

The Village at Playa Vista

Appendix E-3

Operation - Regional Emissions

E-3a - Dispersed Demand Scenario

- Summary
- Electricity and Natural Gas Usage
- URBEMIS2002 Output Files
- Miscellaneous Sources Emissions Worksheets

E-3b - Community Orientated Scenario

- Summary
- URBEMIS2002 Output Files

E-3a

Dispersed Demand Scenario for Operation Regional Emissions

Playa Vista Area D - Dispersed

Regional Emission Calculations (lbs/day)

	CO	NOx	PM10	ROG	SOx
Project					
Area	721	56	128	410	20
Mobile	1783	214	236	169	1
Stationary	18	92	2	3	6
Total Project	2522	362	366	582	28
SCAQMD Standard	550	55	150	55	150
Difference	1,972	307	216	527	(122)
Significant?	Yes	Yes	Yes	Yes	No

Electricity Usage

<u>Land Use</u>	<u>1,000 Sqft</u>	Electricity	Total Electricity Usage		Emission Factors (lbs/MWh) ^b				
		Usage Rate ^a			CO	ROC	NOx	PM10	SOx
		(kWh/sq.ft/yr)	(KWh/year)	(MWh/Day)	0.2	0.01	1.15	0.04	0.12
Project									
Office	175.0	12.95	2,266,250	6.209	1.242	0.062	7.140	0.248	0.745
Retail	150.0	13.55	2,032,500	5.568	1.114	0.056	6.404	0.223	0.668
Miscellaneous	40.0	10.5	420,000	1.151	0.230	0.012	1.323	0.046	0.138
Residential (DU)	2600.0	5,627	14,628,900	40.079	8.016	0.401	46.091	1.603	4.810
Total Project			19,347,650	53.007	10.60	0.53	60.96	2.12	6.36
Net Emissions From Electricity Usage					10.60	0.53	60.96	2.12	6.36

Natural Gas Usage

<u>Land Use</u>	<u>1,000 Sqft</u>	Natural Gas	Total Natural Gas Usage		Emission Factors (lbs/MCUft) ^d				
		Usage Rate ^c			CO	ROC	NOx	PM10	SOx
		(cu.ft/sq.ft/mo)	(cu.ft/mo)	(cu.ft/DAY)	20	5.3	120/80 ^e	0.2	0
Project									
Office	175.0	2.0	350,000	11,667	0.233	0.062	1.400	0.002	--
Retail	150.0	2.9	435,000	14,500	0.290	0.077	1.740	0.003	--
Miscellaneous	40.0	2.9	116,000	3,867	0.077	0.020	0.464	0.001	--
Residential (Multi-Family DU)	2600.0	4,012	10,429,900	347,663	6.953	1.843	27.813	0.070	--
Total Project			11,330,900	377,697	7.55	2.00	31.42	0.08	--
Net Emissions From Natural Gas Usage					7.55	2.00	31.42	0.08	--

Summary of Stationary Emissions

	<u>CO</u>	<u>ROC</u>	<u>NOx</u>	<u>PM10</u>	<u>SOx</u>
Total Existing Emissions (lbs/day)	0.00	0.00	0.00	0.00	0.00
Total Project Emissions (lbs/day)	18.16	2.53	92.38	2.20	6.36
Total Net Emissions (lbs/day)	18.16	2.53	92.38	2.20	6.36

^a Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993.^b Emission Factors from Table A9-11-B, CEQA Air Quality Handbook, SCAQMD, 1993.^c Natural Gas Usage Rates from Table A9-12-A, CEQA Air Quality Handbook, SCAQMD, 1993.^d Emission Factors from Table A9-12-B, CEQA Air Quality Handbook, SCAQMD, 1993.^e The emission factors for NOx in lbs per million cuft of natural gas are 120 for nonresidential uses and 80 for residential uses.

File Name: V:\PROJECTS\AIR QUALITY DIVISION\Projects\Playa Vista 2002\Only\Regional Ops\URBEMIS 2002\project - dispersed.urb
 Project Name: The Village at Playa Vista
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Winter)

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Apartments low rise	36.50	56.00	407.39	0.29	53.54
Condo/townhouse general	68.77	105.63	768.51	0.55	101.00
Strip mall	33.34	56.05	391.97	0.27	52.51
General office building	15.22	25.73	180.86	0.13	24.71
Government (civic center)	3.00	4.99	34.97	0.02	4.71
TOTAL EMISSIONS (lbs/day)	156.83	248.40	1,783.71	1.27	236.47

Does not include correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Temperature (F): 60 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Apartments low rise	5.75 trips / dwelling units	918.00	5,278.50
Condo/townhouse general	5.92 trips / dwelling units	1,682.00	9,957.44
Strip mall	41.29 trips / 1000 sq. ft.	150.00	6,193.05
General office building	12.98 trips / 1000 sq. ft.	175.00	2,270.98
Government (civic center)	13.00 trips / 1000 sq. ft.	40.00	520.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.70	1.10	98.70	0.20
Light Truck < 3,750 lbs	15.20	2.00	96.00	2.00
Light Truck 3,751- 5,750	16.20	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	68.80	31.20	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			
% of Trips - Commercial (by land use)						
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5
Government (civic center)				10.0	5.0	85.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Operations

The operational emission year changed from 2004 to 2010.
 The operational winter temperature changed from 50 to 60.
 The operational summer temperature changed from 90 to 75.
 The operational summer selection item changed from 8 to 5.
 The double counting internal work trip limit changed from to 970.70225.
 The double counting shopping trip limit changed from to 485.351125.
 The double counting other trip limit changed from to 6551.4542.

File Name: V:\PROJECTS\AIR QUALITY DIVISION\Projects\Playa Vista 2002\Only\Regional Ops\URBEMIS 2002\project - dispersed.urb
 Project Name: The Village at Playa Vista
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Summer)

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Apartments low rise	36.19	48.17	387.47	0.31	53.54
Condo/townhouse general	67.92	90.87	730.93	0.58	101.00
Strip mall	28.88	48.29	366.58	0.30	52.51
General office building	13.90	22.13	172.69	0.14	24.71
Government (civic center)	2.75	4.30	32.90	0.03	4.71
TOTAL EMISSIONS (lbs/day)	149.64	213.77	1,690.56	1.34	236.47

Does not include correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Temperature (F): 75 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Apartments low rise	5.75 trips / dwelling units	918.00	5,278.50
Condo/townhouse general	5.92 trips / dwelling units	1,682.00	9,957.44
Strip mall	41.29 trips / 1000 sq. ft.	150.00	6,193.05
General office building	12.98 trips / 1000 sq. ft.	175.00	2,270.98
Government (civic center)	13.00 trips / 1000 sq. ft.	40.00	520.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.70	1.10	98.70	0.20
Light Truck < 3,750 lbs	15.20	2.00	96.00	2.00
Light Truck 3,751- 5,750	16.20	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	68.80	31.20	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)

Strip mall	2.0	1.0	97.0
General office building	35.0	17.5	47.5
Government (civic center)	10.0	5.0	85.0

Page: 4

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DETAIL REPORT
 (Pounds/Day - Summer)

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Apartments low rise	41.51	44.48	437.50	0.31	53.54
Condo/townhouse general	77.76	83.90	825.31	0.59	101.00
Strip mall	31.16	44.60	412.94	0.30	52.51
General office building	15.34	20.42	195.76	0.14	24.71
Government (civic center)	3.06	3.97	37.13	0.03	4.71
TOTAL EMISSIONS (lbs/day)	168.83	197.38	1,908.65	1.37	236.47

Does not include correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Temperature (F): 85 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Apartments low rise	5.75 trips / dwelling units	918.00	5,278.50
Condo/townhouse general	5.92 trips / dwelling units	1,682.00	9,957.44
Strip mall	41.29 trips / 1000 sq. ft.	150.00	6,193.05
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Fleet Mix:

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Light Auto	54.70	1.10	98.70	0.20
Light Truck < 3,750 lbs	15.20	2.00	96.00	2.00
Light Truck 3,751- 5,750	16.20	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	68.80	31.20	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
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Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
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% of Trips - Residential	20.0	37.0	43.0			
% of Trips - Commercial (by land use)						
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5
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Playa Vista - Area D

Summary of Area Source Emissions

Population: ^a	<u>Project</u>				
	6900				
	Emissions (lbs/day)				
	CO	ROC	NO _x	PM ₁₀	SO _x
Solvent Usage	--	120	--	--	--
Surface Coating	--	131	--	--	--
Forklifts	469	18	23	2	--
Charbroilers	--	3	--	22	--
Emergency Generators	6	0.7	14	61	13
Landscaping and Garden	6	0.7	0.06	0.0013	0
Miscellaneous Sources ^b	240	137	19	43	7
Total	721	410	56	128	20

^a Population equals 5,720 residents plus 1,180 employees.

^b Miscellaneous sources equal 0.5 all area sources to account for unforeseen sources.

Playa Vista - Area D

Commercial/ Consumer Solvent Use

AP-42 Section 4.10

WITH PROJECT

Number of People	6900
Nonmethane VOC emissions per capita (lb/day)	0.0252
Nonmethane VOC emissions (lb/day)	173.88

VOC EMISSIONS 173.9

ROC EMISSIONS (69% of VOC) 120.0

a Includes emissions from aerosol products, household products, toiletries, rubbing compounds, windshield washing, polishes and waxes, nonindustrial adhesives, space deodorant, moth control, and laundry detergent.

Nonindustrial Surface Coating

AP-42 Section 4.2.1

	Architectural Surface Coating	Automobile Refinishing
WITH PROJECT		
Number of People	6900	6900
VOC emissions per capita (lb/day)	0.013	0.006
VOC emissions (lb/day)	89.7	41.4
VOC EMISSIONS	89.7	41.4
TOTAL VOC EMISSIONS (surface coating + auto refinishing)		<u>131.1</u>

Charbroilers

Source: SCAQMD, 1997

Number of Restaurants	4
Lbs of meat cooked per day per restaurant ^b	166
Emission factors (lbs/ 1000 lbs cooked)	
ROC (assumed to be equivalent to VOC)	3.94
PM	32.67
Emissions (lbs/day)	
ROC	<u>2.6</u>
PM	<u>21.7</u>

b based on information provided at www.burgerking.com

Playa Vista - Area D

Forklifts

CEQA Handbook Table A9-8-A

	Number	Hours per Day	Emission Factors (lbs/hr)				Emissions (lbs/day)			
			CO	ROC	NOx	PM10	CO	ROC	NOx	PM10
GAS										
Fork Lift - 50 Hp	1	8	14.0	0.5	0.018	0.003	112.0	4	0.144	0.024
Fork Lift - 175 Hp	1	8	43.97	1.53	0.92	0.123	351.76	12.24	7.36	0.984
DIESEL										
Fork Lift - 50 Hp	1	8	0.18	0.053	0.441	0.031	1.44	0.424	3.528	0.248
Fork Lift - 175 Hp	1	8	0.52	0.17	1.54	0.093	4.16	1.36	12.32	0.744
TOTAL	4	32					469.4	18.0	23.4	2.0

Diesel-Powered Emergency Generators

AP-42 Section 3.4.1

Power Rating: 350 kW

Annual Hours of Use: 500^a

% Sulfur in fuel oil: 1.5

	Number	Emission Factors (lbs/hp-hr)							Emissions (lbs/day)						
		CO	TOC	Non-methane TOC	NOx	NOx (controlled)	PM10	SOx	CO	TOC	Non-methane TOC	NOx	NOx (controlled)	PM10	SOx
Diesel Generator	3	0.0055	7.05E-04	6.42E-04	0.024	0.013	0.0573	0.0121	5.9	0.8	0.7	25.7	13.9	61.5	13.0

^a Calculating Potential to Emit for Emergency Generators, EPA, September 1995.

Playa Vista - Area D

Analysis of Emissions from Landscaping Operations

Landscaped Acreage Calculations

Use	Proposed Action (Area D)
Active Park Acreage	10.2
Total Developed Acreage	92.4
Total Landscaped Acreage (50%(Total Developed Area) + Active Park Area)*	47.9

*Total Developed Area is multiplied by 50% based on average lot coverage restrictions for the area.

Lawn & Garden Engine Emissions

Statewide 2005

Emissions in tons/day (from Table K-3, Appendix M, Offroad Vehicle Emissions Inventory and CO Credits)

	Engine Population	% of Total	Fuel Consump.	Exhaust PM	Exhaust PM10 =19% PM*	Exhaust Nox	Exhaust CO	Exhaust ROG	Evap ROG	Container ROG	Dist. S&T ROG	Sum ROG
2-stroke < 25 hp	2153439	40.52%	63293	0.16	0.03	0.61	71.78	23.33	1.17	1.90	0.11	26.50
4-stroke < 25 hp	3097046	58.28%	117964	0.13	0.02	2.42	241.63	9.33	4.66	3.54	0.20	17.74
2-stroke > 25 hp	497	0.01%	2167	0.00	0.00	0.04	2.84	0.07	0.00	0.02	0.00	0.10
4-stroke > 25 hp	63540	1.20%	30515	0.17	0.03	1.10	65.21	1.75	0.88	0.88	0.05	2.98
Total	5314522	100.00%	213939	0.46	0.09	4.17	381.46	34.48	6.71	6.34	0.36	47.32
Avg. Emissions per Engine in tons/ day (fuel in gal./day)			0.040256	8.66E-08	1.64E-08	7.85E-07	7.18E-05	6.49E-06	1.26E-06	1.19E-06	6.77E-08	8.9E-06
Engine Population for Proposed Action =	40	**										
Emissions per Day for Proposed Action in tons/ day (fuel in gal./day)			1.610222	3.46E-06	6.58E-07	3.14E-05	0.002871	0.00026	5.05E-05	4.77E-05	2.71E-06	0.000356
Emissions per Day for Proposed Action in pounds/ day (fuel in gal./day)			1.6	0.007	0.0013	0.06	5.7	0.5	0.10	0.10	0.005	0.7

*Source: CEPA ARB, "A Report to the California Legislature on the Potential Health and Environmental Impacts of Leaf Blowers", Mobile Source Control Division, February 2000.

**Assuming 3 min engine use/100 sf landscaping, biweekly maintenance; Source: January 8, 1998 press release from Aero Air Pollution, Los Angeles.

E-3b

Community Orientated Scenario Operation Regional Emissions

Playa Vista Area D - Community

Regional Emission Calculations (lbs/day)

	CO	NOx	PM10	ROG	SOx
Project					
Area	721	56	128	410	20
Mobile	1595	187	202	158	1
Stationary	18	92	2	3	6
Total Project	2335	335	333	571	28
SCAQMD Standard	550	55	150	55	150
Difference	1,785	280	183	516	(122)
Significant?	Yes	Yes	Yes	Yes	No

Electricity Usage

<u>Land Use</u>	<u>1,000 Sqft</u>	Electricity	Total Electricity Usage		Emission Factors (lbs/MWh) ^b				
		Usage Rate ^a			CO	ROC	NOx	PM10	SOx
		(kWh/sq.ft/yr)	(KWh/year)	(MWh/Day)	<u>0.2</u>	<u>0.01</u>	<u>1.15</u>	<u>0.04</u>	<u>0.12</u>
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Total Project			19,347,650	53.007	10.60	0.53	60.96	2.12	6.36
Net Emissions From Electricity Usage					10.60	0.53	60.96	2.12	6.36

Natural Gas Usage

<u>Land Use</u>	<u>1,000 Sqft</u>	Natural Gas	Total Natural Gas Usage		Emission Factors (lbs/MCUft) ^d				
		Usage Rate ^c			CO	ROC	NOx	PM10	SOx
		(cu.ft/sq.ft/mo)	(cu.ft/mo)	(cu.ft/DAY)	<u>20</u>	<u>5.3</u>	<u>120/80</u> ^e	<u>0.2</u>	<u>0</u>
Project									
Office	175.0	2.0	350,000	11,667	0.233	0.062	1.400	0.002	--
Retail	150.0	2.9	435,000	14,500	0.290	0.077	1.740	0.003	--
Miscellaneous	40.0	2.9	116,000	3,867	0.077	0.020	0.464	0.001	--
Residential (Multi-Family DU)	2600.0	4,012	10,429,900	347,663	6.953	1.843	27.813	0.070	--
Total Project			11,330,900	377,697	7.55	2.00	31.42	0.08	--
Net Emissions From Natural Gas Usage					7.55	2.00	31.42	0.08	--

Summary of Stationary Emissions

	<u>CO</u>	<u>ROC</u>	<u>NOx</u>	<u>PM10</u>	<u>SOx</u>
Total Existing Emissions (lbs/day)	0.00	0.00	0.00	0.00	0.00
Total Project Emissions (lbs/day)	18.16	2.53	92.38	2.20	6.36
Total Net Emissions (lbs/day)	18.16	2.53	92.38	2.20	6.36

^a Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993.^b Emission Factors from Table A9-11-B, CEQA Air Quality Handbook, SCAQMD, 1993.^c Natural Gas Usage Rates from Table A9-12-A, CEQA Air Quality Handbook, SCAQMD, 1993.^d Emission Factors from Table A9-12-B, CEQA Air Quality Handbook, SCAQMD, 1993.^e The emission factors for NOx in lbs per million cuft of natural gas are 120 for nonresidential uses and 80 for residential uses.

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 Project Name: The Village at Playa Vista
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Winter)

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Apartments low rise	36.50	56.00	407.39	0.29	53.54
Condo/townhouse general	68.77	105.63	768.51	0.55	101.00
Strip mall	9.70	16.00	111.89	0.08	14.99
General office building	15.22	25.73	180.86	0.13	24.71
Government (civic center)	3.00	4.99	34.97	0.02	4.71
TOTAL EMISSIONS (lbs/day)	133.19	208.35	1,503.63	1.07	198.95

Does not include correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Temperature (F): 60 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Apartments low rise	5.75 trips / dwelling units	918.00	5,278.50
Condo/townhouse general	5.92 trips / dwelling units	1,682.00	9,957.44
Strip mall	11.79 trips / 1000 sq. ft.	150.00	1,767.90
General office building	12.98 trips / 1000 sq. ft.	175.00	2,270.98
Government (civic center)	13.00 trips / 1000 sq. ft.	40.00	520.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.70	1.10	98.70	0.20
Light Truck < 3,750 lbs	15.20	2.00	96.00	2.00
Light Truck 3,751- 5,750	16.20	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	68.80	31.20	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			
% of Trips - Commercial (by land use)						
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5
Government (civic center)				10.0	5.0	85.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Operations

The operational emission year changed from 2004 to 2010.
 The operational winter temperature changed from 50 to 60.
 The operational summer temperature changed from 90 to 75.
 The operational summer selection item changed from 8 to 5.
 The double counting internal work trip limit changed from to 882.19925.
 The double counting shopping trip limit changed from to 441.099625.
 The double counting other trip limit changed from to 3235.576125.

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 Project Name: The Village at Playa Vista
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Summer)

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Apartments low rise	36.19	48.17	387.47	0.31	53.54
Condo/townhouse general	67.92	90.87	730.93	0.58	101.00
Strip mall	9.00	13.79	104.65	0.08	14.99
General office building	13.90	22.13	172.69	0.14	24.71
Government (civic center)	2.75	4.30	32.90	0.03	4.71
TOTAL EMISSIONS (lbs/day)	129.76	179.26	1,428.63	1.13	198.95

Does not include correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Temperature (F): 75 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Apartments low rise	5.75 trips / dwelling units	918.00	5,278.50
Condo/townhouse general	5.92 trips / dwelling units	1,682.00	9,957.44
Strip mall	11.79 trips / 1000 sq. ft.	150.00	1,767.90
General office building	12.98 trips / 1000 sq. ft.	175.00	2,270.98
Government (civic center)	13.00 trips / 1000 sq. ft.	40.00	520.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.70	1.10	98.70	0.20
Light Truck < 3,750 lbs	15.20	2.00	96.00	2.00
Light Truck 3,751- 5,750	16.20	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	68.80	31.20	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			
% of Trips - Commercial (by land use)						
Strip mall				2.0	1.0	97.0
General office building				35.0	17.5	47.5
Government (civic center)				10.0	5.0	85.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Operations

The operational emission year changed from 2004 to 2010.
 The operational winter temperature changed from 50 to 60.
 The operational summer temperature changed from 90 to 75.
 The operational summer selection item changed from 8 to 5.
 The double counting internal work trip limit changed from to 882.19925.
 The double counting shopping trip limit changed from to 441.099625.
 The double counting other trip limit changed from to 3235.576125.

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 Project Name: The Village at Playa Vista
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Summer)

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Apartments low rise	41.51	44.48	437.50	0.31	53.54
Condo/townhouse general	77.76	83.90	825.31	0.59	101.00
Strip mall	10.08	12.73	117.88	0.09	14.99
General office building	15.34	20.42	195.76	0.14	24.71
Government (civic center)	3.06	3.97	37.13	0.03	4.71
TOTAL EMISSIONS (lbs/day)	147.76	165.51	1,613.59	1.15	198.95

Does not include correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Temperature (F): 85 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Apartments low rise	5.75 trips / dwelling units	918.00	5,278.50
Condo/townhouse general	5.92 trips / dwelling units	1,682.00	9,957.44
Strip mall	11.79 trips / 1000 sq. ft.	150.00	1,767.90
General office building	12.98 trips / 1000 sq. ft.	175.00	2,270.98
Government (civic center)	13.00 trips / 1000 sq. ft.	40.00	520.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.70	1.10	98.70	0.20
Light Truck < 3,750 lbs	15.20	2.00	96.00	2.00
Light Truck 3,751- 5,750	16.20	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	68.80	31.20	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)

Strip mall	2.0	1.0	97.0
General office building	35.0	17.5	47.5
Government (civic center)	10.0	5.0	85.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Operations

The operational emission year changed from 2004 to 2010.
 The operational winter temperature changed from 50 to 60.
 The operational summer temperature changed from 90 to 85.
 The operational summer selection item changed from 8 to 6.
 The double counting internal work trip limit changed from to 882.19925.
 The double counting shopping trip limit changed from to 441.099625.
 The double counting other trip limit changed from to 3235.576125.

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 Project Name: The Village at Playa Vista
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Winter)

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Strip mall	10.76	8.85	91.84	0.02	3.42
TOTAL EMISSIONS (lbs/day)	10.76	8.85	91.84	0.02	3.42

Does not include correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Temperature (F): 60 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Strip mall	29.50 trips / 1000 sq. ft.	150.00	4,425.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.70	1.10	98.70	0.20
Light Truck < 3,750 lbs	15.20	2.00	96.00	2.00
Light Truck 3,751- 5,750	16.20	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	68.80	31.20	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	0.5	0.5	0.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			
% of Trips - Commercial (by land use)				2.0	1.0	97.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Operations

The operational emission year changed from 2004 to 2010.
 The operational winter temperature changed from 50 to 60.
 The operational summer temperature changed from 90 to 75.
 The operational summer selection item changed from 8 to 5.
 The home based work selection item changed from 8 to 7.
 The home based shopping selection item changed from 9 to 8.
 The home based other selection item changed from 9 to 8.
 The commercial based commute selection item changed from 9 to 8.
 The commercial based commute urban trip length changed from 10.3 to .5.
 The commercial based non-work selection item changed from 9 to 8.
 The commercial based non-work urban trip length changed from 5.5 to .5.
 The commercial based customer selection item changed from 9 to 8.
 The commercial based customer urban trip length changed from 5.5 to .5.
 The travel mode environment settings changed from both to: none

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 Project Name: The Village at Playa Vista
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Summer)

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Strip mall	9.78	7.77	73.71	0.02	3.42
TOTAL EMISSIONS (lbs/day)	9.78	7.77	73.71	0.02	3.42

Does not include correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Temperature (F): 75 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Strip mall	29.50 trips / 1000 sq. ft.	150.00	4,425.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.70	1.10	98.70	0.20
Light Truck < 3,750 lbs	15.20	2.00	96.00	2.00
Light Truck 3,751- 5,750	16.20	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	68.80	31.20	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	0.5	0.5	0.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)			
Strip mall	2.0	1.0	97.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Operations

The operational emission year changed from 2004 to 2010.
 The operational winter temperature changed from 50 to 60.
 The operational summer temperature changed from 90 to 75.
 The operational summer selection item changed from 8 to 5.
 The home based work selection item changed from 8 to 7.
 The home based shopping selection item changed from 9 to 8.
 The home based other selection item changed from 9 to 8.
 The commercial based commute selection item changed from 9 to 8.
 The commercial based commute urban trip length changed from 10.3 to .5.
 The commercial based non-work selection item changed from 9 to 8.
 The commercial based non-work urban trip length changed from 5.5 to .5.
 The commercial based customer selection item changed from 9 to 8.
 The commercial based customer urban trip length changed from 5.5 to .5.
 The travel mode environment settings changed from both to: none

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 Project Name: The Village at Playa Vista
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Summer)

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Strip mall	10.72	7.41	74.36	0.02	3.42
TOTAL EMISSIONS (lbs/day)	10.72	7.41	74.36	0.02	3.42

Does not include correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Temperature (F): 85 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
Strip mall	29.50 trips / 1000 sq. ft.	150.00	4,425.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.70	1.10	98.70	0.20
Light Truck < 3,750 lbs	15.20	2.00	96.00	2.00
Light Truck 3,751- 5,750	16.20	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	68.80	31.20	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	0.5	0.5	0.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)			
Strip mall	2.0	1.0	97.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Operations

The operational emission year changed from 2004 to 2010.
 The operational winter temperature changed from 50 to 60.
 The operational summer temperature changed from 90 to 85.
 The operational summer selection item changed from 8 to 6.
 The home based work selection item changed from 8 to 7.
 The home based shopping selection item changed from 9 to 8.
 The home based other selection item changed from 9 to 8.
 The commercial based commute selection item changed from 9 to 8.
 The commercial based commute urban trip length changed from 10.3 to .5.
 The commercial based non-work selection item changed from 9 to 8.
 The commercial based non-work urban trip length changed from 5.5 to .5.
 The commercial based customer selection item changed from 9 to 8.
 The commercial based customer urban trip length changed from 5.5 to .5.
 The travel mode environment settings changed from both to: none