1688	RUBEN'S BODY AND AUTO PAINTING	0.00	0.08	0.02
S	2137	7-ELEVEN, INC	0.00	0.22	0.00
S	2247	KERN COUNTY PUBLIC WORKS	0.00	0.00	0.00
S	2257	BLACKBURN OIL COMPANY	0.00	0.27	0.00
S	2286	US OIL & GAS	0.00	0.00	0.00
S	2357	FASTRIP OIL COMPANY	0.00	0.44	0.00
S	2359	JACO HILL CO	0.00	0.34	0.00
S	2372	JACO HILL COMPANY	0.00	0.38	0.00
S	2374	JAMIESON HILL	0.00	0.81	0.00
S	2383	JAMIESON HILL	0.00	1.23	0.00
S	2621	MARY LAMONT INC.	0.05	0.09	0.06
S	2635	ATLANTIC OIL COMPANY	0.00	0.00	0.00
S	2729	KERN COUNTY FIRE STATION #51	0.00	0.00	0.00
S	2784	GAS 4 LESS	0.00	0.13	0.00
S	2811	LAMONT PUBLIC UTILITY DIST	0.04	0.00	0.00
S	2841	GRIMMWAY ENTERPRISES INC	0.52	0.46	0.62

Region	ID	Facility Name	NOX (tons/yr.)	ROG (tons/yr.)	PM2.5 (tons/yr.)
S	2905	RECOLOGY BLOSSOM VALLEY ORGANICS - SOUTH	0.00	79.49	0.28
S	2927	AT&T MOBILITY	0.00	0.00	0.00
S	2961	HUNTER EDISON OIL DEVELOPMENT	0.01	0.04	0.00
S	2985	PETRO RESOURCES INC - FH	0.00	0.00	0.00
S	3031	CITY OF ARVIN	0.00	0.01	0.00
S	3036	SEQUOIA EXPLORATION - STOCKTON	0.00	0.07	0.00
S	3036	SEQUOIA EXPLORATION - SIMPSON	0.00	0.00	0.00
S	3036	SEQUOIA EXPLORATION - JEWETT	0.00	0.00	0.00
S	3130	FRANKS CABINET SHOP	0.00	0.00	0.40
S	3197	GRIMMWAY FARMS	0.10	0.06	0.10
S	3331	R & R RESOURCES LLC	0.00	0.00	0.00
S	3402	LOHGARH SAMRA INC	0.00	0.56	0.00
S	3433	ARVIN SANITARY LANDFILL	1.35	0.38	0.08
S	3629	VEOLIA WATER NORTH AMERICA	0.10	0.01	0.00
S	3914	TS LEASING OPERATIONS INC	0.00	0.09	0.00
S	4035	JOE'S RENTALS	0.00	0.00	0.00
S	4051	BURGER KING #9637/OCEAN ELEVEN INC	0.04	0.00	0.00
S	4162	KERN OIL & REFINING	0.20	0.69	0.02
S	4169	CITY OF ARVIN	0.01	0.00	0.00
S	4182	ARVIN COMMUNITY SERVICES DISTRICT	0.06	0.00	0.01
S	4270	VERIZON WIRELESS - ARVIN	0.00	0.00	0.00
S	5224	DM CAMP & SONS - RANCH #8	0.00	0.00	0.00
S	5225	DM CAMP & SON - RANCH #8 - SECTION 28	0.00	0.00	0.00
S	6637	G3 DAIRY	0.00	0.00	0.00
S	6684	LAMONT PUBLIC UTILITY DISTRICT	0.02	0.00	0.00
S	6758	KIRSCHENMAN ENTERPRISES INC #4	0.00	0.00	0.00
S	6820	DILLON & SONS DBA THE BARN #4	0.00	0.12	0.00
S	7013	EVERGREEN HEALTHCARE - ARVIN	0.04	0.00	0.00
S	7076	PETRO CAPITAL RESOURCES LLC - JEWETT	0.00	0.00	0.00
S	7076	PETRO CAPITAL RESOURCES LLC - RICHARDS	0.05	0.00	0.01
S	7125	ULRICH BARN BUILDERS OF CALIFORNIA	0.00	0.19	0.58
S	7235	GOGO LLC	0.00	0.00	0.00
S	7345	VERIZON WIRELESS (DT LAMONT)	0.00	0.00	0.00
S	7378	EAST TRAVEL PLAZA, LLC	0.03	1.39	0.00
S	7452	LAMONT PUBLIC UTILITY DISTRICT	0.06	0.00	0.00
S	7537	VERIZON WIRELESS - NORTH LAMONT	0.00	0.00	0.00
S	7543	PANAMA RANCH	0.00	0.00	0.00
S	7648	KERN OIL & REFINING COMPANY	0.01	0.00	0.00

Region	ID	Facility Name	NOX (tons/yr.)	ROG (tons/yr.)	PM2.5 (tons/yr.)
S	7832	ANTHONY VINEYARDS INC	0.00	0.00	0.00
S	8167	CHARTER COMMUNICATIONS	0.01	0.00	0.00
S	8312	GRIFFIN RESOURCES, LLC	0.00	0.00	0.00
S	8334	STENDERUP AG PARTNERS	0.00	0.00	0.00
S	8338	WHEELER RIDGE SHELL STATION	0.00	0.12	0.00
S	8533	TASTEFUL SELECTIONS	0.03	0.00	0.00
S	8573	LAMONT PUBLIC UTILITY DISTRICT	0.08	0.00	0.00
S	8620	LAMONT PUBLIC UTILITIES DISTRICT	0.06	0.00	0.00
S	9035	ARVIN PETROLEUM INC. #47008	0.00	0.52	0.00
S	9091	7 DAYS MINI MART	0.00	0.00	0.00
S	9255	MOUNTAIN VIEW RESOURCES LLC - RICHARDS	0.00	0.00	0.00
S	9255	MOUNTAIN VIEW RESOURCES LLC - TRINIDAD	0.00	0.00	0.00
S	9591	ARVIN COMMUNITY SERVICES DISTRICT	0.00	0.00	0.00
S	9592	ARVIN COMMUNITY SERVICES DISTRICT	0.00	0.00	0.00

Mobile Source Emissions Inventory

Forecasting Emissions - Mobile Sources

On-road vehicle emissions are calculated using vehicle activity data used in the latest adopted Federal Statewide Transportation Plan (FSTIP) or Regional Transportation Plan (RTP) from the local metropolitan planning organization (MPO)[1]. Criteria air pollutant emissions are estimated by applying emission factors and vehicle distribution from the California Air Resources Board's (CARB) latest Emissions Factor Model (EMFAC2021)[2] to vehicle activity data. Toxic air contaminant emissions are estimated by using CARB's chemical speciation profiles[3] for particulate matter (PM) and Total organic gases (TOG) species. Emissions are aggregated by emission inventory code (EIC) by 1-kilometer (1K) grids for the community.

Inputs

- MPO Loaded Network for base year and forecast years from their most current FSTIP or RTP.
- Emission Factors from EMFAC2021
- Statewide 1 kilometer (K) grid as provided by CARB's Modeling Group

Vehicle Activity Data Pre-processing

The MPO loaded networks typically contain a base year and certain future target years based on their FSTIP or RTP. To obtain activity data for every year relevant to a Community Emission Reduction Plan (CERP) community from the MPO loaded networks, the vehicle miles traveled (VMT) in the loaded network are interpolated for each year using the loaded networks for the given years provided by the MPO. In the case where the MPO does not include VMT in their loaded network files, the loaded networks are preprocessed by calculating the VMT. The VMT is calculated by multiplying the total daily volume on each link of the MPO loaded network by the length of the link in miles.

Criteria Air Pollutant Emissions Calculations

After the loaded networks have been interpolated for all the years relevant to the CERP, emission factors by emission inventory code (EIC) are calculated. An on-road EIC represents a unique combination of vehicle type, fuel type, and emission process type. Emission factors by EIC, as well as vehicle distribution based on county wide or sub-area totals are extracted out of EMFAC2021 and applied to the MPO loaded network for each relevant year. Emission factors are calculated on a

[1] San Joaquin Council of Government 2018 Regional Transportation Plan loaded network (2008 base year projected to 2017)

[2] EMFAC2021 includes information on California's car and truck fleet (e.g., vehicle population, age) and also reflects the emissions benefits of CARB's previously adopted on-road mobile source regulations (e.g., Pavley Standards, Advanced Clean Cars, Truck and Bus, other on-road diesel fleet rules). For more information on EMFAC2021, see https://ww2.arb.ca.gov/sites/default/files/2021-08/emfac2021_technical_documentation_april2021.pdf

[3] California Air Resources Board, Speciation Profiles, see https://www.arb.ca.gov/ei/speciate/speciate.htm

VMT basis, even for EICs that were dependent upon trips or vehicle population.

The following equation was used to calculate emission factors by EIC:

$$EF_{EIC} = E_{EIC} \div VMT_{EIC}$$

Where:

EF_{EIC} = Emission Factor of a particular EIC in a county or sub-area
E_{EIC} = Daily emissions in tons per day for a particular EIC in a county or sub-area
VMT_{EIC} = Daily vehicle miles traveled for a particular EIC in a county or sub-area

Vehicle distribution is calculated by getting the vehicle fraction of each EIC, as shown in the following equation.

$$VF_{EIC} = VMT_{EIC} \div VMT_{ALL}$$

Where:

VF_{EIC} = Vehicle fraction of a particular EIC in a county or sub-area
VMT_{EIC} = Daily vehicle miles traveled for a particular EIC in a county or sub-area
VMT_{ALL} = Total daily vehicle miles traveled for all EICs in a county or sub-area

Once the emission factors and the vehicle fraction are calculated, emissions by EIC are calculated on every road link in the loaded network. To display on-road emissions at the 1K grid level, VMT from the MPO loaded network within the community boundary are summed within each 1K grid, then the EIC emission factors and the vehicle fraction are applied to the total VMT in each 1K grid.

The following equation shows the 1K grid EIC emission calculation:

$$E_{grid} = \sum VMT_{Link} \times EF_{EIC} \times VF_{EIC}$$

Where:

E_{grid} = Emissions in tons per day of a particular criteria pollutant within a 1k grid
VMT_{Link} = VMT on each link with in a particular 1k grid
EF_{EIC} = Emission Factor of a particular EIC in a county or sub-area
VF_{EIC} = Vehicle fraction of a particular EIC in a county or sub-area

On-road emissions are converted from tons per day to tons per year by multiplying vehicle operation days per year by each vehicle category (EMFAC202x category[4]). The vehicle operation days of each EMFAC202x category in each county or sub-area are sourced from EMFAC2021. The operation days can range from 292 days to 347 days a year depending on EMFAC202x vehicle category.

[4] See EMFAC202x vehicle categories on the EMFAC website, https://arb.ca.gov/emfac/project-analysis

Toxics Air Contaminant (TAC) Emissions Calculations

The on-road toxics emissions by EIC by grid cell are calculated using chemical speciation profiles for particulate matter (PM) and Total organic gases (TOG) species. These speciation profiles[5] are developed, maintained, and updated by CARB staff and essentially break down PM and TOG emissions into their individual constituents, including toxics, for each EIC. Then, all the species which are listed in Appendix A-I of AB 2588 Air Toxics "Hot Spots" Emission Inventory Criteria and Guidelines Regulation are filtered out as toxics. The TOG based toxics (e.g., Formaldehyde, Benzene, Xylenes, Naphthalene, 1,3-Butadiene) are estimated using TOG speciation profiles and PM based toxics (metals like Lead, Chromium, Nickel, and Arsenic) are estimated using PM speciation profiles.

There are some toxic species that are not included in the speciation profiles (e.g., Diesel Particulate Matter (DPM) and hexavalent chromium (Cr (VI)) which have potential cancerous effects. Therefore, CARB augmented their community emission inventories to include DPM and Cr (VI) emissions. The exhaust PM emissions from diesel internal combustion engines are considered as DPM. DPM is considered one of the most important toxics due to its cancerous effects. Cr (VI) emissions are estimated as 5% of the total speciated Chromium emissions for each of the liquid fuel combustion sources[6]. Ammonia (NH3) is also one of the toxics that is not in the speciation profiles, the NH3 emissions are taken from the criteria emissions and converted to pounds per year from tons per year.

To compare the relative toxicity of TACs, Toxicity Weighted Emissions (TWE) are calculated for all TACs using health values[7] approved by Office of Environmental Health Hazard Assessment (OEHHA). It is important to note that TWEs are not risks, but weighted emissions useful to compare relative toxicity of TACs. TWEs are calculated by multiplying mass emissions of each TAC with the corresponding health values (e.g., cancer unit risk factor, non-cancer chronic, and acute reference exposure levels) as determined by OEHHA, molecular weight adjustment factors accounting for the molecular weight fraction of a compound associated with the specific health effects, maximum hours of emissions, and normalization factors as described in the formulas below:

1) $Cancer\ TWE_{pol} = \sum EMS_{pol} \times CANURF_{pol} \times MWAF_{pol} \times 7700$

[5] California Air Resources Board, Speciation Profiles, see https://www.arb.ca.gov/ei/speciate/speciate.htm

[6] We assumed that 5% ratio of Cr (VI) to the total Cr, which is within the range ratios of 0.7% - 9% noted in CARB 1986 study, Kang et al, 2016, Rogula-Kozloska, 2018. We also acknowledge that this Cr (VI) ratio to total Cr could vary with different sources (e.g. soil, dust, combustion sources etc.) (Kitsa et al., 1992, Catrambone et al., 2013).

[7] OEHHA Approved health values - https://ww2.arb.ca.gov/sites/default/files/classic//toxics/healthval/contable.pdf.

NOTE: The Inhalation Cancer Unit Risk Factor and the Molecular Weight Adjustment Fraction (MWAF) should be obtained from the approved **"Consolidated Table" of health values** on the above mentioned CARB website. The Chronic Inhalation REL and Acute Inhalation REL values (used below) are also available in the "Consolidated Table".

NOTE: The Molecular Weight Adjustment Fraction (MWAF) is used with Cancer score, for example to get the proportion of the weight of carcinogenic chromium in a compound like barium chromate. The latest OEHHA guidelines also allow the use of the MWAF for non-cancer (chronic and acute) score calculations.

Where,

Cancer TWE_{pol} = Cancer risk based s (TWE) for a pollutant
$CANURF_{pol}$ = Cancer Inhalation Unit Risk Factor for a pollutant
EMS_{pol} = Annual Emissions in lbs/yr for a pollutant
$MWAF_{pol}$ = Molecular Weight Adjustment Fraction for a pollutant

2) $Chronic\ Non\ Cancer\ TWE_{pol} = \sum\ ((EMS_{pol}\ \div 8760)\ \div\ CHRONREL_{pol}) \times 150$

Where,

Chronic Non-Cancer TWE_{pol} = Chronic Non-Cancer risk based (TWE) of a pollutant
$CHRONREL_{pol}$ = Chronic Inhalation reference exposure level (REL) for a pollutant

3) $Acute\ Non\ Cancer\ TWE_{pol} = \sum\ ((EMS_{pol}\ \div 8760)\ \div\ ACUTEREL_{pol}) \times 1500$

Where,

Acute Non-Cancer TWE_{pol} = Acute Non-Cancer risk based (TWE) of a pollutant
$ACUTEREL_{pol}$ = Acute Inhalation reference exposure level (REL) for a pollutant

To avoid double counting of risk from toxic species constituents that occur in whole diesel exhaust sources, only DPM TWE is accounted and excluded the contribution of speciated species for cancer and non-cancer chronic risks. However, one should consider the contribution of the diesel-source species when performing detailed health risks analysis, including for example, the diesel contribution to multi-pathway risk to target organ/endpoint thresholds, and to ambient levels of individual chemicals. Some examples of the species that occur in diesel exhaust and could affect those types of detailed analyses include benzene; ethyl benzene; metals such as arsenic, cadmium, chromium, and nickel; various aldehydes; and others.

Off-Road Mobile Sources

Emissions from off-road sources were estimated using a suite of category-specific models or, where a new model was not available, the OFFROAD2007 model. Many of the newer models were developed to support recent regulations, including in-use off-road equipment, recreational boats, and others.

Inventory Base Year

CARB worked with the local air districts to determine the base year that should be used across the State. CARB selected 2017 as the base year to maintain consistency in the State. Mobile source emissions have been forecasted for years 2019, 2026, and 2031 for the purposes of the CERP.

Methodology

The EMFAC model was used to assess emissions from on-road vehicles. Off-road mobile source emissions are estimated using a new modular approach for different source categories. On-road and off-road models account for the effects of various adopted regulations, technology types, and seasonal conditions on emissions.

Additional information on all CARB's Mobile source Methodologies and categories is available at: https://ww3.arb.ca.gov/msei/msei.htm

Summary of On-Road Mobile Source Emissions

Table 4 below summarizes the total estimated on-road mobile source emissions for each general on-road mobile source category in the Arvin/Lamont Community for 2019:

Table 4: Year 2019 On-Road Mobile Source Emissions

On-Road Mobile Source Category	NOx (tpy)	VOC (tpy)	PM2.5 (tpy)
Heavy Heavy Duty Vehicles	117.28	4.11	2.88
Medium Heavy Duty Vehicles	14.19	1.00	0.36
Medium Duty Vehicles	11.33	9.73	0.25
Light Duty Vehicles	35.76	28.31	1.36
Bus	2.05	0.22	0.04
Other	0.98	3.76	0.02
Total	**181.59**	**47.13**	**4.92**

Summary of Off-Road Mobile Source Emissions

Table 5 below summarizes the total estimated off-road mobile source emissions for each general off-road mobile source category in the Arvin/Lamont Community for 2019:

Table 5: Year 2019 Off-Road Mobile Source Emissions

Off-Road Mobile Source Category	NOx (tpy)	VOC (tpy)	PM2.5 (tpy)
Trains	7.78	0.00	0.12
Recreational Boats	0.00	4.47	0.00
Off-Road Recreational Vehicles	0.06	3.83	0.01
Off-Road Equipment	61.80	29.64	2.75
Fuel Storage and Handling	0.00	3.04	0.00
Aircraft	0.19	0.00	0.00
Farm Equipment	32.50	5.47	1.88

Off-Road Mobile Source Category	NOx (tpy)	VOC (tpy)	PM2.5 (tpy)
Total	**102.31**	**46.46**	**4.77**

Summary of Mobile Source Emissions

Table 6 below summarizes total 2019 off-road and on-road mobile source emissions

Table 6: Year 2019 Mobile Source Emissions Summary

Mobile Source Categories	NOx (tpy)	VOC (tpy)	PM2.5 (tpy)
On-Road Mobile Sources	181.59	47.13	4.92
Off-Road Mobile Sources	102.31	46.46	4.77
Total	**283.90**	**93.59**	**9.7**

The Tables below, summarizes the data used to forecast future-year mobile source emissions by broad source category groupings.

Tables 8 and 9 below summarize the total forecasted on-road emissions in the Arvin/Lamont Community for the years 2026 and 2031:

Table 8: Year 2026 Projected On-Road Mobile Source Emissions

On-Road Mobile Source Categories	NOx (tpy)	VOC (tpy)	PM2.5 (tpy)
Heavy Duty Vehicles	67.20	1.68	1.75
Medium Heavy Duty Vehicles	5.25	0.21	0.10
Medium Duty Vehicles	5.21	6.96	0.23
Light Duty Vehicles	19.83	19.97	1.26
Bus	1.16	0.09	0.02
Other	0.74	3.45	0.02
Total	**99.39**	**32.36**	**3.38**

Table 9: Year 2031 Projected On-Road Mobile Source Emissions

On-Road Mobile Source Categories	NOx (tpy)	VOC (tpy)	PM2.5 (tpy)
Heavy Duty Vehicles	69.84	1.83	1.99
Medium Heavy Duty Vehicles	4.28	0.14	0.10
Medium Duty Vehicles	3.36	5.58	0.21
Light Duty Vehicles	14.18	16.65	1.20
Bus	0.82	0.08	0.02
Other	0.62	3.31	0.01
Total	**93.11**	**27.59**	**3.52**

Tables 10 and 11 below summarize the total forecasted off-road emissions in the

Arvin/Lamont Community for the years 2026 and 2031:

Table 10: Year 2026 Projected Off-Road Mobile Source Emissions

Off-Road Mobile Source Categories	NOx (tpy)	VOC (tpy)	PM2.5 (tpy)
Trains	7.78	0.00	0.12
Recreational Boats	0.00	3.76	0.00
Off-Road Recreational Vehicles	0.07	3.09	0.02
Off-Road Equipment	44.09	27.40	1.68
Fuel Storage and Handling	0.00	2.56	0.00
Aircraft	0.14	0.00	0.00
Farm Equipment	19.55	3.71	1.16
Total	**71.63**	**40.51**	**2.98**

Table 11: Year 2031 Projected Off-Road Mobile Source Emissions

Off-Road Mobile Source Categories	NOx (tpy)	VOC (tpy)	PM2.5 (tpy)
Trains	7.78	0.00	0.12
Recreational Boats	0.00	3.39	0.00
Off-Road Recreational Vehicles	0.07	2.24	0.02
Off-Road Equipment	41.48	28.07	1.48
Fuel Storage and Handling	0.00	2.48	0.00
Aircraft	0.12	0.00	0.00
Farm Equipment	14.24	2.98	0.84
Total	**63.69**	**39.17**	**2.45**

Area-Wide Sources Emissions Inventory

Area-wide sources are categories such as consumer products, unpaved road dust, fireplaces, and prescribed burning for which emissions occur over a wide geographic area. Emissions for these categories are estimated by both CARB and the local air districts using various models and methodologies.

For additional information on all area source Methodologies and categories visit CARB and District Web pages:

- https://ww3.arb.ca.gov/ei/areasrc/areameth.htm
- http://www.valleyair.org/Air_Quality_Plans/EmissionsMethods/EmissionsMethods.htm

Table 12 below summarizes the total projected Area Source emissions for each Category in the Arvin/Lamont Community for 2019:

Table 12: Year 2019 Area Source Emissions for Arvin-Lamont Community

Source Categories	NOX (tpy)	ROG (tpy)	PM2.5 (tpy)
CLEANING AND SURFACE COATINGS	**0.00**	**12.39**	**0.00**
ADHESIVES AND SEALANTS	0.00	1.18	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	7.71	0.00
DEGREASING	0.00	3.50	0.00
FUEL COMBUSTION	**63.93**	**12.51**	**17.02**
COGENERATION	2.50	2.09	1.88
ELECTRIC UTILITIES	0.07	0.00	0.00
FOOD AND AGRICULTURAL PROCESSING	7.92	1.20	0.94
MANUFACTURING AND INDUSTRIAL	4.17	0.60	0.71
OIL AND GAS PRODUCTION (COMBUSTION)	0.46	0.01	0.00
OTHER (FUEL COMBUSTION)	0.08	0.00	0.00
PETROLEUM REFINING (COMBUSTION)	46.80	7.98	13.36
SERVICE AND COMMERCIAL	1.92	0.63	0.12
INDUSTRIAL PROCESSES	**0.00**	**74.05**	**1.23**
CHEMICAL	0.00	72.32	0.04
MINERAL PROCESSES	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.00	0.85	0.28
FOOD AND AGRICULTURE	0.00	0.89	0.00
METAL PROCESSES	0.00	0.00	0.03
WOOD AND PAPER	0.00	0.00	0.89
MISCELLANEOUS PROCESSES	**12.54**	**130.25**	**48.19**
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.83
COOKING	0.00	2.00	12.26

Source Categories	NOX (tpy)	ROG (tpy)	PM2.5 (tpy)
FARMING OPERATIONS	0.00	123.89	14.96
FIRES	0.05	0.18	0.24
FUGITIVE WINDBLOWN DUST	0.00	0.00	5.30
MANAGED BURNING AND DISPOSAL	0.98	1.43	1.85
PAVED ROAD DUST	0.00	0.00	7.91
RESIDENTIAL FUEL COMBUSTION	11.51	2.74	2.80
UNPAVED ROAD DUST	0.00	0.00	2.03
OTHER MOBILE SOURCES	**102.31**	**46.46**	**4.77**
AIRCRAFT	0.19	0.00	0.00
FARM EQUIPMENT	32.50	5.47	1.88
FUEL STORAGE AND HANDLING	0.00	3.04	0.00
OFF-ROAD EQUIPMENT	45.68	28.17	2.16
OFF-ROAD EQUIPMENT (PERP)	16.11	1.48	0.59
OFF-ROAD RECREATIONAL VEHICLES	0.06	3.83	0.01
RECREATIONAL BOATS	0.00	4.47	0.00
TRAINS	7.78	0.00	0.12
PETROLEUM PRODUCTION AND MARKETING	**1.41**	**56.19**	**0.29**
OIL AND GAS PRODUCTION	1.30	21.85	0.14
PETROLEUM MARKETING	0.11	11.64	0.15
PETROLEUM REFINING	0.00	22.70	0.00
SOLVENT EVAPORATION	**0.00**	**160.97**	**0.00**
ARCHITECTURAL COATINGS AND RELATED PROCESS SOLVENTS	0.00	27.65	0.00
CONSUMER PRODUCTS	0.00	56.12	0.00
PESTICIDES/FERTILIZERS	0.00	77.19	0.00
WASTE DISPOSAL	**1.97**	**847.33**	**0.44**
LANDFILLS	1.97	0.11	0.10
OTHER (WASTE DISPOSAL)	0.00	847.22	0.33
Grand Total	**182.16**	**1340.16**	**71.94**

Forecasting Emissions – Area Sources

Emission forecasts are based on growth profiles that in many cases incorporate historical trends up to the base year or beyond. The growth surrogates used to forecast the emissions from these categories are presented below.

Tables 13 and 14 below summarize the total projected area source emissions for each category in the Arvin/Lamont Community for years 2026 and 2031:

Table 13: Year 2026 Projected Area Source Emissions for Arvin-Lamont Community

Source Categories	NOX (tpy)	ROG (tpy)	PM2.5 (tpy)
CLEANING AND SURFACE COATINGS	**0.00**	**15.22**	**1.27**
ADHESIVES AND SEALANTS	0.00	1.16	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	10.03	1.27
DEGREASING	0.00	4.03	0.00
FUEL COMBUSTION	**51.26**	**12.36**	**16.98**
COGENERATION	2.53	2.11	1.91
ELECTRIC UTILITIES	0.07	0.00	0.00
FOOD AND AGRICULTURAL PROCESSING	5.52	0.98	0.86
MANUFACTURING AND INDUSTRIAL	4.22	0.61	0.72
OIL AND GAS PRODUCTION (COMBUSTION)	0.36	0.01	0.00
OTHER (FUEL COMBUSTION)	0.07	0.00	0.00
PETROLEUM REFINING (COMBUSTION)	36.64	7.98	13.36
SERVICE AND COMMERCIAL	1.86	0.66	0.12
INDUSTRIAL PROCESSES	**0.00**	**75.86**	**0.95**
CHEMICAL	0.00	73.98	0.04
MINERAL PROCESSES	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.00	0.90	0.00
FOOD AND AGRICULTURE	0.00	0.97	0.00
METAL PROCESSES	0.00	0.00	0.03
WOOD AND PAPER	0.00	0.00	0.88
MISCELLANEOUS PROCESSES	**12.23**	**128.39**	**49.82**
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.86
COOKING	0.00	2.17	13.30
FARMING OPERATIONS	0.00	121.79	14.33
FIRES	0.05	0.19	0.26
FUGITIVE WINDBLOWN DUST	0.00	0.00	5.07
MANAGED BURNING AND DISPOSAL	0.95	1.40	1.81
PAVED ROAD DUST	0.00	0.00	9.31
RESIDENTIAL FUEL COMBUSTION	11.23	2.83	2.92
UNPAVED ROAD DUST	0.00	0.00	1.95
OTHER MOBILE SOURCES	**71.63**	**40.51**	**2.98**
AIRCRAFT	0.14	0.00	0.00
FARM EQUIPMENT	19.55	3.71	1.16
FUEL STORAGE AND HANDLING	0.00	2.56	0.00
OFF-ROAD EQUIPMENT	36.42	26.43	1.45
OFF-ROAD EQUIPMENT (PERP)	7.67	0.97	0.23
OFF-ROAD RECREATIONAL VEHICLES	0.07	3.09	0.02
RECREATIONAL BOATS	0.00	3.76	0.00
TRAINS	7.78	0.00	0.12
PETROLEUM PRODUCTION AND MARKETING	**0.50**	**48.35**	**0.20**
OIL AND GAS PRODUCTION	0.40	16.70	0.07

Source Categories	NOX (tpy)	ROG (tpy)	PM2.5 (tpy)
PETROLEUM MARKETING	0.10	8.94	0.13
PETROLEUM REFINING	0.00	22.70	0.00
SOLVENT EVAPORATION	**0.00**	**165.50**	**0.00**
ARCHITECTURAL COATINGS AND RELATED PROCESS SOLVENTS	0.00	29.14	0.00
CONSUMER PRODUCTS	0.00	62.58	0.00
PESTICIDES/FERTILIZERS	0.00	73.79	0.00
WASTE DISPOSAL	**1.28**	**919.13**	**0.36**
LANDFILLS	1.28	0.09	0.08
OTHER (WASTE DISPOSAL)	0.00	919.04	0.28
Grand Total	**136.89**	**1405.31**	**72.57**

Table 14: Year 2031 Projected Area Source Emissions for Stockton Community

Source Categories	NOX (tpy)	ROG (tpy)	PM2.5 (tpy)
CLEANING AND SURFACE COATINGS	**0.00**	**16.40**	**1.34**
ADHESIVES AND SEALANTS	0.00	1.16	0.00
COATINGS AND RELATED PROCESS SOLVENTS	0.00	10.74	1.34
DEGREASING	0.00	4.50	0.00
FUEL COMBUSTION	**45.30**	**12.37**	**17.05**
COGENERATION	2.57	2.15	1.94
ELECTRIC UTILITIES	0.07	0.00	0.00
FOOD AND AGRICULTURAL PROCESSING	4.34	0.92	0.87
MANUFACTURING AND INDUSTRIAL	4.37	0.64	0.76
OIL AND GAS PRODUCTION (COMBUSTION)	0.31	0.01	0.00
OTHER (FUEL COMBUSTION)	0.07	0.00	0.00
PETROLEUM REFINING (COMBUSTION)	31.69	7.98	13.36
SERVICE AND COMMERCIAL	1.87	0.68	0.13
INDUSTRIAL PROCESSES	**0.00**	**82.33**	**0.97**
CHEMICAL	0.00	80.29	0.04
MINERAL PROCESSES	0.00	0.00	0.00
OTHER (INDUSTRIAL PROCESSES)	0.00	0.96	0.00
FOOD AND AGRICULTURE	0.00	1.08	0.00
METAL PROCESSES	0.00	0.00	0.03
WOOD AND PAPER	0.00	0.00	0.89
MISCELLANEOUS PROCESSES	**12.09**	**127.55**	**50.85**
CONSTRUCTION AND DEMOLITION	0.00	0.00	0.91
COOKING	0.00	2.27	13.91

Source Categories	NOX (tpy)	ROG (tpy)	PM2.5 (tpy)
FARMING OPERATIONS	0.00	120.83	13.98
FIRES	0.05	0.20	0.27
FUGITIVE WINDBLOWN DUST	0.00	0.00	4.94
MANAGED BURNING AND DISPOSAL	0.93	1.38	1.79
PAVED ROAD DUST	0.00	0.00	10.16
RESIDENTIAL FUEL COMBUSTION	11.10	2.87	2.98
UNPAVED ROAD DUST	0.00	0.00	1.91
OTHER MOBILE SOURCES	**63.69**	**39.17**	**2.45**
AIRCRAFT	0.12	0.00	0.00
FARM EQUIPMENT	14.24	2.98	0.84
FUEL STORAGE AND HANDLING	0.00	2.48	0.00
OFF-ROAD EQUIPMENT	34.97	27.10	1.32
OFF-ROAD EQUIPMENT (PERP)	6.52	0.96	0.15
OFF-ROAD RECREATIONAL VEHICLES	0.07	2.24	0.02
RECREATIONAL BOATS	0.00	3.39	0.00
TRAINS	7.78	0.00	0.12
PETROLEUM PRODUCTION AND MARKETING	**0.44**	**45.32**	**0.18**
OIL AND GAS PRODUCTION	0.34	14.42	0.06
PETROLEUM MARKETING	0.09	8.20	0.12
PETROLEUM REFINING	0.00	22.70	0.00
SOLVENT EVAPORATION	**0.00**	**169.58**	**0.00**
ARCHITECTURAL COATINGS AND RELATED PROCESS SOLVENTS	0.00	30.47	0.00
CONSUMER PRODUCTS	0.00	67.24	0.00
PESTICIDES/FERTILIZERS	0.00	71.87	0.00
WASTE DISPOSAL	**1.35**	**961.37**	**0.38**
LANDFILLS	1.35	0.09	0.08
OTHER (WASTE DISPOSAL)	0.00	961.27	0.29
Grand Total	**122.87**	**1454.10**	**73.21**