APPENDIX B

AIR QUALITY CALCULATIONS

Alamitos Bay Marina - Phase 1

ENGINE EXHAUST EMISSIONS

Source [1]	Parameter 1	Parameter 2	CO Emission Factor	CO Emission (lbs/day)	ROC Emission Factor	ROC Emission (lbs/day)	NOx Emission Factor	NOx Emission (lbs/day)	SOx Emission Factor	SOx Emission (lbs/day)	PM10 Emission Factor	PM10 Emission (lbs/day)	PM2.5 Emission Factor	PM2.5 Emission (lbs/day)	CO2 Emission Factor	CO2 Emission (lbs/day)
Phase 1a: Remove Existing Gangways and Piles																
Diesel Crane	8 hours/day	1 unit	0.637 lb/hr	5.1	0.188 lb/hr	1.5	1.695 lb/hr	13.6	0.001 lb/hr	0.0	0.076 lb/hr	0.6	0.067 lb/hr	0.5	186.500 lb/hr	1,492.0
Gas Skiffs	2 hours/day	2 unit	37.667 lb/hr	150.7	16.521 lb/hr	66.1	0.011 lb/hr	0.0	0.011 lb/hr	0.0	0.156 lb/hr	0.6	0.139 lb/hr	0.6	25.432 lb/hr	101.7
Heavy Duty Trucks	40 miles	6 trips per day	6.733 gr/VMT	3.6	0.867 gr/VMT	0.5	13.366 gr/VMT	7.1	0.014 gr/VMT	0.0	0.481 gr/VMT	0.3	0.416 gr/VMT	0.2	####### gr/VMT	793.7
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				169.0		68.4		21.9		0.1		1.6		1.3		3,318.6
Phase 1b: Install New Gangways																
Diesel Crane	2 hours/day	1 unit	0.637 lb/hr	1.3	0.188 lb/hr	0.4	1.695 lb/hr	3.4	0.001 lb/hr	0.0	0.076 lb/hr	0.2	0.067 lb/hr	0.1	186.500 lb/hr	373.0
Pile Driver	8 hours/day	1 unit	0.475 lb/hr	3.8	0.131 lb/hr	1.0	1.241 lb/hr	9.9	0.001 lb/hr	0.0	0.054 lb/hr	0.4	0.048 lb/hr	0.4	132.500 lb/hr	1,060.0
Heavy Duty Trucks	40 miles	2 trips per day	6.733 gr/VMT	1.2	0.867 gr/VMT	0.2	13.366 gr/VMT	2.4	0.014 gr/VMT	0.0	0.481 gr/VMT	0.1	0.416 gr/VMT	0.1	####### gr/VMT	264.6
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				16.0		2.0		16.9		0.0		0.8		0.6		2,628.8
Phase 1c: Install Temporary Docks																
Diesel Crane	2 hours/day	1 unit	0.637 lb/hr	1.3	0.188 lb/hr	0.4	1.695 lb/hr	3.4	0.001 lb/hr	0.0	0.076 lb/hr	0.2	0.067 lb/hr	0.1	186.500 lb/hr	373.0
Pile Driver	4 hours/day	1 unit	0.475 lb/hr	1.9	0.131 lb/hr	0.5	1.241 lb/hr	5.0	0.001 lb/hr	0.0	0.054 lb/hr	0.2	0.048 lb/hr	0.2	132.500 lb/hr	530.0
Heavy Duty Trucks	40 miles	5 trips per day	6.733 gr/VMT	3.0	0.867 gr/VMT	0.4	13.366 gr/VMT	5.9	0.014 gr/VMT	0.0	0.481 gr/VMT	0.2	0.416 gr/VMT	0.2	####### gr/VMT	661.4
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				15.8		1.7		15.4		0.0		0.7		0.5		2,495.6

Phase 1d: Dredging																
Diesel Clam Bucket	8 hours/day	1 unit	0.848 lb/hr	6.8	0.212 lb/hr	1.7	2.105 lb/hr	16.8	0.002 lb/hr	0.0	0.082 lb/hr	0.7	0.073 lb/hr	0.6	248.300 lb/hr	1,986.4
Diesel Tender	8 hours/day	1 unit	0.558 lb/hr	4.5	0.186 lb/hr	1.5	1.953 lb/hr	15.6	0.002 lb/hr	0.0	0.140 lb/hr	1.1	0.125 lb/hr	1.0	163.400 lb/hr	1,307.2
Heavy Duty Trucks	40 miles	0 trips per day	6.733 gr/VMT	0.0	0.867 gr/VMT	0.0	13.366 gr/VMT	0.0	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	0.0
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				20.9		3.6		33.7		0.0		1.9		1.6		4,224.8
Phase 1e: Seawall and Rip Rap Repair																
Gas Skiffs	2 hours/day	1 unit	37.667 lb/hr	75.3	16.521 lb/hr	33.0	0.011 lb/hr	0.0	0.011 lb/hr	0.0	0.156 lb/hr	0.3	0.139 lb/hr	0.3	25.432 lb/hr	50.9
Heavy Duty Trucks	40 miles	12 trips per day	6.733 gr/VMT	7.1	0.867 gr/VMT	0.9	13.366 gr/VMT	14.1	0.014 gr/VMT	0.0	0.481 gr/VMT	0.5	0.416 gr/VMT	0.4	####### gr/VMT	1,587.4
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				92.2		34.4		15.4		0.0		0.9		0.7		2,569.5

Phase 1f: Restroom Replacement																
Backhoe	8 hours/day	1 unit	0.414 lb/hr	3.3	0.131 lb/hr	1.0	0.830 lb/hr	6.6	0.001 lb/hr	0.0	0.064 lb/hr	0.5	0.057 lb/hr	0.5	66.800 lb/hr	534.4
Loader	8 hours/day	1 unit	0.555 lb/hr	4.4	0.173 lb/hr	1.4	1.382 lb/hr	11.1	0.001 lb/hr	0.0	0.077 lb/hr	0.6	0.069 lb/hr	0.5	89.600 lb/hr	716.8
Bobcat	8 hours/day	1 unit	0.399 lb/hr	3.2	0.168 lb/hr	1.3	0.329 lb/hr	2.6	0.000 lb/hr	0.0	0.039 lb/hr	0.3	0.035 lb/hr	0.3	69.000 lb/hr	552.0
Heavy Duty Trucks	40 miles	4 trips per day	6.733 gr/VMT	2.4	0.867 gr/VMT	0.3	13.366 gr/VMT	4.7	0.014 gr/VMT	0.0	0.481 gr/VMT	0.2	0.416 gr/VMT	0.1	####### gr/VMT	529.1
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				23.0		4.5		26.2		0.0		1.7		1.4		3,263.5
Phase 1g: Parking Lot Asphalt																
Backhoe	4 hours/day	1 unit	0.414 lb/hr	1.7	0.131 lb/hr	0.5	0.830 lb/hr	3.3	0.001 lb/hr	0.0	0.064 lb/hr	0.3	0.057 lb/hr	0.2	66.800 lb/hr	267.2
Loader	4 hours/day	1 unit	0.555 lb/hr	2.2	0.173 lb/hr	0.7	1.382 lb/hr	5.5	0.001 lb/hr	0.0	0.077 lb/hr	0.3	0.069 lb/hr	0.3	89.600 lb/hr	358.4
Paving Equipment	4 hours/day	2 unit	0.469 lb/hr	3.8	0.156 lb/hr	1.2	1.033 lb/hr	8.3	0.008 lb/hr	0.1	0.071 lb/hr	0.6	0.063 lb/hr	0.5	69.000 lb/hr	552.0
Bobcat	4 hours/day	1 unit	0.399 lb/hr	1.6	0.168 lb/hr	0.7	0.329 lb/hr	1.3	0.000 lb/hr	0.0	0.039 lb/hr	0.2	0.035 lb/hr	0.1	30.300 lb/hr	121.2
Heavy Duty Trucks	40 miles	2 trips per day	6.733 gr/VMT	1.2	0.867 gr/VMT	0.2	13.366 gr/VMT	2.4	0.014 gr/VMT	0.0	0.481 gr/VMT	0.1	0.416 gr/VMT	0.1	####### gr/VMT	264.6
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				20.1		3.7		22.0		0.1		1.5		1.2		2,494.6

Peak Emissions for Phase		CO	169.0	ROC	68.4	NOx	33.7	SOx	0.1	PM10	1.9	PM2.5	1.6	CO2	4,224.8
	Threshold		550		75		100		150		150		55		NA

Alamitos Bay Marina - Phase 1a

ENGINE EXHAUST EMISSIONS

Source [1]	Parameter 1	Parameter 2	CO Emission Factor	CO Emission (lbs/day)	ROC Emission Factor	ROC Emission (lbs/day)	NOx Emission Factor	NOx Emission (lbs/day)	SOx Emission Factor	SOx Emission (lbs/day)	PM10 Emission Factor	PM10 Emission (lbs/day)	PM2.5 Emission Factor	PM2.5 Emission (lbs/day)	CO2 Emission Factor	CO2 Emission (lbs/day)
Phase a: Demolition																
Backhoe	8 hours/day	1 unit	0.414 lb/hr	3.3	0.131 lb/hr	1.0	0.830 lb/hr	6.6	0.001 lb/hr	0.0	0.064 lb/hr	0.5	0.057 lb/hr	0.5	66.800 lb/hr	534.4
Loader	2 hours/day	1 unit	0.555 lb/hr	1.1	0.173 lb/hr	0.3	1.382 lb/hr	2.8	0.001 lb/hr	0.0	0.077 lb/hr	0.2	0.069 lb/hr	0.1	89.600 lb/hr	179.2
Bobcat	4 hours/day	1 unit	0.399 lb/hr	1.6	0.168 lb/hr	0.7	0.329 lb/hr	1.3	0.000 lb/hr	0.0	0.039 lb/hr	0.2	0.035 lb/hr	0.1	69.000 lb/hr	276.0
Heavy Duty Trucks	40 miles	18 trips per day	6.733 gr/VMT	10.7	0.867 gr/VMT	1.4	13.366 gr/VMT	21.2	0.014 gr/VMT	0.0	0.481 gr/VMT	0.8	0.416 gr/VMT	0.7	####### gr/VMT	2,381.1
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				26.4		3.8		33.1		0.0		1.7		1.4		4,301.9
Phase b: Reroute Utilities																
Backhoe	2 hours/day	1 unit	0.414 lb/hr	3.3	0.131 lb/hr	1.0	0.830 lb/hr	6.6	0.001 lb/hr	0.0	0.064 lb/hr	0.5	0.057 lb/hr	0.5	66.800 lb/hr	534.4
Bobcat	2 hours/day	1 unit	0.399 lb/hr	3.2	0.168 lb/hr	1.3	0.329 lb/hr	2.6	0.000 lb/hr	0.0	0.039 lb/hr	0.3	0.035 lb/hr	0.3	69.000 lb/hr	552.0
Heavy Duty Trucks	40 miles	18 trips per day	6.733 gr/VMT	10.7	0.867 gr/VMT	1.4	13.366 gr/VMT	21.2	0.014 gr/VMT	0.0	0.481 gr/VMT	0.8	0.416 gr/VMT	0.7	####### gr/VMT	2,381.1
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				26.9		4.2		31.7		0.0		1.7		1.4		4,398.7
Phase c: Excavation																
Backhoe	8 hours/day	1 unit	0.414 lb/hr	3.3	0.131 lb/hr	1.0	0.830 lb/hr	6.6	0.001 lb/hr	0.0	0.064 lb/hr	0.5	0.057 lb/hr	0.5	66.800 lb/hr	534.4
Loader	8 hours/day	1 unit	0.555 lb/hr	4.4	0.173 lb/hr	1.4	1.382 lb/hr	11.1	0.001 lb/hr	0.0	0.077 lb/hr	0.6	0.069 lb/hr	0.5	89.600 lb/hr	716.8
Heavy Duty Trucks	40 miles	18 trips per day	6.733 gr/VMT	10.7	0.867 gr/VMT	1.4	13.366 gr/VMT	21.2	0.014 gr/VMT	0.0	0.481 gr/VMT	0.8	0.416 gr/VMT	0.7	####### gr/VMT	2,381.1
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				28.1		4.2		40.1		0.0		2.0		1.7		4,563.5

Phase d: Salvage Stone																
Backhoe	8 hours/day	1 unit	0.414 lb/hr	3.3	0.131 lb/hr	1.0	0.830 lb/hr	6.6	0.001 lb/hr	0.0	0.064 lb/hr	0.5	0.057 lb/hr	0.5	66.800 lb/hr	534.4
Loader	8 hours/day	1 unit	0.555 lb/hr	4.4	0.173 lb/hr	1.4	1.382 lb/hr	11.1	0.001 lb/hr	0.0	0.077 lb/hr	0.6	0.069 lb/hr	0.5	89.600 lb/hr	716.8
Heavy Duty Trucks	40 miles	18 trips per day	6.733 gr/VMT	10.7	0.867 gr/VMT	1.4	13.366 gr/VMT	21.2	0.014 gr/VMT	0.0	0.481 gr/VMT	0.8	0.416 gr/VMT	0.7	####### gr/VMT	2,381.1
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				28.1		4.2		40.1		0.0		2.0		1.7		4,563.5
Phase e: Rip Rap Construction																
Backhoe	4 hours/day	1 unit	0.414 lb/hr	1.7	0.131 lb/hr	0.5	0.830 lb/hr	3.3	0.001 lb/hr	0.0	0.064 lb/hr	0.3	0.057 lb/hr	0.2	66.800 lb/hr	267.2
Loader	4 hours/day	1 unit	0.555 lb/hr	2.2	0.173 lb/hr	0.7	1.382 lb/hr	5.5	0.001 lb/hr	0.0	0.077 lb/hr	0.3	0.069 lb/hr	0.3	89.600 lb/hr	358.4
Heavy Duty Trucks	40 miles	18 trips per day	6.733 gr/VMT	10.7	0.867 gr/VMT	1.4	13.366 gr/VMT	21.2	0.014 gr/VMT	0.0	0.481 gr/VMT	0.8	0.416 gr/VMT	0.7	####### gr/VMT	2,381.1
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				24.3		3.0		31.3		0.0		1.4		1.2		3,937.9
Phase f: Sidewalk Construction																
Loader	8 hours/day	1 unit	0.555 lb/hr	4.4	0.173 lb/hr	1.4	1.382 lb/hr	11.1	0.001 lb/hr	0.0	0.077 lb/hr	0.6	0.069 lb/hr	0.5	89.600 lb/hr	716.8
Bobcat	8 hours/day	1 unit	0.399 lb/hr	3.2	0.168 lb/hr	1.3	0.329 lb/hr	2.6	0.000 lb/hr	0.0	0.039 lb/hr	0.3	0.035 lb/hr	0.3	69.000 lb/hr	552.0
Heavy Duty Trucks	40 miles	18 trips per day	6.733 gr/VMT	10.7	0.867 gr/VMT	1.4	13.366 gr/VMT	21.2	0.014 gr/VMT	0.0	0.481 gr/VMT	0.8	0.416 gr/VMT	0.7	####### gr/VMT	2,381.1
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				28.0		4.5		36.1		0.0		1.8		1.5		4,581.1

Peak Emissions for Phase		CO	28.1	ROC	4.5	NOx	40.1	SOx	0.0	PM10	2.0	PM2.5	1.7	CO2	4,581.1
	Threshold		550		75		100		150		150		55		NA

Alamitos Bay Marina - Phases 2 and 3

ENGINE EXHAUST EMISSIONS

			CO		ROC		NOx		SOx		PM10		PM2.5		CO2	
Source [1]	Parameter 1	Parameter 2	Emission Factor	Emission (lbs/day)	Emission Factor	Emission (lbs/day)	Emission Factor	Emission (lbs/day)	Emission Factor	Emission (lbs/day)	Emission Factor	Emission (lbs/day)	Emission Factor	Emission (lbs/day)	Emission Factor	Emission (lbs/day)
Phase 2a: Remove Existing Gangways and Piles																
Gas Skiffs	2 hours/day	2 unit	37.667 lb/hr	150.7	16.521 lb/hr	66.1	0.011 lb/hr	0.0	0.011 lb/hr	0.0	0.156 lb/hr	0.6	0.139 lb/hr	0.6	25.432 lb/hr	101.7
Diesel Crane	8 hours/day	1 unit	0.637 lb/hr	5.1	0.188 lb/hr	1.5	1.695 lb/hr	13.6	0.001 lb/hr	0.0	0.076 lb/hr	0.6	0.067 lb/hr	0.5	186.500 lb/hr	1,492.0
Heavy Duty Trucks	40 miles	6 trips per day	6.733 gr/VMT	3.6	0.867 gr/VMT	0.5	13.366 gr/VMT	7.1	0.014 gr/VMT	0.0	0.481 gr/VMT	0.3	0.416 gr/VMT	0.2	####### gr/VMT	793.7
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				169.0		68.4		21.9		0.1		1.6		1.3		3,318.6
Phase 2b: Install New Gangways																
Diesel Crane	2 hours/day	1 unit	0.637 lb/hr	1.3	0.188 lb/hr	0.4	1.695 lb/hr	3.4	0.001 lb/hr	0.0	0.076 lb/hr	0.2	0.067 lb/hr	0.1	186.500 lb/hr	373.0
Pile Driver	8 hours/day	1 unit	0.475 lb/hr	3.8	0.131 lb/hr	1.0	1.241 lb/hr	9.9	0.001 lb/hr	0.0	0.054 lb/hr	0.4	0.048 lb/hr	0.4	132.500 lb/hr	1,060.0
Heavy Duty Trucks	40 miles	2 trips per day	6.733 gr/VMT	1.2	0.867 gr/VMT	0.2	13.366 gr/VMT	2.4	0.014 gr/VMT	0.0	0.481 gr/VMT	0.1	0.416 gr/VMT	0.1	####### gr/VMT	264.6
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				16.0		2.0		16.9		0.0		0.8		0.6		2,628.8
Phase 2c: Dredging																
Diesel Clam Bucket	8 hours/day	1 unit	0.848 lb/hr	6.8	0.212 lb/hr	1.7	2.105 lb/hr	16.8	0.002 lb/hr	0.0	0.082 lb/hr	0.7	0.073 lb/hr	0.6	248.300 lb/hr	1,986.4
Diesel Tender	8 hours/day	1 unit	0.558 lb/hr	4.5	0.186 lb/hr	1.5	1.953 lb/hr	15.6	0.002 lb/hr	0.0	0.140 lb/hr	1.1	0.125 lb/hr	1.0	163.400 lb/hr	1,307.2
Heavy Duty Trucks	400 miles	22 trips per day	6.733 gr/VMT	130.6	0.867 gr/VMT	16.8	13.366 gr/VMT	259.3	0.014 gr/VMT	0.3	0.481 gr/VMT	9.3	0.416 gr/VMT	8.1	####### gr/VMT	29,102.7
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				151.6		20.4		293.0		0.3		11.2		9.7		33,327.5

Phase 2d: Seawall and Rip Rap Repair																
Gas Skiffs	2 hours/day	1 unit	37.667 lb/hr	75.3	16.521 lb/hr	33.0	0.011 lb/hr	0.0	0.011 lb/hr	0.0	0.156 lb/hr	0.3	0.139 lb/hr	0.3	25.432 lb/hr	50.9
Heavy Duty Trucks	40 miles	48 trips per day	6.733 gr/VMT	28.5	0.867 gr/VMT	3.7	13.366 gr/VMT	56.6	0.014 gr/VMT	0.1	0.481 gr/VMT	2.0	0.416 gr/VMT	1.8	####### gr/VMT	6,349.7
Worker Commute (Light Duty Auto)	40 miles	12 trips per day	3.430 gr/VMT	3.6	0.150 gr/VMT	0.2	0.420 gr/VMT	0.4	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	349.2
<TOTAL>				107.4		36.9		57.0		0.1		2.3		2.0		6,749.7
Phase 2e: Restroom Replacement																
Backhoe	8 hours/day	1 unit	0.414 lb/hr	3.3	0.131 lb/hr	1.0	0.830 lb/hr	6.6	0.001 lb/hr	0.0	0.064 lb/hr	0.5	0.057 lb/hr	0.5	66.800 lb/hr	534.4
Loader	8 hours/day	1 unit	0.555 lb/hr	4.4	0.173 lb/hr	1.4	1.382 lb/hr	11.1	0.001 lb/hr	0.0	0.077 lb/hr	0.6	0.069 lb/hr	0.5	89.600 lb/hr	716.8
Bobcat	8 hours/day	1 unit	0.399 lb/hr	3.2	0.168 lb/hr	1.3	0.329 lb/hr	2.6	0.000 lb/hr	0.0	0.039 lb/hr	0.3	0.035 lb/hr	0.3	69.000 lb/hr	552.0
Heavy Duty Trucks	40 miles	4 trips per day	6.733 gr/VMT	2.4	0.867 gr/VMT	0.3	13.366 gr/VMT	4.7	0.014 gr/VMT	0.0	0.481 gr/VMT	0.2	0.416 gr/VMT	0.1	####### gr/VMT	529.1
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				23.0		4.5		26.2		0.0		1.7		1.4		3,263.5
Phase 2f: Parking Lot Asphalt																
Backhoe	4 hours/day	1 unit	0.414 lb/hr	1.7	0.131 lb/hr	0.5	0.830 lb/hr	3.3	0.001 lb/hr	0.0	0.064 lb/hr	0.3	0.057 lb/hr	0.2	66.800 lb/hr	267.2
Loader	4 hours/day	1 unit	0.555 lb/hr	2.2	0.173 lb/hr	0.7	1.382 lb/hr	5.5	0.001 lb/hr	0.0	0.077 lb/hr	0.3	0.069 lb/hr	0.3	89.600 lb/hr	358.4
Paving Equipment	4 hours/day	2 unit	0.469 lb/hr	3.8	0.156 lb/hr	1.2	1.033 lb/hr	8.3	0.008 lb/hr	0.1	0.071 lb/hr	0.6	0.063 lb/hr	0.5	69.000 lb/hr	552.0
Bobcat	4 hours/day	1 unit	0.399 lb/hr	1.6	0.168 lb/hr	0.7	0.329 lb/hr	1.3	0.000 lb/hr	0.0	0.039 lb/hr	0.2	0.035 lb/hr	0.1	30.300 lb/hr	121.2
Heavy Duty Trucks	40 miles	2 trips per day	6.733 gr/VMT	1.2	0.867 gr/VMT	0.2	13.366 gr/VMT	2.4	0.014 gr/VMT	0.0	0.481 gr/VMT	0.1	0.416 gr/VMT	0.1	####### gr/VMT	264.6
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				20.1		3.7		22.0		0.1		1.5		1.2		2,494.6

Peak Emissions for Phase		CO	169.0	ROC	68.4	NOx	293.0	SOx	0.3	PM10	11.2	PM2.5	9.7	CO2	33,327.5
	Threshold		550		75		100		150		150		55		NA

Alamitos Bay Marina - Phases 4 - 12

ENGINE EXHAUST EMISSIONS

Source [1]	Parameter 1	Parameter 2	CO Emission Factor	CO Emission (lbs/day)	ROC Emission Factor	ROC Emission (lbs/day)	NOx Emission Factor	NOx Emission (lbs/day)	SOx Emission Factor	SOx Emission (lbs/day)	PM10 Emission Factor	PM10 Emission (lbs/day)	PM2.5 Emission Factor	PM2.5 Emission (lbs/day)	CO2 Emission Factor	CO2 Emission (lbs/day)
Phase 2a: Remove Existing Gangways and Piles																
Diesel Crane	8 hours/day	1 unit	0.637 lb/hr	5.1	0.188 lb/hr	1.5	1.695 lb/hr	13.6	0.001 lb/hr	0.0	0.076 lb/hr	0.6	0.067 lb/hr	0.5	186.500 lb/hr	1,492.0
Gas Skiffs	2 hours/day	2 unit	37.667 lb/hr	150.7	16.521 lb/hr	66.1	0.011 lb/hr	0.0	0.011 lb/hr	0.0	0.156 lb/hr	0.6	0.139 lb/hr	0.6	25.432 lb/hr	101.7
Heavy Duty Trucks	40 miles	6 trips per day	6.733 gr/VMT	3.6	0.867 gr/VMT	0.5	13.366 gr/VMT	7.1	0.014 gr/VMT	0.0	0.481 gr/VMT	0.3	0.416 gr/VMT	0.2	####### gr/VMT	793.7
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				169.0		68.4		21.9		0.1		1.6		1.3		3,318.6
Phase 2b: Install New Gangways																
Diesel Crane	2 hours/day	1 unit	0.637 lb/hr	1.3	0.188 lb/hr	0.4	1.695 lb/hr	3.4	0.001 lb/hr	0.0	0.076 lb/hr	0.2	0.067 lb/hr	0.1	186.500 lb/hr	373.0
Pile Driver	8 hours/day	1 unit	0.475 lb/hr	3.8	0.131 lb/hr	1.0	1.241 lb/hr	9.9	0.001 lb/hr	0.0	0.054 lb/hr	0.4	0.048 lb/hr	0.4	132.500 lb/hr	1,060.0
Heavy Duty Trucks	40 miles	2 trips per day	6.733 gr/VMT	1.2	0.867 gr/VMT	0.2	13.366 gr/VMT	2.4	0.014 gr/VMT	0.0	0.481 gr/VMT	0.1	0.416 gr/VMT	0.1	####### gr/VMT	264.6
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				16.0		2.0		16.9		0.0		0.8		0.6		2,628.8
Phase 2c: Dredging																
Diesel Clam Bucket	8 hours/day	1 unit	0.848 lb/hr	6.8	0.212 lb/hr	1.7	2.105 lb/hr	16.8	0.002 lb/hr	0.0	0.082 lb/hr	0.7	0.073 lb/hr	0.6	248.300 lb/hr	1,986.4
Diesel Tender	8 hours/day	1 unit	0.558 lb/hr	4.5	0.186 lb/hr	1.5	1.953 lb/hr	15.6	0.002 lb/hr	0.0	0.140 lb/hr	1.1	0.125 lb/hr	1.0	163.400 lb/hr	1,307.2
Heavy Duty Trucks	40 miles	0 trips per day	6.733 gr/VMT	0.0	0.867 gr/VMT	0.0	13.366 gr/VMT	0.0	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	0.0
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				20.9		3.6		33.7		0.0		1.9		1.6		4,224.8

Phase 2d: Seawall and Rip Rap Repair																
Gas Skiffs	2 hours/day	1 unit	37.667 lb/hr	75.3	16.521 lb/hr	33.0	0.011 lb/hr	0.0	0.011 lb/hr	0.0	0.156 lb/hr	0.3	0.139 lb/hr	0.3	25.432 lb/hr	50.9
Heavy Duty Trucks	40 miles	12 trips per day	6.733 gr/VMT	7.1	0.867 gr/VMT	0.9	13.366 gr/VMT	14.1	0.014 gr/VMT	0.0	0.481 gr/VMT	0.5	0.416 gr/VMT	0.4	####### gr/VMT	1,587.4
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				92.2		34.4		15.4		0.0		0.9		0.7		2,569.5
Phase 2e: Restroom Replacement																
Backhoe	8 hours/day	1 unit	0.414 lb/hr	3.3	0.131 lb/hr	1.0	0.830 lb/hr	6.6	0.001 lb/hr	0.0	0.064 lb/hr	0.5	0.057 lb/hr	0.5	66.800 lb/hr	534.4
Loader	8 hours/day	1 unit	0.555 lb/hr	4.4	0.173 lb/hr	1.4	1.382 lb/hr	11.1	0.001 lb/hr	0.0	0.077 lb/hr	0.6	0.069 lb/hr	0.5	89.600 lb/hr	716.8
Bobcat	8 hours/day	1 unit	0.399 lb/hr	3.2	0.168 lb/hr	1.3	0.329 lb/hr	2.6	0.000 lb/hr	0.0	0.039 lb/hr	0.3	0.035 lb/hr	0.3	69.000 lb/hr	552.0
Heavy Duty Trucks	40 miles	4 trips per day	6.733 gr/VMT	2.4	0.867 gr/VMT	0.3	13.366 gr/VMT	4.7	0.014 gr/VMT	0.0	0.481 gr/VMT	0.2	0.416 gr/VMT	0.1	####### gr/VMT	529.1
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				23.0		4.5		26.2		0.0		1.7		1.4		3,263.5
Phase 2f: Parking Lot Asphalt																
Backhoe	4 hours/day	1 unit	0.414 lb/hr	1.7	0.131 lb/hr	0.5	0.830 lb/hr	3.3	0.001 lb/hr	0.0	0.064 lb/hr	0.3	0.057 lb/hr	0.2	66.800 lb/hr	267.2
Loader	4 hours/day	1 unit	0.555 lb/hr	2.2	0.173 lb/hr	0.7	1.382 lb/hr	5.5	0.001 lb/hr	0.0	0.077 lb/hr	0.3	0.069 lb/hr	0.3	89.600 lb/hr	358.4
Paving Equipment	4 hours/day	2 unit	0.469 lb/hr	3.8	0.156 lb/hr	1.2	1.033 lb/hr	8.3	0.008 lb/hr	0.1	0.071 lb/hr	0.6	0.063 lb/hr	0.5	69.000 lb/hr	552.0
Bobcat	4 hours/day	1 unit	0.399 lb/hr	1.6	0.168 lb/hr	0.7	0.329 lb/hr	1.3	0.000 lb/hr	0.0	0.039 lb/hr	0.2	0.035 lb/hr	0.1	30.300 lb/hr	121.2
Heavy Duty Trucks	40 miles	2 trips per day	6.733 gr/VMT	1.2	0.867 gr/VMT	0.2	13.366 gr/VMT	2.4	0.014 gr/VMT	0.0	0.481 gr/VMT	0.1	0.416 gr/VMT	0.1	####### gr/VMT	264.6
Worker Commute (Light Duty Auto)	40 miles	32 trips per day	3.430 gr/VMT	9.7	0.150 gr/VMT	0.4	0.420 gr/VMT	1.2	0.003 gr/VMT	0.0	0.032 gr/VMT	0.1	0.017 gr/VMT	0.0	330.290 gr/VMT	931.2
<TOTAL>				20.1		3.7		22.0		0.1		1.5		1.2		2,494.6

Peak Emissions for Phase		CO	169.0	ROC	68.4	NOx	33.7	SOx	0.1	PM10	1.9	PM2.5	1.6	CO2	4,224.8
	Threshold		550		75		100		150		150		55		NA

Alamitos Bay Marina - Phase 1 LST

ENGINE EXHAUST EMISSIONS

Source [1]	Parameter 1	Parameter 2	CO Emission Factor	CO Emission (lbs/day)	ROC Emission Factor	ROC Emission (lbs/day)	NOx Emission Factor	NOx Emission (lbs/day)	SOx Emission Factor	SOx Emission (lbs/day)	PM10 Emission Factor	PM10 Emission (lbs/day)	PM2.5 Emission Factor	PM2.5 Emission (lbs/day)	CO2 Emission Factor	CO2 Emission (lbs/day)
Phase 1a: Remove Existing Gangways and Piles																
Diesel Crane	8 hours/day	1 unit	0.637 lb/hr	5.1	0.188 lb/hr	1.5	1.695 lb/hr	13.6	0.001 lb/hr	0.0	0.076 lb/hr	0.6	0.067 lb/hr	0.5	186.500 lb/hr	1,492.0
Gas Skiffs	2 hours/day	2 unit	37.667 lb/hr	150.7	16.521 lb/hr	66.1	0.011 lb/hr	0.0	0.011 lb/hr	0.0	0.156 lb/hr	0.6	0.139 lb/hr	0.6	25.432 lb/hr	101.7
Heavy Duty Trucks	2 miles	6 trips per day	6.733 gr/VMT	0.2	0.867 gr/VMT	0.0	13.366 gr/VMT	0.4	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	39.7
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				156.4		67.6		14.1		0.1		1.2		1.1		1,680.0
Phase 1b: Install New Gangways																
Diesel Crane	2 hours/day	1 unit	0.637 lb/hr	1.3	0.188 lb/hr	0.4	1.695 lb/hr	3.4	0.001 lb/hr	0.0	0.076 lb/hr	0.2	0.067 lb/hr	0.1	186.500 lb/hr	373.0
Pile Driver	8 hours/day	1 unit	0.475 lb/hr	3.8	0.131 lb/hr	1.0	1.241 lb/hr	9.9	0.001 lb/hr	0.0	0.054 lb/hr	0.4	0.048 lb/hr	0.4	132.500 lb/hr	1,060.0
Heavy Duty Trucks	2 miles	2 trips per day	6.733 gr/VMT	0.1	0.867 gr/VMT	0.0	13.366 gr/VMT	0.1	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	13.2
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				5.6		1.4		13.5		0.0		0.6		0.5		1,492.8
Phase 1c: Install Temporary Docks																
Diesel Crane	2 hours/day	1 unit	0.637 lb/hr	1.3	0.188 lb/hr	0.4	1.695 lb/hr	3.4	0.001 lb/hr	0.0	0.076 lb/hr	0.2	0.067 lb/hr	0.1	186.500 lb/hr	373.0
Pile Driver	4 hours/day	1 unit	0.475 lb/hr	1.9	0.131 lb/hr	0.5	1.241 lb/hr	5.0	0.001 lb/hr	0.0	0.054 lb/hr	0.2	0.048 lb/hr	0.2	132.500 lb/hr	530.0
Heavy Duty Trucks	2 miles	5 trips per day	6.733 gr/VMT	0.1	0.867 gr/VMT	0.0	13.366 gr/VMT	0.3	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	33.1
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				3.8		0.9		8.7		0.0		0.4		0.3		982.7

Phase 1d: Dredging																
Diesel Clam Bucket	8 hours/day	1 unit	0.848 lb/hr	6.8	0.212 lb/hr	1.7	2.105 lb/hr	16.8	0.002 lb/hr	0.0	0.082 lb/hr	0.7	0.073 lb/hr	0.6	248.300 lb/hr	1,986.4
Diesel Tender	8 hours/day	1 unit	0.558 lb/hr	4.5	0.186 lb/hr	1.5	1.953 lb/hr	15.6	0.002 lb/hr	0.0	0.140 lb/hr	1.1	0.125 lb/hr	1.0	163.400 lb/hr	1,307.2
Heavy Duty Trucks	2 miles	0 trips per day	6.733 gr/VMT	0.0	0.867 gr/VMT	0.0	13.366 gr/VMT	0.0	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	0.0
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				11.7		3.2		32.6		0.0		1.8		1.6		3,340.2
Phase 1e: Seawall and Rip Rap Repair																
Gas Skiffs	2 hours/day	1 unit	37.667 lb/hr	75.3	16.521 lb/hr	33.0	0.011 lb/hr	0.0	0.011 lb/hr	0.0	0.156 lb/hr	0.3	0.139 lb/hr	0.3	25.432 lb/hr	50.9
Heavy Duty Trucks	2 miles	12 trips per day	6.733 gr/VMT	0.4	0.867 gr/VMT	0.0	13.366 gr/VMT	0.7	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	79.4
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				76.2		33.1		0.8		0.0		0.3		0.3		176.8
Phase 1f: Restroom Replacement																
Backhoe	8	1	0.414	3.3	0.131	1.0	0.830	6.6	0.001	0.0	0.064	0.5	0.057	0.5	66.800	534.4

	hours/day	unit	lb/hr		lb/hr		lb/hr		lb/hr		lb/hr		lb/hr		lb/hr	
Loader	8 hours/day	1 unit	0.555 lb/hr	4.4	0.173 lb/hr	1.4	1.382 lb/hr	11.1	0.001 lb/hr	0.0	0.077 lb/hr	0.6	0.069 lb/hr	0.5	89.600 lb/hr	716.8
Bobcat	8 hours/day	1 unit	0.399 lb/hr	3.2	0.168 lb/hr	1.3	0.329 lb/hr	2.6	0.000 lb/hr	0.0	0.039 lb/hr	0.3	0.035 lb/hr	0.3	69.000 lb/hr	552.0
Heavy Duty Trucks	2 miles	4 trips per day	6.733 gr/VMT	0.1	0.867 gr/VMT	0.0	13.366 gr/VMT	0.2	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	26.5
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				11.6		3.8		20.7		0.0		1.4		1.3		1,876.3
Phase 1g: Parking Lot Asphalt																
Backhoe	4 hours/day	1 unit	0.414 lb/hr	1.7	0.131 lb/hr	0.5	0.830 lb/hr	3.3	0.001 lb/hr	0.0	0.064 lb/hr	0.3	0.057 lb/hr	0.2	66.800 lb/hr	267.2
Loader	4 hours/day	1 unit	0.555 lb/hr	2.2	0.173 lb/hr	0.7	1.382 lb/hr	5.5	0.001 lb/hr	0.0	0.077 lb/hr	0.3	0.069 lb/hr	0.3	89.600 lb/hr	358.4
Paving Equipment	4 hours/day	2 unit	0.469 lb/hr	3.8	0.156 lb/hr	1.2	1.033 lb/hr	8.3	0.008 lb/hr	0.1	0.071 lb/hr	0.6	0.063 lb/hr	0.5	69.000 lb/hr	552.0
Bobcat	4 hours/day	1 unit	0.399 lb/hr	1.6	0.168 lb/hr	0.7	0.329 lb/hr	1.3	0.000 lb/hr	0.0	0.039 lb/hr	0.2	0.035 lb/hr	0.1	30.300 lb/hr	121.2
Heavy Duty Trucks	2 miles	2 trips per day	6.733 gr/VMT	0.1	0.867 gr/VMT	0.0	13.366 gr/VMT	0.1	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	13.2
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				9.8		3.1		18.6		0.1		1.3		1.1		1,358.6

Peak Emissions for Phase		CO	156.4	ROC	67.6	NOx	32.6	SOx	0.1	PM10	1.8	PM2.5	1.6	CO2	3,340.2
	Threshold		550		75		100		150		150		55		NA

Alamitos Bay Marina - Phase 1a LST

ENGINE EXHAUST EMISSIONS

Source [1]	Parameter 1	Parameter 2	CO Emission Factor	CO Emission (lbs/day)	ROC Emission Factor	ROC Emission (lbs/day)	NOx Emission Factor	NOx Emission (lbs/day)	SOx Emission Factor	SOx Emission (lbs/day)	PM10 Emission Factor	PM10 Emission (lbs/day)	PM2.5 Emission Factor	PM2.5 Emission (lbs/day)	CO2 Emission Factor	CO2 Emission (lbs/day)
Phase a: Demolition																
Backhoe	8 hours/day	1 unit	0.414 lb/hr	3.3	0.131 lb/hr	1.0	0.830 lb/hr	6.6	0.001 lb/hr	0.0	0.064 lb/hr	0.5	0.057 lb/hr	0.5	66.800 lb/hr	534.4
Loader	2 hours/day	1 unit	0.555 lb/hr	1.1	0.173 lb/hr	0.3	1.382 lb/hr	2.8	0.001 lb/hr	0.0	0.077 lb/hr	0.2	0.069 lb/hr	0.1	89.600 lb/hr	179.2
Bobcat	4 hours/day	1 unit	0.399 lb/hr	1.6	0.168 lb/hr	0.7	0.329 lb/hr	1.3	0.000 lb/hr	0.0	0.039 lb/hr	0.2	0.035 lb/hr	0.1	69.000 lb/hr	276.0
Heavy Duty Trucks	2 miles	18 trips per day	6.733 gr/VMT	0.5	0.867 gr/VMT	0.1	13.366 gr/VMT	1.1	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	119.1
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				7.1		2.1		11.9		0.0		0.9		0.8		1,155.3
Phase b: Reroute Utilities																
Backhoe	2 hours/day	1 unit	0.414 lb/hr	3.3	0.131 lb/hr	1.0	0.830 lb/hr	6.6	0.001 lb/hr	0.0	0.064 lb/hr	0.5	0.057 lb/hr	0.5	66.800 lb/hr	534.4
Bobcat	2 hours/day	1 unit	0.399 lb/hr	3.2	0.168 lb/hr	1.3	0.329 lb/hr	2.6	0.000 lb/hr	0.0	0.039 lb/hr	0.3	0.035 lb/hr	0.3	69.000 lb/hr	552.0
Heavy Duty Trucks	2 miles	18 trips per day	6.733 gr/VMT	0.5	0.867 gr/VMT	0.1	13.366 gr/VMT	1.1	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	119.1
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				7.5		2.5		10.4		0.0		0.9		0.8		1,252.1
Phase c: Excavation																
Backhoe	8 hours/day	1 unit	0.414 lb/hr	3.3	0.131 lb/hr	1.0	0.830 lb/hr	6.6	0.001 lb/hr	0.0	0.064 lb/hr	0.5	0.057 lb/hr	0.5	66.800 lb/hr	534.4
Loader	8 hours/day	1 unit	0.555 lb/hr	4.4	0.173 lb/hr	1.4	1.382 lb/hr	11.1	0.001 lb/hr	0.0	0.077 lb/hr	0.6	0.069 lb/hr	0.5	89.600 lb/hr	716.8
Heavy Duty Trucks	2 miles	18 trips per day	6.733 gr/VMT	0.5	0.867 gr/VMT	0.1	13.366 gr/VMT	1.1	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	119.1
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				8.8		2.5		18.9		0.0		1.2		1.0		1,416.9

Phase d: Salvage Stone																
Backhoe	8 hours/day	1 unit	0.414 lb/hr	3.3	0.131 lb/hr	1.0	0.830 lb/hr	6.6	0.001 lb/hr	0.0	0.064 lb/hr	0.5	0.057 lb/hr	0.5	66.800 lb/hr	534.4
Loader	8 hours/day	1 unit	0.555 lb/hr	4.4	0.173 lb/hr	1.4	1.382 lb/hr	11.1	0.001 lb/hr	0.0	0.077 lb/hr	0.6	0.069 lb/hr	0.5	89.600 lb/hr	716.8
Heavy Duty Trucks	2 miles	18 trips per day	6.733 gr/VMT	0.5	0.867 gr/VMT	0.1	13.366 gr/VMT	1.1	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	119.1
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				8.8		2.5		18.9		0.0		1.2		1.0		1,416.9
Phase e: Rip Rap Construction																
Backhoe	4 hours/day	1 unit	0.414 lb/hr	1.7	0.131 lb/hr	0.5	0.830 lb/hr	3.3	0.001 lb/hr	0.0	0.064 lb/hr	0.3	0.057 lb/hr	0.2	66.800 lb/hr	267.2
Loader	4 hours/day	1 unit	0.555 lb/hr	2.2	0.173 lb/hr	0.7	1.382 lb/hr	5.5	0.001 lb/hr	0.0	0.077 lb/hr	0.3	0.069 lb/hr	0.3	89.600 lb/hr	358.4
Heavy Duty Trucks	2 miles	18 trips per day	6.733 gr/VMT	0.5	0.867 gr/VMT	0.1	13.366 gr/VMT	1.1	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	119.1
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				4.9		1.3		10.0		0.0		0.6		0.5		791.3
Phase f: Sidewalk Construction																
Loader	8 hours/day	1 unit	0.555 lb/hr	4.4	0.173 lb/hr	1.4	1.382 lb/hr	11.1	0.001 lb/hr	0.0	0.077 lb/hr	0.6	0.069 lb/hr	0.5	89.600 lb/hr	716.8
Bobcat	8 hours/day	1 unit	0.399 lb/hr	3.2	0.168 lb/hr	1.3	0.329 lb/hr	2.6	0.000 lb/hr	0.0	0.039 lb/hr	0.3	0.035 lb/hr	0.3	69.000 lb/hr	552.0
Heavy Duty Trucks	2 miles	18 trips per day	6.733 gr/VMT	0.5	0.867 gr/VMT	0.1	13.366 gr/VMT	1.1	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	119.1
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				8.7		2.8		14.8		0.0		1.0		0.9		1,434.5

Peak Emissions for Phase		CO	8.8	ROC	2.8	NOx	18.9	SOx	0.0	PM10	1.2	PM2.5	1.0	CO2	1,434.5
	Threshold		550		75		100		150		150		55		NA

Alamitos Bay Marina - Phases 2 and 3 LST

ENGINE EXHAUST EMISSIONS

Source [1]	Parameter 1	Parameter 2	CO Emission Factor	CO Emission (lbs/day)	ROC Emission Factor	ROC Emission (lbs/day)	NOx Emission Factor	NOx Emission (lbs/day)	SOx Emission Factor	SOx Emission (lbs/day)	PM10 Emission Factor	PM10 Emission (lbs/day)	PM2.5 Emission Factor	PM2.5 Emission (lbs/day)	CO2 Emission Factor	CO2 Emission (lbs/day)
Phase 2a: Remove Existing Gangways and Piles																
Gas Skiffs	2 hours/day	2 unit	37.667 lb/hr	150.7	16.521 lb/hr	66.1	0.011 lb/hr	0.0	0.011 lb/hr	0.0	0.156 lb/hr	0.6	0.139 lb/hr	0.6	25.432 lb/hr	101.7
Diesel Crane	8 hours/day	1 unit	0.637 lb/hr	5.1	0.188 lb/hr	1.5	1.695 lb/hr	13.6	0.001 lb/hr	0.0	0.076 lb/hr	0.6	0.067 lb/hr	0.5	186.500 lb/hr	1,492.0
Heavy Duty Trucks	2 miles	6 trips per day	6.733 gr/VMT	0.2	0.867 gr/VMT	0.0	13.366 gr/VMT	0.4	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	39.7
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				156.4		67.6		14.1		0.1		1.2		1.1		1,680.0
Phase 2b: Install New Gangways																
Diesel Crane	2 hours/day	1 unit	0.637 lb/hr	1.3	0.188 lb/hr	0.4	1.695 lb/hr	3.4	0.001 lb/hr	0.0	0.076 lb/hr	0.2	0.067 lb/hr	0.1	186.500 lb/hr	373.0
Pile Driver	8 hours/day	1 unit	0.475 lb/hr	3.8	0.131 lb/hr	1.0	1.241 lb/hr	9.9	0.001 lb/hr	0.0	0.054 lb/hr	0.4	0.048 lb/hr	0.4	132.500 lb/hr	1,060.0
Heavy Duty Trucks	2 miles	2 trips per day	6.733 gr/VMT	0.1	0.867 gr/VMT	0.0	13.366 gr/VMT	0.1	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	13.2
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				5.6		1.4		13.5		0.0		0.6		0.5		1,492.8
Phase 2c: Dredging																
Diesel Clam Bucket	8 hours/day	1 unit	0.848 lb/hr	6.8	0.212 lb/hr	1.7	2.105 lb/hr	16.8	0.002 lb/hr	0.0	0.082 lb/hr	0.7	0.073 lb/hr	0.6	248.300 lb/hr	1,986.4
Diesel Tender	8 hours/day	1 unit	0.558 lb/hr	4.5	0.186 lb/hr	1.5	1.953 lb/hr	15.6	0.002 lb/hr	0.0	0.140 lb/hr	1.1	0.125 lb/hr	1.0	163.400 lb/hr	1,307.2
Heavy Duty Trucks	2 miles	22 trips per day	6.733 gr/VMT	0.7	0.867 gr/VMT	0.1	13.366 gr/VMT	1.3	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	145.5
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				12.4		3.3		33.9		0.0		1.8		1.6		3,485.7

Phase 2d: Seawall and Rip Rap Repair																
Gas Skiffs	2 hours/day	1 unit	37.667 lb/hr	75.3	16.521 lb/hr	33.0	0.011 lb/hr	0.0	0.011 lb/hr	0.0	0.156 lb/hr	0.3	0.139 lb/hr	0.3	25.432 lb/hr	50.9
Heavy Duty Trucks	2 miles	48 trips per day	6.733 gr/VMT	1.4	0.867 gr/VMT	0.2	13.366 gr/VMT	2.8	0.014 gr/VMT	0.0	0.481 gr/VMT	0.1	0.416 gr/VMT	0.1	####### gr/VMT	317.5
Worker Commute (Light Duty Auto)	2 miles	12 trips per day	3.430 gr/VMT	0.2	0.150 gr/VMT	0.0	0.420 gr/VMT	0.0	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	17.5
<TOTAL>				77.0		33.2		2.9		0.0		0.4		0.4		385.8
Phase 2e: Restroom Replacement																
Backhoe	8 hours/day	1 unit	0.414 lb/hr	3.3	0.131 lb/hr	1.0	0.830 lb/hr	6.6	0.001 lb/hr	0.0	0.064 lb/hr	0.5	0.057 lb/hr	0.5	66.800 lb/hr	534.4
Loader	8 hours/day	1 unit	0.555 lb/hr	4.4	0.173 lb/hr	1.4	1.382 lb/hr	11.1	0.001 lb/hr	0.0	0.077 lb/hr	0.6	0.069 lb/hr	0.5	89.600 lb/hr	716.8
Bobcat	8 hours/day	1 unit	0.399 lb/hr	3.2	0.168 lb/hr	1.3	0.329 lb/hr	2.6	0.000 lb/hr	0.0	0.039 lb/hr	0.3	0.035 lb/hr	0.3	69.000 lb/hr	552.0
Heavy Duty Trucks	2 miles	4 trips per day	6.733 gr/VMT	0.1	0.867 gr/VMT	0.0	13.366 gr/VMT	0.2	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	26.5
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				11.6		3.8		20.7		0.0		1.4		1.3		1,876.3
Phase 2f: Parking Lot Asphalt																
Backhoe	4 hours/day	1 unit	0.414 lb/hr	1.7	0.131 lb/hr	0.5	0.830 lb/hr	3.3	0.001 lb/hr	0.0	0.064 lb/hr	0.3	0.057 lb/hr	0.2	66.800 lb/hr	267.2
Loader	4 hours/day	1 unit	0.555 lb/hr	2.2	0.173 lb/hr	0.7	1.382 lb/hr	5.5	0.001 lb/hr	0.0	0.077 lb/hr	0.3	0.069 lb/hr	0.3	89.600 lb/hr	358.4
Paving Equipment	4 hours/day	2 unit	0.469 lb/hr	3.8	0.156 lb/hr	1.2	1.033 lb/hr	8.3	0.008 lb/hr	0.1	0.071 lb/hr	0.6	0.063 lb/hr	0.5	69.000 lb/hr	552.0
Bobcat	4 hours/day	1 unit	0.399 lb/hr	1.6	0.168 lb/hr	0.7	0.329 lb/hr	1.3	0.000 lb/hr	0.0	0.039 lb/hr	0.2	0.035 lb/hr	0.1	30.300 lb/hr	121.2
Heavy Duty Trucks	2 miles	2 trips per day	6.733 gr/VMT	0.1	0.867 gr/VMT	0.0	13.366 gr/VMT	0.1	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	13.2
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				9.8		3.1		18.6		0.1		1.3		1.1		1,358.6

Peak Emissions for Phase		CO	156.4	ROC	67.6	NOx	33.9	SOx	0.1	PM10	1.8	PM2.5	1.6	CO2	3,485.7
	Threshold		550		75		100		150		150		55		NA

Alamitos Bay Marina - Phases 4 - 12 LST

ENGINE EXHAUST EMISSIONS

Source [1]	Parameter 1	Parameter 2	CO Emission Factor	CO Emission (lbs/day)	ROC Emission Factor	ROC Emission (lbs/day)	NOx Emission Factor	NOx Emission (lbs/day)	SOx Emission Factor	SOx Emission (lbs/day)	PM10 Emission Factor	PM10 Emission (lbs/day)	PM2.5 Emission Factor	PM2.5 Emission (lbs/day)	CO2 Emission Factor	CO2 Emission (lbs/day)
Phase 2a: Remove Existing Gangways and Piles																
Diesel Crane	8 hours/day	1 unit	0.637 lb/hr	5.1	0.188 lb/hr	1.5	1.695 lb/hr	13.6	0.001 lb/hr	0.0	0.076 lb/hr	0.6	0.067 lb/hr	0.5	186.500 lb/hr	1,492.0
Gas Skiffs	2 hours/day	2 unit	37.667 lb/hr	150.7	16.521 lb/hr	66.1	0.011 lb/hr	0.0	0.011 lb/hr	0.0	0.156 lb/hr	0.6	0.139 lb/hr	0.6	25.432 lb/hr	101.7
Heavy Duty Trucks	2 miles	6 trips per day	6.733 gr/VMT	0.2	0.867 gr/VMT	0.0	13.366 gr/VMT	0.4	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	39.7
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				156.4		67.6		14.1		0.1		1.2		1.1		1,680.0
Phase 2b: Install New Gangways																
Diesel Crane	2 hours/day	1 unit	0.637 lb/hr	1.3	0.188 lb/hr	0.4	1.695 lb/hr	3.4	0.001 lb/hr	0.0	0.076 lb/hr	0.2	0.067 lb/hr	0.1	186.500 lb/hr	373.0
Pile Driver	8 hours/day	1 unit	0.475 lb/hr	3.8	0.131 lb/hr	1.0	1.241 lb/hr	9.9	0.001 lb/hr	0.0	0.054 lb/hr	0.4	0.048 lb/hr	0.4	132.500 lb/hr	1,060.0
Heavy Duty Trucks	2 miles	2 trips per day	6.733 gr/VMT	0.1	0.867 gr/VMT	0.0	13.366 gr/VMT	0.1	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	13.2
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				5.6		1.4		13.5		0.0		0.6		0.5		1,492.8
Phase 2c: Dredging																
Diesel Clam Bucket	8 hours/day	1 unit	0.848 lb/hr	6.8	0.212 lb/hr	1.7	2.105 lb/hr	16.8	0.002 lb/hr	0.0	0.082 lb/hr	0.7	0.073 lb/hr	0.6	248.300 lb/hr	1,986.4
Diesel Tender	8 hours/day	1 unit	0.558 lb/hr	4.5	0.186 lb/hr	1.5	1.953 lb/hr	15.6	0.002 lb/hr	0.0	0.140 lb/hr	1.1	0.125 lb/hr	1.0	163.400 lb/hr	1,307.2
Heavy Duty Trucks	2 miles	0 trips per day	6.733 gr/VMT	0.0	0.867 gr/VMT	0.0	13.366 gr/VMT	0.0	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	0.0
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				11.7		3.2		32.6		0.0		1.8		1.6		3,340.2

Phase 2d: Seawall and Rip Rap Repair																
Gas Skiffs	2 hours/day	1 unit	37.667 lb/hr	75.3	16.521 lb/hr	33.0	0.011 lb/hr	0.0	0.011 lb/hr	0.0	0.156 lb/hr	0.3	0.139 lb/hr	0.3	25.432 lb/hr	50.9
Heavy Duty Trucks	2 miles	12 trips per day	6.733 gr/VMT	0.4	0.867 gr/VMT	0.0	13.366 gr/VMT	0.7	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	79.4
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				76.2		33.1		0.8		0.0		0.3		0.3		176.8
Phase 2e: Restroom Replacement																
Backhoe	8 hours/day	1 unit	0.414 lb/hr	3.3	0.131 lb/hr	1.0	0.830 lb/hr	6.6	0.001 lb/hr	0.0	0.064 lb/hr	0.5	0.057 lb/hr	0.5	66.800 lb/hr	534.4
Loader	8 hours/day	1 unit	0.555 lb/hr	4.4	0.173 lb/hr	1.4	1.382 lb/hr	11.1	0.001 lb/hr	0.0	0.077 lb/hr	0.6	0.069 lb/hr	0.5	89.600 lb/hr	716.8
Bobcat	8 hours/day	1 unit	0.399 lb/hr	3.2	0.168 lb/hr	1.3	0.329 lb/hr	2.6	0.000 lb/hr	0.0	0.039 lb/hr	0.3	0.035 lb/hr	0.3	69.000 lb/hr	552.0
Heavy Duty Trucks	2 miles	4 trips per day	6.733 gr/VMT	0.1	0.867 gr/VMT	0.0	13.366 gr/VMT	0.2	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	26.5
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				11.6		3.8		20.7		0.0		1.4		1.3		1,876.3
Phase 2f: Parking Lot Asphalt																
Backhoe	4 hours/day	1 unit	0.414 lb/hr	1.7	0.131 lb/hr	0.5	0.830 lb/hr	3.3	0.001 lb/hr	0.0	0.064 lb/hr	0.3	0.057 lb/hr	0.2	66.800 lb/hr	267.2
Loader	4 hours/day	1 unit	0.555 lb/hr	2.2	0.173 lb/hr	0.7	1.382 lb/hr	5.5	0.001 lb/hr	0.0	0.077 lb/hr	0.3	0.069 lb/hr	0.3	89.600 lb/hr	358.4
Paving Equipment	4 hours/day	2 unit	0.469 lb/hr	3.8	0.156 lb/hr	1.2	1.033 lb/hr	8.3	0.008 lb/hr	0.1	0.071 lb/hr	0.6	0.063 lb/hr	0.5	69.000 lb/hr	552.0
Bobcat	4 hours/day	1 unit	0.399 lb/hr	1.6	0.168 lb/hr	0.7	0.329 lb/hr	1.3	0.000 lb/hr	0.0	0.039 lb/hr	0.2	0.035 lb/hr	0.1	30.300 lb/hr	121.2
Heavy Duty Trucks	2 miles	2 trips per day	6.733 gr/VMT	0.1	0.867 gr/VMT	0.0	13.366 gr/VMT	0.1	0.014 gr/VMT	0.0	0.481 gr/VMT	0.0	0.416 gr/VMT	0.0	####### gr/VMT	13.2
Worker Commute (Light Duty Auto)	2 miles	32 trips per day	3.430 gr/VMT	0.5	0.150 gr/VMT	0.0	0.420 gr/VMT	0.1	0.003 gr/VMT	0.0	0.032 gr/VMT	0.0	0.017 gr/VMT	0.0	330.290 gr/VMT	46.6
<TOTAL>				9.8		3.1		18.6		0.1		1.3		1.1		1,358.6

Peak Emissions for Phase		CO	156.4	ROC	67.6	NOx	32.6	SOx	0.1	PM10	1.8	PM2.5	1.6	CO2	3,340.2
	Threshold		550		75		100		150		150		55		NA

One Acre Site - Site Preparation Phase

Construction Activity

Two Acre Site

Site Preparation 84,000 Square Feet[a]

Site Preparation Schedule - 5 days[a]

Equipment Type[a,b]	No. of Equipment	hr/day	Crew Size
Rubber Tired Dozers	1	8.0	6
Tractors/Loaders/Backhoes	2	8.0	

Fugitive Dust Clearing Parameters

Silt Content[d]	Moisture Content[d]
6.9	7.9

Fugitive Dust Stockpiling Parameters

Silt Content[d]	Precipitation Days[e]	Mean Wind Speed Percent[f]	TSP Fraction	Area[g] (acres)
6.9	10	100	0.5	0.21

Fugitive Dust Material Handling

Aerodynamic Particle Size Multiplier[h]	Mean Wind Speed[i] mph	Moisture Content[d]	Dirt Handled[a] cy	Debris Handled[a] cy	Dirt Handled[j] lb/day
0.35	10	7.9	1,481	185	740,500

One Acre Site - Site Preparation Phase

Construction Worker Number of Trips and Trip Length

Vehicle	No. of One-Way Trips/Day	One WayTrip Length (miles)
Haul Truck[l]	10	0.1
Water Truck[m]	3	2.7

Fugitive Dust Emissions from Construction Operations

Equations:

Clearing[n]: PM10 Emissions (lb/day) = 0.75 x (silt content$^{1.5}$)/(moisture content$^{1.4}$) x hours operated (hr/day) x (1 - control efficiency)

Storage Piles[o]: PM10 Emissions (lb/day) = 1.7 x (silt content/1.5) x ((365-precipitation days)/235) x wind speed percent/15 x TSP fraction x Area) x (1 - control efficiency)

Material Handling[p]: PM10 Emissions (lb/day) = (0.0032 x aerodynamic particle size multiplier x (wind speed (mph)/5)$^{1.3}$/(moisture content/2)$^{1.4}$ x dirt handled (lb/day)/2,000 (lb/ton) (1 - control efficiency)

Description	Control Efficiency %	Unmitigated PM10 lb/day	Mitigated PM10[q] lb/day	Mititgated PM2.5 lb/day
Clearing	68	6.02	1.93	0.40
Storage Piles	68	8.27	2.65	0.55
Material Handling	68	0.15	0.05	0.01
Total		**14.4**	**4.63**	**0.96**

ARB OffRoad Model Emission Factors

Sum of Ems Factor #/hr		Year	Pollutant			
		2008				
Eq Name	Hp	CO	NOx	PM10	SOx	VOC
Bore/Drill Rigs	Composite	0.472	1.099	0.043	0.329	0.056
Cement and Mortar Mixers	Composite	0.046	0.072	0.005	0	0.01
Concrete/Industrial Saws	Composite	0.457	0.764	0.071	0.128	0.118
Cranes	Composite	0.35	0.941	0.049	0.196	0.08
Crawler Tractors	Composite	0.616	1.48	0.099	0.232	0.156
Crushing/Proc. Equipment	Composite	0.836	1.703	0.125	0.268	0.217
Dumpers/Tenders	Composite	0.022	0.076	0	0	0
Excavators	Composite	0.469	1.029	0.055	0.243	0.086
Forklifts	Composite	0.254	0.432	0.048	0	0.074
Generator Sets	Composite	0.315	0.635	0.047	0.001	0.09
Graders	Composite	0.54	1.331	0.069	0.276	0.112
Off-Highway Tractors	Composite	0.679	1.898	0.093	0.31	0.165
Off-Highway Trucks	Composite	0.607	2.525	0.09	0.494	0.175
Other Construction Equipment	Composite	0.534	1.336	0.063	0.223	0.115
Pavers	Composite	0.429	0.745	0.053	0.165	0.086
Paving Equipment	Composite	0.408	0.885	0.065	0.144	0.104
Plate Compactors	Composite	0.026	0.037	0.002	0	0
Rollers	Composite	0.36	0.648	0.046	0.139	0.068
Rough Terrain Forklifts	Composite	0.442	0.754	0.067	0.15	0.09
Rubber Tired Dozers	Composite	0.952	2.728	0.108	0.452	0.204
Rubber Tired Loaders	Composite	0.421	1.022	0.059	0.221	0.09
Scrapers	Composite	0.748	2.625	0.105	0.496	0.19
Signal Boards	Composite	0.096	0.18	0.013	0.024	0.02
Skid Steer Loaders	Composite	0.194	0.27	0.022	0.067	0.034
Surfacing Equipment	Composite	0.628	1.77	0.062	0.307	0.103
Tractors/Loaders/Backhoes	Composite	0.42	0.799	0.083	0.115	0.122
Trenchers	Composite	0.357	0.556	0.045	0.127	0.071
Welders	Composite	0.23	0.311	0.033	0	0.077

Title : South Coast Air Basin Avg Annual CYr 2007
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2006/12/04 10:12:08
Scen Year: 2007 -- All model years in the range 1965 to 2007 selected
Season : Annual
Area : South Coast
****

Year: 2007 -- Model Years 1965 to 2007 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast Basin Average Basin Average

Table 1: Running Exhaust Emissions (grams/mile; grams/idle-hour)

Pollutant Name: Total Organic Gases Temperature: 50F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	3.759	11.303	0	0	1
1	0.843	0.929	1.266	9.369	4.506	6.619	1.326
5	0.684	0.757	1.101	9.369	4.506	6.619	1.169
10	0.468	0.521	0.745	5.445	3.083	5.219	0.764
15	0.336	0.377	0.528	2.858	2.199	4.308	0.508
20	0.253	0.285	0.392	1.646	1.633	3.723	0.365
25	0.2	0.227	0.305	1.305	1.262	3.366	0.291
30	0.166	0.189	0.249	1.05	1.015	3.186	0.242
35	0.145	0.164	0.212	0.867	0.85	3.155	0.21
40	0.132	0.15	0.189	0.749	0.739	3.27	0.191
45	0.126	0.143	0.176	0.69	0.669	3.546	0.184
50	0.126	0.143	0.172	0.687	0.628	4.025	0.186
55	0.132	0.149	0.176	0.738	0.614	4.781	0.198
60	0.145	0.164	0.188	0.842	0.622	5.943	0.223
65	0.167	0.188	0.211	1	0.656	7.732	0.262

Pollutant Name: Carbon Monoxide Temperature: 50F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	21.774	45.122	0	0	4.948
1	7.521	9.049	11.927	30.199	34.129	48.289	9.872
5	6.804	8.169	11.069	30.199	34.129	48.289	9.118
10	5.705	6.815	8.525	21.226	22.233	39.649	7.341
15	4.914	5.845	6.88	15.373	15.341	34.269	6.123
20	4.327	5.128	5.775	11.616	11.211	31.176	5.268
25	3.882	4.588	5.013	9.398	8.674	29.851	4.665
30	3.542	4.179	4.48	7.831	7.105	30.085	4.226
35	3.283	3.871	4.115	6.733	6.161	31.919	3.914
40	3.094	3.649	3.881	6.005	5.655	35.656	3.709

45	2.971	3.508	3.764	5.594	5.493	41.944	3.608
50	2.914	3.449	3.767	5.487	5.647	51.965	3.619
55	2.936	3.485	3.908	5.699	6.143	67.814	3.769
60	3.059	3.644	4.231	6.282	7.072	93.219	4.108
65	3.328	3.979	4.817	7.34	8.615	134.982	4.733

Pollutant Name: Oxides of Nitrogen Temperature: 50F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	3.772	76.692	0	0	3.707
1	0.657	1.084	1.676	30.703	34.422	1.216	2.246
5	0.609	0.999	1.585	30.703	34.422	1.216	2.182
10	0.532	0.86	1.382	21.944	26.627	1.267	1.695
15	0.475	0.759	1.239	16.599	21.678	1.319	1.385
20	0.433	0.686	1.14	14.544	18.555	1.374	1.237
25	0.403	0.633	1.073	13.947	16.675	1.43	1.168
30	0.382	0.597	1.033	13.559	15.714	1.487	1.123
35	0.369	0.574	1.015	13.366	15.509	1.546	1.098
40	0.362	0.563	1.016	13.365	16.022	1.606	1.093
45	0.361	0.562	1.037	13.563	17.324	1.666	1.106
50	0.367	0.573	1.08	13.984	19.615	1.728	1.14
55	0.378	0.596	1.147	14.667	23.281	1.79	1.198
60	0.397	0.632	1.245	15.676	29.005	1.853	1.285
65	0.425	0.685	1.386	17.117	37.98	1.916	1.412

Pollutant Name: Carbon Dioxide Temperature: 50F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	875.168	4999.75	0	0	330.705
1	1123.438	1374.586	1916.091	2817.97	2725.021	226.914	1383.671
5	963.187	1178.857	1697.449	2817.969	2725.021	226.914	1211.681
10	728.057	891.671	1256.615	2345.632	2503.834	193.773	922.195
15	571.206	700.094	971.73	1984.466	2373.215	168.225	728.487
20	465.141	570.547	783.859	1732.223	2293.683	148.468	597.842
25	393.124	482.586	658.779	1632.284	2244.256	133.206	512.437
30	344.839	423.611	576.189	1554.877	2213.462	121.505	454.919
35	313.928	385.857	523.961	1495.986	2194.933	112.697	417.797
40	296.594	364.684	495.017	1453.412	2185.179	106.311	396.625
45	290.805	357.614	485.658	1426.072	2182.487	102.034	389.043
50	295.902	363.839	494.733	1413.678	2186.396	99.684	394.293
55	312.466	384.07	523.399	1416.65	2197.575	99.201	413.069
60	342.431	420.67	575.372	1436.241	2218.01	100.658	447.655
65	389.467	478.119	657.778	1474.915	2251.606	104.28	502.4

Pollutant Name: Sulfur Dioxide Temperature: 50F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	0.009	0.048	0	0	0.003
1	0.011	0.013	0.019	0.027	0.026	0.003	0.013
5	0.009	0.011	0.016	0.027	0.026	0.003	0.012
10	0.007	0.009	0.012	0.023	0.024	0.003	0.009
15	0.006	0.007	0.009	0.019	0.023	0.002	0.007
20	0.005	0.006	0.008	0.017	0.022	0.002	0.006
25	0.004	0.005	0.006	0.016	0.022	0.002	0.005
30	0.003	0.004	0.006	0.015	0.021	0.002	0.004
35	0.003	0.004	0.005	0.014	0.021	0.002	0.004
40	0.003	0.004	0.005	0.014	0.021	0.002	0.004
45	0.003	0.003	0.005	0.014	0.021	0.002	0.004
50	0.003	0.004	0.005	0.014	0.021	0.002	0.004
55	0.003	0.004	0.005	0.014	0.021	0.002	0.004
60	0.003	0.004	0.006	0.014	0.021	0.003	0.004
65	0.004	0.005	0.006	0.014	0.022	0.003	0.005

Pollutant Name: PM10 Temperature: 50F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	0.042	1.503	0	0	0.068
1	0.063	0.114	0.111	2.053	0.792	0.066	0.17
5	0.051	0.091	0.091	2.053	0.792	0.066	0.154
10	0.033	0.06	0.061	1.423	0.573	0.052	0.104
15	0.023	0.042	0.043	0.963	0.429	0.043	0.072
20	0.017	0.031	0.032	0.693	0.333	0.037	0.052
25	0.013	0.024	0.024	0.581	0.268	0.034	0.042
30	0.01	0.019	0.02	0.496	0.224	0.032	0.035
35	0.009	0.016	0.017	0.436	0.193	0.032	0.031
40	0.008	0.014	0.015	0.401	0.173	0.033	0.028
45	0.007	0.014	0.014	0.389	0.16	0.036	0.027
50	0.007	0.013	0.014	0.401	0.153	0.041	0.027
55	0.008	0.014	0.014	0.436	0.152	0.048	0.029
60	0.008	0.015	0.015	0.493	0.157	0.06	0.032
65	0.01	0.017	0.017	0.573	0.167	0.078	0.037

Pollutant Name: PM10 - Tire Wear Temperature: 50F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL

0	0	0	0	0	0	0	0
1	0.008	0.008	0.009	0.024	0.009	0.004	0.009
5	0.008	0.008	0.009	0.024	0.009	0.004	0.009
10	0.008	0.008	0.009	0.024	0.009	0.004	0.009
15	0.008	0.008	0.009	0.024	0.009	0.004	0.009
20	0.008	0.008	0.009	0.024	0.009	0.004	0.009
25	0.008	0.008	0.009	0.024	0.009	0.004	0.009
30	0.008	0.008	0.009	0.024	0.009	0.004	0.009
35	0.008	0.008	0.009	0.024	0.009	0.004	0.009
40	0.008	0.008	0.009	0.024	0.009	0.004	0.009
45	0.008	0.008	0.009	0.024	0.009	0.004	0.009
50	0.008	0.008	0.009	0.024	0.009	0.004	0.009
55	0.008	0.008	0.009	0.024	0.009	0.004	0.009
60	0.008	0.008	0.009	0.024	0.009	0.004	0.009
65	0.008	0.008	0.009	0.024	0.009	0.004	0.009

Pollutant Name: PM10 - Break Wear Temperature: 50F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	0	0	0	0	0
1	0.013	0.013	0.013	0.021	0.013	0.006	0.013
5	0.013	0.013	0.013	0.021	0.013	0.006	0.013
10	0.013	0.013	0.013	0.021	0.013	0.006	0.013
15	0.013	0.013	0.013	0.021	0.013	0.006	0.013
20	0.013	0.013	0.013	0.021	0.013	0.006	0.013
25	0.013	0.013	0.013	0.021	0.013	0.006	0.013
30	0.013	0.013	0.013	0.021	0.013	0.006	0.013
35	0.013	0.013	0.013	0.021	0.013	0.006	0.013
40	0.013	0.013	0.013	0.021	0.013	0.006	0.013
45	0.013	0.013	0.013	0.021	0.013	0.006	0.013
50	0.013	0.013	0.013	0.021	0.013	0.006	0.013
55	0.013	0.013	0.013	0.021	0.013	0.006	0.013
60	0.013	0.013	0.013	0.021	0.013	0.006	0.013
65	0.013	0.013	0.013	0.021	0.013	0.006	0.013

Pollutant Name: Gasoline - mi/gal Temperature: 50F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	0	0	0	0	0
1	7.8	6.328	4.452	3.326	3.335	27.578	6.93
5	9.094	7.379	5.106	3.326	3.335	27.578	8.034
10	12.022	9.754	6.846	5	5.014	32.744	10.615
15	15.311	12.424	8.839	7.115	7.135	37.864	13.518

20	18.79	15.249	10.984	9.582	9.611	42.657	16.591
25	22.223	18.035	13.131	12.216	12.255	46.798	19.625
30	25.329	20.557	15.096	14.741	14.792	49.933	22.372
35	27.826	22.583	16.684	16.836	16.899	51.708	24.576
40	29.463	23.911	17.721	18.201	18.274	51.806	26.013
45	30.067	24.399	18.088	18.624	18.704	50.008	26.528
50	29.572	23.994	17.739	18.037	18.12	46.269	26.062
55	28.027	22.738	16.718	16.533	16.614	40.785	24.662
60	25.596	20.762	15.142	14.343	14.418	34.032	22.477
65	22.522	18.265	13.185	11.778	11.841	26.723	19.73

Pollutant Name: Diesel - mi/gal Temperature: 50F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	0	0	0	0	0
1	27.709	28.977	19.711	4.305	3.599	0	8.885
5	27.709	28.977	19.711	4.305	3.599	0	8.885
10	27.709	28.977	19.711	4.636	3.599	0	9.125
15	27.709	28.977	19.711	5.046	3.599	0	9.424
20	27.709	28.977	19.711	5.477	3.599	0	9.737
25	27.709	28.977	19.711	5.663	3.599	0	9.873
30	27.709	28.977	19.711	5.841	3.599	0	10.003
35	27.709	28.977	19.711	6.003	3.599	0	10.121
40	27.709	28.977	19.711	6.141	3.599	0	10.221
45	27.709	28.977	19.711	6.245	3.599	0	10.296
50	27.709	28.977	19.711	6.308	3.599	0	10.342
55	27.709	28.977	19.711	6.325	3.599	0	10.355
60	27.709	28.977	19.711	6.296	3.599	0	10.334
65	27.709	28.977	19.711	6.223	3.599	0	10.281

Title : South Coast Air Basin Avg Annual CYr 2007
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2006/12/04 10:12:08
Scen Year: 2007 -- All model years in the range 1965 to 2007 selected
Season : Annual
Area : South Coast
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Year: 2007 -- Model Years 1965 to 2007 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast Basin Average Basin Average

Table 2: Starting Emissions (grams/trip)

Pollutant Name: Total Organic Gases Temperature: 50F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.215	0.2	0.401	1.275	0.42	2.728	0.321
10	0.335	0.316	0.677	1.589	0.661	2.821	0.479
20	0.561	0.533	1.192	2.191	1.107	3.059	0.775
30	0.766	0.732	1.656	2.757	1.508	3.365	1.045
40	0.951	0.911	2.068	3.287	1.862	3.738	1.29
50	1.116	1.072	2.428	3.782	2.171	4.179	1.509
60	1.251	1.205	2.727	4.145	2.417	4.421	1.686
120	1.417	1.344	2.426	2.889	1.7	2.679	1.668
180	0.939	0.92	2.129	3.087	1.808	2.843	1.28
240	0.996	0.975	2.253	3.281	1.912	3.063	1.357
300	1.05	1.029	2.374	3.471	2.014	3.282	1.432
360	1.104	1.082	2.492	3.657	2.113	3.5	1.506
420	1.157	1.134	2.607	3.838	2.208	3.717	1.577
480	1.208	1.185	2.718	4.016	2.301	3.934	1.647
540	1.258	1.234	2.827	4.19	2.39	4.149	1.716
600	1.306	1.283	2.932	4.359	2.477	4.364	1.783
660	1.354	1.33	3.035	4.525	2.56	4.578	1.848
720	1.4	1.376	3.134	4.686	2.641	4.791	1.911

Pollutant Name: Carbon Monoxide Temperature: 50F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	1.62	1.701	4.433	11.611	4.779	6.207	2.722
10	2.825	3.021	8.134	16.863	8.687	6.366	4.62
20	5.106	5.523	15.097	26.768	16.014	6.733	8.205
30	7.215	7.84	21.474	35.875	22.69	7.162	11.507
40	9.152	9.971	27.267	44.182	28.714	7.654	14.527
50	10.918	11.918	32.474	51.691	34.086	8.208	17.265
60	12.512	13.679	37.096	58.402	38.807	8.825	19.721
120	16.139	17.128	28.387	35.823	21.59	8.024	19.622
180	10.013	10.977	23.506	39.422	22.515	9.992	14.3
240	10.64	11.67	24.64	42.766	23.427	12.437	15.196
300	11.219	12.307	25.721	45.855	24.327	14.606	16.029
360	11.751	12.89	26.751	48.689	25.214	16.496	16.799
420	12.235	13.418	27.729	51.269	26.089	18.109	17.505
480	12.672	13.891	28.655	53.594	26.951	19.444	18.149
540	13.061	14.31	29.529	55.664	27.801	20.502	18.729
600	13.402	14.673	30.351	57.48	28.638	21.282	19.246
660	13.696	14.982	31.121	59.041	29.463	21.784	19.699
720	13.942	15.235	31.839	60.347	30.276	22.009	20.09

Pollutant Name: Oxides of Nitrogen Temperature: 50F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.296	0.453	0.939	0.85	0.674	0.267	0.486
10	0.35	0.522	1.197	1.244	1.011	0.295	0.6
20	0.447	0.645	1.652	1.937	1.603	0.346	0.8
30	0.527	0.746	2.025	2.503	2.086	0.389	0.965
40	0.589	0.827	2.316	2.941	2.459	0.425	1.094
50	0.635	0.886	2.525	3.251	2.723	0.454	1.187
60	0.664	0.925	2.652	3.434	2.877	0.476	1.245
120	0.696	0.981	2.76	3.515	2.943	0.493	1.3
180	0.743	1.044	2.802	3.499	2.932	0.482	1.346
240	0.737	1.036	2.784	3.475	2.915	0.468	1.337
300	0.729	1.025	2.758	3.444	2.892	0.45	1.323
360	0.718	1.009	2.724	3.405	2.863	0.429	1.305
420	0.705	0.99	2.683	3.358	2.829	0.404	1.283
480	0.689	0.967	2.634	3.304	2.789	0.376	1.257
540	0.671	0.94	2.577	3.242	2.742	0.344	1.227
600	0.65	0.909	2.512	3.172	2.691	0.309	1.193
660	0.626	0.875	2.44	3.094	2.633	0.27	1.154
720	0.6	0.837	2.359	3.009	2.569	0.227	1.112

Pollutant Name: Carbon Dioxide Temperature: 50F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	11.023	13.776	16.753	11.639	3.905	28.714	13.009
10	13.727	16.71	22.243	15.459	6.424	31.442	16.343
20	19.425	22.993	33.593	23.003	11.412	36.752	23.327
30	25.508	29.834	45.435	30.421	16.338	41.863	30.732
40	31.977	37.23	57.769	37.714	21.2	46.777	38.557
50	38.831	45.183	70.595	44.88	26	51.493	46.803
60	46.07	53.692	83.914	51.919	30.735	56.012	55.47
120	92.799	111.833	162.738	82.837	51.313	77.056	110.172
180	106.312	127.853	187.785	94.021	59.945	78.231	126.258
240	119.47	143.541	211.963	104.545	68.068	79.339	141.888
300	132.273	158.898	235.272	114.411	75.682	80.382	157.063
360	144.721	173.923	257.712	123.617	82.786	81.359	171.782
420	156.814	188.616	279.283	132.164	89.381	82.27	186.046
480	168.553	202.978	299.986	140.052	95.467	83.114	199.854
540	179.937	217.009	319.819	147.281	101.043	83.893	213.206
600	190.966	230.707	338.783	153.851	106.11	84.605	226.103
660	201.64	244.075	356.879	159.762	110.668	85.252	238.544
720	211.96	257.111	374.105	165.013	114.716	85.832	250.529

Pollutant Name: Sulfur Dioxide Temperature: 50F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0.001	0.001	0	0.001	0
30	0	0	0.001	0.001	0.001	0.001	0
40	0	0.001	0.001	0.001	0.001	0.001	0.001
50	0.001	0.001	0.001	0.001	0.001	0.001	0.001
60	0.001	0.001	0.001	0.001	0.001	0.001	0.001
120	0.001	0.001	0.002	0.001	0.001	0.001	0.001
180	0.001	0.001	0.002	0.002	0.001	0.001	0.001
240	0.001	0.002	0.002	0.002	0.001	0.001	0.002
300	0.001	0.002	0.003	0.002	0.001	0.001	0.002
360	0.002	0.002	0.003	0.002	0.001	0.001	0.002
420	0.002	0.002	0.003	0.002	0.001	0.001	0.002
480	0.002	0.002	0.003	0.002	0.001	0.001	0.002
540	0.002	0.002	0.004	0.002	0.001	0.001	0.002
600	0.002	0.002	0.004	0.002	0.002	0.001	0.003
660	0.002	0.003	0.004	0.003	0.002	0.001	0.003
720	0.002	0.003	0.004	0.003	0.002	0.001	0.003

Pollutant Name: PM10 Temperature: 50F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.001	0.001	0.001	0.001	0	0.016	0.001
10	0.001	0.002	0.002	0.001	0.001	0.015	0.002
20	0.003	0.004	0.004	0.002	0.001	0.011	0.003
30	0.004	0.006	0.006	0.002	0.002	0.009	0.005
40	0.005	0.008	0.008	0.003	0.003	0.007	0.006
50	0.006	0.01	0.009	0.003	0.003	0.005	0.007
60	0.006	0.011	0.011	0.004	0.003	0.004	0.008
120	0.009	0.016	0.015	0.005	0.005	0.011	0.012
180	0.01	0.017	0.016	0.006	0.005	0.017	0.013
240	0.01	0.018	0.017	0.006	0.005	0.022	0.014
300	0.011	0.019	0.017	0.006	0.005	0.027	0.014
360	0.011	0.02	0.018	0.007	0.005	0.031	0.015
420	0.012	0.021	0.019	0.007	0.006	0.035	0.016
480	0.012	0.022	0.019	0.007	0.006	0.038	0.016
540	0.013	0.022	0.02	0.008	0.006	0.04	0.017
600	0.013	0.023	0.02	0.008	0.006	0.041	0.017
660	0.013	0.023	0.021	0.008	0.006	0.042	0.017
720	0.013	0.024	0.021	0.008	0.006	0.043	0.018

Title : South Coast Air Basin Avg Annual CYr 2007
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2006/12/04 10:12:08
Scen Year: 2007 -- All model years in the range 1965 to 2007 selected
Season : Annual
Area : South Coast
****

Year: 2007 -- Model Years 1965 to 2007 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast Basin Average Basin Average

Table 4: Hot Soak Emissions (grams/trip)

Pollutant Name: Total Organic Gases Temperature: 50F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.051	0.041	0.028	0.012	0.035	0.105	0.042
10	0.094	0.076	0.053	0.022	0.065	0.195	0.078
20	0.16	0.13	0.091	0.038	0.111	0.332	0.134
30	0.205	0.168	0.118	0.05	0.142	0.428	0.172
40	0.222	0.182	0.128	0.054	0.154	0.463	0.187

Hot soak results are scaled to reflect zero emissions for trip lengths of less than 5 minutes (about 25% of in-use trips).

Title : South Coast Air Basin Avg Annual CYr 2007
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2006/12/04 10:12:08
Scen Year: 2007 -- All model years in the range 1965 to 2007 selected
Season : Annual
Area : South Coast
****

Year: 2007 -- Model Years 1965 to 2007 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast Basin Average Basin Average

Table 5a: Partial Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Total Organic Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
50	0.011	0.009	0.007	0.001	0	0.012	0.01

Title : South Coast Air Basin Avg Annual CYr 2007
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2006/12/04 10:12:08
Scen Year: 2007 -- All model years in the range 1965 to 2007 selected
Season : Annual
Area : South Coast
****
Year: 2007 -- Model Years 1965 to 2007 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast Basin Average Basin Average

Table 5b: Multi-Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Total Organic Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
50	0.001	0.001	0.001	0	0	0.001	0.001

Title : South Coast Air Basin Avg Annual CYr 2007
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2006/12/04 10:12:08
Scen Year: 2007 -- All model years in the range 1965 to 2007 selected
Season : Annual
Area : South Coast
****
Year: 2007 -- Model Years 1965 to 2007 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast Basin Average Basin Average

Table 6a: Partial Day Resting Loss Emissions (grams/hour)

Pollutant Name: Total Organic Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
50	0.009	0.007	0.006	0.001	0	0.01	0.008

Title : South Coast Air Basin Avg Annual CYr 2007
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2006/12/04 10:12:08
Scen Year: 2007 -- All model years in the range 1965 to 2007 selected
Season : Annual
Area : South Coast
****
Year: 2007 -- Model Years 1965 to 2007 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast Basin Average Basin Average

Table 6b: Multi-Day Resting Loss Emissions (grams/hour)

Pollutant Name: Total Organic Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
50	0.001	0.001	0	0	0	0.001	0.001

Title : South Coast Air Basin Avg Annual CYr 2007
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2006/12/04 10:12:08
Scen Year: 2007 -- All model years in the range 1965 to 2007 selected
Season : Annual
Area : South Coast
****
Year: 2007 -- Model Years 1965 to 2007 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast Basin Average Basin Average

Table 7: Estimated Travel Fractions

Pollutant Name: Temperature: ALL Relative Humidity: ALL

	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
%VMT	0.488	0.321	0.142	0.041	0.002	0.006	1
%TRIP	0.477	0.28	0.182	0.053	0	0.008	1
%VEH	0.52	0.303	0.126	0.024	0.001	0.028	1

Title : South Coast Air Basin Avg Annual CYr 2007
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2006/12/04 10:12:08
Scen Year: 2007 -- All model years in the range 1965 to 2007 selected
Season : Annual
Area : South Coast
****

Year: 2007 -- Model Years 1965 to 2007 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast Basin Average Basin Average

Table 8: Evaporative Running Loss Emissions (grams/minute)

Pollutant Name: Total Organic Gases Temperature: 50F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
1	0.034	0.336	0.291	0.147	0.347	0.13	0.173
2	0.039	0.177	0.154	0.082	0.188	0.163	0.102
3	0.043	0.126	0.11	0.061	0.135	0.18	0.081
4	0.046	0.102	0.089	0.051	0.109	0.189	0.071
5	0.049	0.088	0.076	0.044	0.094	0.196	0.066
10	0.054	0.063	0.054	0.032	0.063	0.214	0.057
15	0.055	0.057	0.05	0.029	0.053	0.223	0.055
20	0.056	0.057	0.05	0.027	0.049	0.23	0.055
25	0.057	0.058	0.051	0.026	0.047	0.235	0.056
30	0.056	0.058	0.05	0.026	0.046	0.234	0.056
35	0.056	0.057	0.05	0.026	0.046	0.232	0.055
40	0.055	0.056	0.049	0.026	0.046	0.23	0.055
45	0.055	0.056	0.049	0.025	0.045	0.229	0.054

50	0.054	0.055	0.048	0.025	0.045	0.223	0.053
55	0.052	0.054	0.048	0.025	0.045	0.217	0.052
60	0.051	0.054	0.047	0.025	0.044	0.211	0.051

Summary of Two Acre Site Example Results By Phase

Total On-Site

	CO	NOx	PM10	PM2.5
Paving	8.3	16.7	1.5	1.4
Localized Significance Threshold*	647.0	180.0	7.0	5.0
Exceed Significance?	NO	NO	NO	NO

* Thresholds for the South Coastal Los Angeles County area (Area 4) Source Receptor Area (SRA) at 25 meters.

Total Regional

	CO	VOC	NOx	SOx	PM10	PM2.5
Paving	13.5	3.0	23.5	2.5	1.6	1.5
SCAQMD Emissions Threshold	**550**	**75**	**100**	**150**	**150**	**55**
Exceed Significance?	NO	NO	NO	NO	NO	NO

Construction Summary By Phase and Equipment

Asphalt Paving of Parking Lot

Vehicle Description	No. of Vehicle	Hours	Trips	Length	CO	VOC	NOx	SOx	PM10	PM2.5
Pavers	0	4.0			0.0	0.00	0.0	0.0	0.00	0.00
Rollers	0	4.0			0.0	0.00	0.0	0.0	0.00	0.00
Paving Equipment	2	4.0			3.3	0.8	7	1.2	0.52	0.48
Cement and Mortar Mixers	0	4.0			0.00	0.00	0.00	0.00	0.000	0.000
Tractors/Loaders/Backhoes	3	4.0			5.0	1.5	9.6	1.38	1.00	0.92
Haul Trucks			5	20	5	0.7	7	0.007	0.13	0.12
Water Trucks			0	6.4	0.0	0.00	0.0	0.0000	0.000	0.000
Worker Trips			8	40	5	0.20	0.8	0.004	0.05	0.04
Total Emissions					**14**	**3.0**	**23**	**2.5**	**1.6**	**1.5**
SCAQMD Emissions Threshold					**550**	**75**	**100**	**150**	**150**	**55**
Exceed Significance?					**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Summary of Two Acre Site Results By Phase and Equipment

Asphalt Paving of Parking Lot

Vehicle Description	No. of Vehicle	Hours	Trips	Length	CO	NOx	PM10	PM2.5
Pavers	0	4.0			0.0	0.0	0.00	0.00
Rollers	0	4.0			0.0	0.0	0.00	0.00
Paving Equipment	2	4.0			3.3	7	0.52	0.48
Cement and Mortar Mixers	0	4.0			0.00	0.00	0.00	0.000
Tractors/Loaders/Backhoes	3	4.0			5.0	9.6	1.00	0.92
Haul Trucks			5	0.1	0.026	0.034	0.0006	0.0006
Water Trucks			0	6.4	0.0	0.0	0.000	0.000
Total Onsite Emissions					**8**	**17**	**1.5**	**1.4**
Localized Significance Threshold*					**647**	**180**	**7**	**5**
Exceed Significance?					**NO**	**NO**	**NO**	**NO**

* Thresholds for the South Coastal Los Angeles County area (Area 4) Source Receptor Area (SRA) at 25 meters.

Two Acre Site - Architectural Coating and Asphalt Paving

One Acre Site		**Construction Activity** Asphalt Paving
Construction Schedule -	18	**days**[a]

Equipment Type[a,b]	**No. of Equipment**	**hr/day**	**Crew Size**
Pavers	0	4.0	8
Rollers	0	4.0	
Paving Equipment	2	4.0	
Cement and Mortar Mixers	0	4.0	
Tractors/Loaders/Backhoes	3	4.0	

Construction Equipment Combustion Emission Factors

Equipment Type[c]	**CO** lb/hr	**NOx** lb/hr	**PM10** lb/hr
Pavers	0.429	0.745	0.053
Rollers	0.360	0.648	0.046
Paving Equipment	0.408	0.885	0.065
Cement and Mortar Mixers	0.046	0.072	0.005
Tractors/Loaders/Backhoes	0.420	0.799	0.083

Construction Vehicle (Mobile Source) Emission Factors

	CO lb/mile	**NOx** lb/mile	**PM10** lb/mile
Heavy-Duty Truck[d]	0.026167	0.034155	0.000626

Construction Worker Number of Trips and Trip Length

Vehicle	**No. of One-Way Trips/Day**	**Trip Length (miles)**
Delivery Truck[e]	5	0.1
Water Truck[f]	0	6.4

Two Acre Site - Architectural Coating and Asphalt Paving

Incremental Increase in Onsite Combustion Emissions from Construction Equipment

Equation: Emission Factor (lb/BHP-hr) x No. of Equipment x Work Day (hr/day) x Equipment rating (hp) x Load Factor (%/100) = Onsite Construction Emissions (lb/day)

Equipment Type	CO lb/day	NOx lb/day	PM10 lb/day
Pavers	0.00	0.00	0.00
Rollers	0.00	0.00	0.00
Paving Equipment	3.26	7.08	0.52
Cement and Mortar Mixers	0.00	0.00	0.00
Tractors/Loaders/Backhoes	5.04	9.59	1.00
Total	**8.3**	**16.7**	**1.5**

Incremental Increase in Onsite Combustion Emissions from Onroad Mobile Vehicles

Equation: Emission Factor (lb/mile) x No. of One-Way Trips/Day x 2 x Trip length (mile) = Mobile Emissions (lb/day)

Vehicle	CO lb/day	NOx lb/day	PM10 lb/day
Delivery Truck	0.03	0.03	0.00
Water Truck	0.00	0	0
Total	**0.03**	**0.03**	**0.00**

Total Incremental Combustion Emissions from Construction Activities

Sources	CO lb/day	NOx lb/day	PM10 lb/day
On-Site Emissions	**8.3**	**16.7**	**1.5**
Significance Threshold[g]	*647*	*180*	*7*
Exceed Significance?	**NO**	**NO**	**NO**

Notes:

Project specific data may be entered into shaded cells. Changing the values in the shaded cells will not affect the integrity of the worksheets. Verify that units of values entered match units for cell.

Adding lines or entering values with units different than those associated with the shaded cells may alter the integrity of the sheets or produce incorrect results.

a) SCAQMD, estimated from survey data, Sept 2004

b) Equipment name must match CARB Off-Road Model (see Off-Road Model EF worksheet) equipment name for sheet to look up EFs automatically

c) SCAB values provided by the ARB, Aug 2004. Assumed equipment is diesel fueled except the welders which are powered by the generator.

d) CARB, EMFAC2002 (version 2.2) Burden Model, Winter 2005, 75 F, 40% RH: EF, lb/yr = (EF, ton/yr x 2,000 lb/ton)/VMT

e) Assumed haul truck travels 0.1 miles through facility

f) Assumed six foot wide water truck traverses over 200,000 square feet of disturbed area

g) Thresholds for the South Coastal Los Angeles County area (Area 4) Source Receptor Area (SRA) at 25 meters.

ARB OffRoad Model Emission Factors

Sum of Ems Factor #/hr		Year	Pollutant			
		2008				
Eq Name	Hp	CO	NOx	PM10	SOx	VOC
Bore/Drill Rigs	Composite	0.472	1.099	0.043	0.329	0.056
Cement and Mortar Mixers	Composite	0.046	0.072	0.005	0	0.01
Concrete/Industrial Saws	Composite	0.457	0.764	0.071	0.128	0.118
Cranes	Composite	0.35	0.941	0.049	0.196	0.08
Crawler Tractors	Composite	0.616	1.48	0.099	0.232	0.156
Crushing/Proc. Equipment	Composite	0.836	1.703	0.125	0.268	0.217
Dumpers/Tenders	Composite	0.022	0.076	0	0	0
Excavators	Composite	0.469	1.029	0.055	0.243	0.086
Forklifts	Composite	0.254	0.432	0.048	0	0.074
Generator Sets	Composite	0.315	0.635	0.047	0.001	0.09
Graders	Composite	0.54	1.331	0.069	0.276	0.112
Off-Highway Tractors	Composite	0.679	1.898	0.093	0.31	0.165
Off-Highway Trucks	Composite	0.607	2.525	0.09	0.494	0.175
Other Construction Equipment	Composite	0.534	1.336	0.063	0.223	0.115
Pavers	Composite	0.429	0.745	0.053	0.165	0.086
Paving Equipment	Composite	0.408	0.885	0.065	0.144	0.104
Plate Compactors	Composite	0.026	0.037	0.002	0	0
Rollers	Composite	0.36	0.648	0.046	0.139	0.068
Rough Terrain Forklifts	Composite	0.442	0.754	0.067	0.15	0.09
Rubber Tired Dozers	Composite	0.952	2.728	0.108	0.452	0.204
Rubber Tired Loaders	Composite	0.421	1.022	0.059	0.221	0.09
Scrapers	Composite	0.748	2.625	0.105	0.496	0.19
Signal Boards	Composite	0.096	0.18	0.013	0.024	0.02
Skid Steer Loaders	Composite	0.194	0.27	0.022	0.067	0.034
Surfacing Equipment	Composite	0.628	1.77	0.062	0.307	0.103
Tractors/Loaders/Backhoes	Composite	0.42	0.799	0.083	0.115	0.122
Trenchers	Composite	0.357	0.556	0.045	0.127	0.071
Welders	Composite	0.23	0.311	0.033	0	0.077

Title : South Coast Air Basin Avg Annual CYr 2007
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2006/12/04 10:12:08
Scen Year: 2007 -- All model years in the range 1965 to 2007 selected
Season : Annual
Area : South Coast
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Year: 2007 -- Model Years 1965 to 2007 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast Basin Average Basin Average

Table 1: Running Exhaust Emissions (grams/mile; grams/idle-hour)

Pollutant Name: Total Organic Gases Temperature: 50F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	3.759	11.303	0	0	1
1	0.843	0.929	1.266	9.369	4.506	6.619	1.326
5	0.684	0.757	1.101	9.369	4.506	6.619	1.169
10	0.468	0.521	0.745	5.445	3.083	5.219	0.764
15	0.336	0.377	0.528	2.858	2.199	4.308	0.508
20	0.253	0.285	0.392	1.646	1.633	3.723	0.365
25	0.2	0.227	0.305	1.305	1.262	3.366	0.291
30	0.166	0.189	0.249	1.05	1.015	3.186	0.242
35	0.145	0.164	0.212	0.867	0.85	3.155	0.21
40	0.132	0.15	0.189	0.749	0.739	3.27	0.191
45	0.126	0.143	0.176	0.69	0.669	3.546	0.184
50	0.126	0.143	0.172	0.687	0.628	4.025	0.186
55	0.132	0.149	0.176	0.738	0.614	4.781	0.198
60	0.145	0.164	0.188	0.842	0.622	5.943	0.223
65	0.167	0.188	0.211	1	0.656	7.732	0.262

Pollutant Name: Carbon Monoxide Temperature: 50F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	21.774	45.122	0	0	4.948
1	7.521	9.049	11.927	30.199	34.129	48.289	9.872
5	6.804	8.169	11.069	30.199	34.129	48.289	9.118
10	5.705	6.815	8.525	21.226	22.233	39.649	7.341
15	4.914	5.845	6.88	15.373	15.341	34.269	6.123
20	4.327	5.128	5.775	11.616	11.211	31.176	5.268
25	3.882	4.588	5.013	9.398	8.674	29.851	4.665
30	3.542	4.179	4.48	7.831	7.105	30.085	4.226
35	3.283	3.871	4.115	6.733	6.161	31.919	3.914
40	3.094	3.649	3.881	6.005	5.655	35.656	3.709

45	2.971	3.508	3.764	5.594	5.493	41.944	3.608
50	2.914	3.449	3.767	5.487	5.647	51.965	3.619
55	2.936	3.485	3.908	5.699	6.143	67.814	3.769
60	3.059	3.644	4.231	6.282	7.072	93.219	4.108
65	3.328	3.979	4.817	7.34	8.615	134.982	4.733

Pollutant Name: Oxides of Nitrogen Temperature: 50F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	3.772	76.692	0	0	3.707
1	0.657	1.084	1.676	30.703	34.422	1.216	2.246
5	0.609	0.999	1.585	30.703	34.422	1.216	2.182
10	0.532	0.86	1.382	21.944	26.627	1.267	1.695
15	0.475	0.759	1.239	16.599	21.678	1.319	1.385
20	0.433	0.686	1.14	14.544	18.555	1.374	1.237
25	0.403	0.633	1.073	13.947	16.675	1.43	1.168
30	0.382	0.597	1.033	13.559	15.714	1.487	1.123
35	0.369	0.574	1.015	13.366	15.509	1.546	1.098
40	0.362	0.563	1.016	13.365	16.022	1.606	1.093
45	0.361	0.562	1.037	13.563	17.324	1.666	1.106
50	0.367	0.573	1.08	13.984	19.615	1.728	1.14
55	0.378	0.596	1.147	14.667	23.281	1.79	1.198
60	0.397	0.632	1.245	15.676	29.005	1.853	1.285
65	0.425	0.685	1.386	17.117	37.98	1.916	1.412

Pollutant Name: Carbon Dioxide Temperature: 50F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	875.168	4999.75	0	0	330.705
1	1123.438	1374.586	1916.091	2817.97	2725.021	226.914	1383.671
5	963.187	1178.857	1697.449	2817.969	2725.021	226.914	1211.681
10	728.057	891.671	1256.615	2345.632	2503.834	193.773	922.195
15	571.206	700.094	971.73	1984.466	2373.215	168.225	728.487
20	465.141	570.547	783.859	1732.223	2293.683	148.468	597.842
25	393.124	482.586	658.779	1632.284	2244.256	133.206	512.437
30	344.839	423.611	576.189	1554.877	2213.462	121.505	454.919
35	313.928	385.857	523.961	1495.986	2194.933	112.697	417.797
40	296.594	364.684	495.017	1453.412	2185.179	106.311	396.625
45	290.805	357.614	485.658	1426.072	2182.487	102.034	389.043
50	295.902	363.839	494.733	1413.678	2186.396	99.684	394.293
55	312.466	384.07	523.399	1416.65	2197.575	99.201	413.069
60	342.431	420.67	575.372	1436.241	2218.01	100.658	447.655
65	389.467	478.119	657.778	1474.915	2251.606	104.28	502.4

Pollutant Name: Sulfur Dioxide Temperature: 50F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	0.009	0.048	0	0	0.003
1	0.011	0.013	0.019	0.027	0.026	0.003	0.013
5	0.009	0.011	0.016	0.027	0.026	0.003	0.012
10	0.007	0.009	0.012	0.023	0.024	0.003	0.009
15	0.006	0.007	0.009	0.019	0.023	0.002	0.007
20	0.005	0.006	0.008	0.017	0.022	0.002	0.006
25	0.004	0.005	0.006	0.016	0.022	0.002	0.005
30	0.003	0.004	0.006	0.015	0.021	0.002	0.004
35	0.003	0.004	0.005	0.014	0.021	0.002	0.004
40	0.003	0.004	0.005	0.014	0.021	0.002	0.004
45	0.003	0.003	0.005	0.014	0.021	0.002	0.004
50	0.003	0.004	0.005	0.014	0.021	0.002	0.004
55	0.003	0.004	0.005	0.014	0.021	0.002	0.004
60	0.003	0.004	0.006	0.014	0.021	0.003	0.004
65	0.004	0.005	0.006	0.014	0.022	0.003	0.005

Pollutant Name: PM10 Temperature: 50F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	0.042	1.503	0	0	0.068
1	0.063	0.114	0.111	2.053	0.792	0.066	0.17
5	0.051	0.091	0.091	2.053	0.792	0.066	0.154
10	0.033	0.06	0.061	1.423	0.573	0.052	0.104
15	0.023	0.042	0.043	0.963	0.429	0.043	0.072
20	0.017	0.031	0.032	0.693	0.333	0.037	0.052
25	0.013	0.024	0.024	0.581	0.268	0.034	0.042
30	0.01	0.019	0.02	0.496	0.224	0.032	0.035
35	0.009	0.016	0.017	0.436	0.193	0.032	0.031
40	0.008	0.014	0.015	0.401	0.173	0.033	0.028
45	0.007	0.014	0.014	0.389	0.16	0.036	0.027
50	0.007	0.013	0.014	0.401	0.153	0.041	0.027
55	0.008	0.014	0.014	0.436	0.152	0.048	0.029
60	0.008	0.015	0.015	0.493	0.157	0.06	0.032
65	0.01	0.017	0.017	0.573	0.167	0.078	0.037

Pollutant Name: PM10 - Tire Wear Temperature: 50F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL

0	0	0	0	0	0	0	0
1	0.008	0.008	0.009	0.024	0.009	0.004	0.009
5	0.008	0.008	0.009	0.024	0.009	0.004	0.009
10	0.008	0.008	0.009	0.024	0.009	0.004	0.009
15	0.008	0.008	0.009	0.024	0.009	0.004	0.009
20	0.008	0.008	0.009	0.024	0.009	0.004	0.009
25	0.008	0.008	0.009	0.024	0.009	0.004	0.009
30	0.008	0.008	0.009	0.024	0.009	0.004	0.009
35	0.008	0.008	0.009	0.024	0.009	0.004	0.009
40	0.008	0.008	0.009	0.024	0.009	0.004	0.009
45	0.008	0.008	0.009	0.024	0.009	0.004	0.009
50	0.008	0.008	0.009	0.024	0.009	0.004	0.009
55	0.008	0.008	0.009	0.024	0.009	0.004	0.009
60	0.008	0.008	0.009	0.024	0.009	0.004	0.009
65	0.008	0.008	0.009	0.024	0.009	0.004	0.009

Pollutant Name: PM10 - Break Wear Temperature: 50F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	0	0	0	0	0
1	0.013	0.013	0.013	0.021	0.013	0.006	0.013
5	0.013	0.013	0.013	0.021	0.013	0.006	0.013
10	0.013	0.013	0.013	0.021	0.013	0.006	0.013
15	0.013	0.013	0.013	0.021	0.013	0.006	0.013
20	0.013	0.013	0.013	0.021	0.013	0.006	0.013
25	0.013	0.013	0.013	0.021	0.013	0.006	0.013
30	0.013	0.013	0.013	0.021	0.013	0.006	0.013
35	0.013	0.013	0.013	0.021	0.013	0.006	0.013
40	0.013	0.013	0.013	0.021	0.013	0.006	0.013
45	0.013	0.013	0.013	0.021	0.013	0.006	0.013
50	0.013	0.013	0.013	0.021	0.013	0.006	0.013
55	0.013	0.013	0.013	0.021	0.013	0.006	0.013
60	0.013	0.013	0.013	0.021	0.013	0.006	0.013
65	0.013	0.013	0.013	0.021	0.013	0.006	0.013

Pollutant Name: Gasoline - mi/gal Temperature: 50F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	0	0	0	0	0
1	7.8	6.328	4.452	3.326	3.335	27.578	6.93
5	9.094	7.379	5.106	3.326	3.335	27.578	8.034
10	12.022	9.754	6.846	5	5.014	32.744	10.615
15	15.311	12.424	8.839	7.115	7.135	37.864	13.518

20	18.79	15.249	10.984	9.582	9.611	42.657	16.591
25	22.223	18.035	13.131	12.216	12.255	46.798	19.625
30	25.329	20.557	15.096	14.741	14.792	49.933	22.372
35	27.826	22.583	16.684	16.836	16.899	51.708	24.576
40	29.463	23.911	17.721	18.201	18.274	51.806	26.013
45	30.067	24.399	18.088	18.624	18.704	50.008	26.528
50	29.572	23.994	17.739	18.037	18.12	46.269	26.062
55	28.027	22.738	16.718	16.533	16.614	40.785	24.662
60	25.596	20.762	15.142	14.343	14.418	34.032	22.477
65	22.522	18.265	13.185	11.778	11.841	26.723	19.73

Pollutant Name: Diesel - mi/gal Temperature: 50F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0	0	0	0	0	0	0
1	27.709	28.977	19.711	4.305	3.599	0	8.885
5	27.709	28.977	19.711	4.305	3.599	0	8.885
10	27.709	28.977	19.711	4.636	3.599	0	9.125
15	27.709	28.977	19.711	5.046	3.599	0	9.424
20	27.709	28.977	19.711	5.477	3.599	0	9.737
25	27.709	28.977	19.711	5.663	3.599	0	9.873
30	27.709	28.977	19.711	5.841	3.599	0	10.003
35	27.709	28.977	19.711	6.003	3.599	0	10.121
40	27.709	28.977	19.711	6.141	3.599	0	10.221
45	27.709	28.977	19.711	6.245	3.599	0	10.296
50	27.709	28.977	19.711	6.308	3.599	0	10.342
55	27.709	28.977	19.711	6.325	3.599	0	10.355
60	27.709	28.977	19.711	6.296	3.599	0	10.334
65	27.709	28.977	19.711	6.223	3.599	0	10.281

Title : South Coast Air Basin Avg Annual CYr 2007
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2006/12/04 10:12:08
Scen Year: 2007 -- All model years in the range 1965 to 2007 selected
Season : Annual
Area : South Coast
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Year: 2007 -- Model Years 1965 to 2007 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast Basin Average Basin Average

Table 2: Starting Emissions (grams/trip)

Pollutant Name: Total Organic Gases Temperature: 50F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.215	0.2	0.401	1.275	0.42	2.728	0.321
10	0.335	0.316	0.677	1.589	0.661	2.821	0.479
20	0.561	0.533	1.192	2.191	1.107	3.059	0.775
30	0.766	0.732	1.656	2.757	1.508	3.365	1.045
40	0.951	0.911	2.068	3.287	1.862	3.738	1.29
50	1.116	1.072	2.428	3.782	2.171	4.179	1.509
60	1.251	1.205	2.727	4.145	2.417	4.421	1.686
120	1.417	1.344	2.426	2.889	1.7	2.679	1.668
180	0.939	0.92	2.129	3.087	1.808	2.843	1.28
240	0.996	0.975	2.253	3.281	1.912	3.063	1.357
300	1.05	1.029	2.374	3.471	2.014	3.282	1.432
360	1.104	1.082	2.492	3.657	2.113	3.5	1.506
420	1.157	1.134	2.607	3.838	2.208	3.717	1.577
480	1.208	1.185	2.718	4.016	2.301	3.934	1.647
540	1.258	1.234	2.827	4.19	2.39	4.149	1.716
600	1.306	1.283	2.932	4.359	2.477	4.364	1.783
660	1.354	1.33	3.035	4.525	2.56	4.578	1.848
720	1.4	1.376	3.134	4.686	2.641	4.791	1.911

Pollutant Name: Carbon Monoxide Temperature: 50F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	1.62	1.701	4.433	11.611	4.779	6.207	2.722
10	2.825	3.021	8.134	16.863	8.687	6.366	4.62
20	5.106	5.523	15.097	26.768	16.014	6.733	8.205
30	7.215	7.84	21.474	35.875	22.69	7.162	11.507
40	9.152	9.971	27.267	44.182	28.714	7.654	14.527
50	10.918	11.918	32.474	51.691	34.086	8.208	17.265
60	12.512	13.679	37.096	58.402	38.807	8.825	19.721
120	16.139	17.128	28.387	35.823	21.59	8.024	19.622
180	10.013	10.977	23.506	39.422	22.515	9.992	14.3
240	10.64	11.67	24.64	42.766	23.427	12.437	15.196
300	11.219	12.307	25.721	45.855	24.327	14.606	16.029
360	11.751	12.89	26.751	48.689	25.214	16.496	16.799
420	12.235	13.418	27.729	51.269	26.089	18.109	17.505
480	12.672	13.891	28.655	53.594	26.951	19.444	18.149
540	13.061	14.31	29.529	55.664	27.801	20.502	18.729
600	13.402	14.673	30.351	57.48	28.638	21.282	19.246
660	13.696	14.982	31.121	59.041	29.463	21.784	19.699
720	13.942	15.235	31.839	60.347	30.276	22.009	20.09

Pollutant Name: Oxides of Nitrogen Temperature: 50F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.296	0.453	0.939	0.85	0.674	0.267	0.486
10	0.35	0.522	1.197	1.244	1.011	0.295	0.6
20	0.447	0.645	1.652	1.937	1.603	0.346	0.8
30	0.527	0.746	2.025	2.503	2.086	0.389	0.965
40	0.589	0.827	2.316	2.941	2.459	0.425	1.094
50	0.635	0.886	2.525	3.251	2.723	0.454	1.187
60	0.664	0.925	2.652	3.434	2.877	0.476	1.245
120	0.696	0.981	2.76	3.515	2.943	0.493	1.3
180	0.743	1.044	2.802	3.499	2.932	0.482	1.346
240	0.737	1.036	2.784	3.475	2.915	0.468	1.337
300	0.729	1.025	2.758	3.444	2.892	0.45	1.323
360	0.718	1.009	2.724	3.405	2.863	0.429	1.305
420	0.705	0.99	2.683	3.358	2.829	0.404	1.283
480	0.689	0.967	2.634	3.304	2.789	0.376	1.257
540	0.671	0.94	2.577	3.242	2.742	0.344	1.227
600	0.65	0.909	2.512	3.172	2.691	0.309	1.193
660	0.626	0.875	2.44	3.094	2.633	0.27	1.154
720	0.6	0.837	2.359	3.009	2.569	0.227	1.112

Pollutant Name: Carbon Dioxide Temperature: 50F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	11.023	13.776	16.753	11.639	3.905	28.714	13.009
10	13.727	16.71	22.243	15.459	6.424	31.442	16.343
20	19.425	22.993	33.593	23.003	11.412	36.752	23.327
30	25.508	29.834	45.435	30.421	16.338	41.863	30.732
40	31.977	37.23	57.769	37.714	21.2	46.777	38.557
50	38.831	45.183	70.595	44.88	26	51.493	46.803
60	46.07	53.692	83.914	51.919	30.735	56.012	55.47
120	92.799	111.833	162.738	82.837	51.313	77.056	110.172
180	106.312	127.853	187.785	94.021	59.945	78.231	126.258
240	119.47	143.541	211.963	104.545	68.068	79.339	141.888
300	132.273	158.898	235.272	114.411	75.682	80.382	157.063
360	144.721	173.923	257.712	123.617	82.786	81.359	171.782
420	156.814	188.616	279.283	132.164	89.381	82.27	186.046
480	168.553	202.978	299.986	140.052	95.467	83.114	199.854
540	179.937	217.009	319.819	147.281	101.043	83.893	213.206
600	190.966	230.707	338.783	153.851	106.11	84.605	226.103
660	201.64	244.075	356.879	159.762	110.668	85.252	238.544
720	211.96	257.111	374.105	165.013	114.716	85.832	250.529

Pollutant Name: Sulfur Dioxide Temperature: 50F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0.001	0.001	0	0.001	0
30	0	0	0.001	0.001	0.001	0.001	0
40	0	0.001	0.001	0.001	0.001	0.001	0.001
50	0.001	0.001	0.001	0.001	0.001	0.001	0.001
60	0.001	0.001	0.001	0.001	0.001	0.001	0.001
120	0.001	0.001	0.002	0.001	0.001	0.001	0.001
180	0.001	0.001	0.002	0.002	0.001	0.001	0.001
240	0.001	0.002	0.002	0.002	0.001	0.001	0.002
300	0.001	0.002	0.003	0.002	0.001	0.001	0.002
360	0.002	0.002	0.003	0.002	0.001	0.001	0.002
420	0.002	0.002	0.003	0.002	0.001	0.001	0.002
480	0.002	0.002	0.003	0.002	0.001	0.001	0.002
540	0.002	0.002	0.004	0.002	0.001	0.001	0.002
600	0.002	0.002	0.004	0.002	0.002	0.001	0.003
660	0.002	0.003	0.004	0.003	0.002	0.001	0.003
720	0.002	0.003	0.004	0.003	0.002	0.001	0.003

Pollutant Name: PM10 Temperature: 50F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.001	0.001	0.001	0.001	0	0.016	0.001
10	0.001	0.002	0.002	0.001	0.001	0.015	0.002
20	0.003	0.004	0.004	0.002	0.001	0.011	0.003
30	0.004	0.006	0.006	0.002	0.002	0.009	0.005
40	0.005	0.008	0.008	0.003	0.003	0.007	0.006
50	0.006	0.01	0.009	0.003	0.003	0.005	0.007
60	0.006	0.011	0.011	0.004	0.003	0.004	0.008
120	0.009	0.016	0.015	0.005	0.005	0.011	0.012
180	0.01	0.017	0.016	0.006	0.005	0.017	0.013
240	0.01	0.018	0.017	0.006	0.005	0.022	0.014
300	0.011	0.019	0.017	0.006	0.005	0.027	0.014
360	0.011	0.02	0.018	0.007	0.005	0.031	0.015
420	0.012	0.021	0.019	0.007	0.006	0.035	0.016
480	0.012	0.022	0.019	0.007	0.006	0.038	0.016
540	0.013	0.022	0.02	0.008	0.006	0.04	0.017
600	0.013	0.023	0.02	0.008	0.006	0.041	0.017
660	0.013	0.023	0.021	0.008	0.006	0.042	0.017
720	0.013	0.024	0.021	0.008	0.006	0.043	0.018

Title : South Coast Air Basin Avg Annual CYr 2007
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2006/12/04 10:12:08
Scen Year: 2007 -- All model years in the range 1965 to 2007 selected
Season : Annual
Area : South Coast
****
Year: 2007 -- Model Years 1965 to 2007 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast Basin Average Basin Average

Table 4: Hot Soak Emissions (grams/trip)

Pollutant Name: Total Organic Gases Temperature: 50F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.051	0.041	0.028	0.012	0.035	0.105	0.042
10	0.094	0.076	0.053	0.022	0.065	0.195	0.078
20	0.16	0.13	0.091	0.038	0.111	0.332	0.134
30	0.205	0.168	0.118	0.05	0.142	0.428	0.172
40	0.222	0.182	0.128	0.054	0.154	0.463	0.187

Hot soak results are scaled to reflect zero emissions for trip lengths of less than 5 minutes (about 25% of in-use trips).

Title : South Coast Air Basin Avg Annual CYr 2007
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2006/12/04 10:12:08
Scen Year: 2007 -- All model years in the range 1965 to 2007 selected
Season : Annual
Area : South Coast
****
Year: 2007 -- Model Years 1965 to 2007 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast Basin Average Basin Average

Table 5a: Partial Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Total Organic Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
50	0.011	0.009	0.007	0.001	0	0.012	0.01

Title : South Coast Air Basin Avg Annual CYr 2007
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2006/12/04 10:12:08
Scen Year: 2007 -- All model years in the range 1965 to 2007 selected
Season : Annual
Area : South Coast
****
Year: 2007 -- Model Years 1965 to 2007 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast Basin Average Basin Average

Table 5b: Multi-Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Total Organic Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
50	0.001	0.001	0.001	0	0	0.001	0.001

Title : South Coast Air Basin Avg Annual CYr 2007
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2006/12/04 10:12:08
Scen Year: 2007 -- All model years in the range 1965 to 2007 selected
Season : Annual
Area : South Coast
****
Year: 2007 -- Model Years 1965 to 2007 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast Basin Average Basin Average

Table 6a: Partial Day Resting Loss Emissions (grams/hour)

Pollutant Name: Total Organic Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
50	0.009	0.007	0.006	0.001	0	0.01	0.008

Title : South Coast Air Basin Avg Annual CYr 2007
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2006/12/04 10:12:08
Scen Year: 2007 -- All model years in the range 1965 to 2007 selected
Season : Annual
Area : South Coast
****
Year: 2007 -- Model Years 1965 to 2007 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast Basin Average Basin Average

Table 6b: Multi-Day Resting Loss Emissions (grams/hour)

Pollutant Name: Total Organic Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
50	0.001	0.001	0	0	0	0.001	0.001

Title : South Coast Air Basin Avg Annual CYr 2007
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2006/12/04 10:12:08
Scen Year: 2007 -- All model years in the range 1965 to 2007 selected
Season : Annual
Area : South Coast
****
Year: 2007 -- Model Years 1965 to 2007 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast Basin Average Basin Average

Table 7: Estimated Travel Fractions

Pollutant Name: Temperature: ALL Relative Humidity: ALL

	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
%VMT	0.488	0.321	0.142	0.041	0.002	0.006	1
%TRIP	0.477	0.28	0.182	0.053	0	0.008	1
%VEH	0.52	0.303	0.126	0.024	0.001	0.028	1

Title : South Coast Air Basin Avg Annual CYr 2007
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2006/12/04 10:12:08
Scen Year: 2007 -- All model years in the range 1965 to 2007 selected
Season : Annual
Area : South Coast
****

Year: 2007 -- Model Years 1965 to 2007 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast Basin Average Basin Average

Table 8: Evaporative Running Loss Emissions (grams/minute)

Pollutant Name: Total Organic Gases Temperature: 50F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
1	0.034	0.336	0.291	0.147	0.347	0.13	0.173
2	0.039	0.177	0.154	0.082	0.188	0.163	0.102
3	0.043	0.126	0.11	0.061	0.135	0.18	0.081
4	0.046	0.102	0.089	0.051	0.109	0.189	0.071
5	0.049	0.088	0.076	0.044	0.094	0.196	0.066
10	0.054	0.063	0.054	0.032	0.063	0.214	0.057
15	0.055	0.057	0.05	0.029	0.053	0.223	0.055
20	0.056	0.057	0.05	0.027	0.049	0.23	0.055
25	0.057	0.058	0.051	0.026	0.047	0.235	0.056
30	0.056	0.058	0.05	0.026	0.046	0.234	0.056
35	0.056	0.057	0.05	0.026	0.046	0.232	0.055
40	0.055	0.056	0.049	0.026	0.046	0.23	0.055
45	0.055	0.056	0.049	0.025	0.045	0.229	0.054

50	0.054	0.055	0.048	0.025	0.045	0.223	0.053
55	0.052	0.054	0.048	0.025	0.045	0.217	0.052
60	0.051	0.054	0.047	0.025	0.044	0.211	0.051