Appendix B

Air Quality Technical Appendix

Lake Forest Sports Park

Regional Emission Calculations (lbs/day)

	ROC	NOx	CO	SOx	PM10	PM2.5
Existing Condition						
Mobile	0.0	0.0	0.0	0.0	0.0	0.0
Area	0.0	0.0	0.0	0.0	0.0	0.0
Stationary	0.0	0.0	0.0	0.0	0.0	0.0
Total Existing	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Project Condition						
Mobile	17.1	25.2	224.1	0.3	57.1	11.1
Area	11.4	0.0	3.1	0.0	0.0	0.0
Stationary	0.1	3.9	0.7	0.3	0.1	0.1
Total Project	**28.6**	**29.1**	**227.8**	**0.6**	**57.3**	**11.2**
Net Project Emissions						
Net Mobile	17.1	25.2	224.1	0.3	57.1	11.1
Net Area	11.4	0.0	3.1	0.0	0.0	0.0
Net Stationary	0.1	3.9	0.7	0.3	0.1	0.1
Total Net	28.6	29.1	227.8	0.6	57.2	11.2
SCAQMD Significance Threshold	55	55	550	150	150	55
Difference	**(26)**	**(26)**	**(322)**	**(149)**	**(93)**	**(44)**
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Electricity Usage

Land Use	1,000 Sqft	Electricity Usage Rate [a] (kWh\sq.ft\yr)	Total Electricity Usage (KWh\year)	Total Electricity Usage (MWh\Day)	CO 0.2	ROC 0.01	NOx 1.15	PM10 0.04	SOx 0.12
					Emission Factors (lbs/MWh) [b]				
Existing					Emissions from Electricity Consumption (lbs/day)				
Office	0.0	12.95	0	0.000	0.000	0.000	0.000	0.000	0.000
Retail	0.0	13.55	0	0.000	0.000	0.000	0.000	0.000	0.000
Hotel/Motel	0.0	9.95	0	0.000	0.000	0.000	0.000	0.000	0.000
Restaurant	0.0	47.45	0	0.000	0.000	0.000	0.000	0.000	0.000
Food Store	0.0	53.30	0	0.000	0.000	0.000	0.000	0.000	0.000
Warehouse	0.0	4.35	0	0.000	0.000	0.000	0.000	0.000	0.000
College/University	0.0	11.55	0	0.000	0.000	0.000	0.000	0.000	0.000
High School	0.0	10.50	0	0.000	0.000	0.000	0.000	0.000	0.000
Elementary School	0.0	5.90	0	0.000	0.000	0.000	0.000	0.000	0.000
Hospital	0.0	21.70	0	0.000	0.000	0.000	0.000	0.000	0.000
Miscellaneous	0.0	10.50	0	0.000	0.000	0.000	0.000	0.000	0.000
Residential (DU)	0.0	5,627	0	0.000	0.000	0.000	0.000	0.000	0.000
Total Existing			**0**	**0.000**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Project									
Office	0.0	12.95	0	0.000	0.000	0.000	0.000	0.000	0.000
Retail	0.0	13.55	0	0.000	0.000	0.000	0.000	0.000	0.000
Hotel/Motel	0.0	9.95	0	0.000	0.000	0.000	0.000	0.000	0.000
Restaurant	0.0	47.45	0	0.000	0.000	0.000	0.000	0.000	0.000
Food Store	0.0	53.3	0	0.000	0.000	0.000	0.000	0.000	0.000
Warehouse	0.0	4.35	0	0.000	0.000	0.000	0.000	0.000	0.000
College/University	0.0	11.55	0	0.000	0.000	0.000	0.000	0.000	0.000
High School	0.0	10.5	0	0.000	0.000	0.000	0.000	0.000	0.000
Elementary School	0.0	5.9	0	0.000	0.000	0.000	0.000	0.000	0.000
Hospital	0.0	21.7	0	0.000	0.000	0.000	0.000	0.000	0.000
Miscellaneous	87.7	10.5	920,850	2.523	0.505	0.025	2.901	0.101	0.303
Residential (DU)	0.0	5,627	0	0.000	0.000	0.000	0.000	0.000	0.000
Total Project			**920,850**	**2.523**	**0.51**	**0.03**	**2.90**	**0.10**	**0.30**
Net Emissions From Electricity Usage					**0.51**	**0.03**	**2.90**	**0.10**	**0.30**

Summary of Stationary Emissions

	CO	ROC	NOx	PM10	SOx
Total Existing Emissions (lbs/day)	0.00	0.00	0.00	0.00	0.00
Total Project Emissions (lbs/day)	0.67	0.07	3.92	0.10	0.30
Total Net Emissions (lbs/day)	**0.51**	**0.03**	**2.90**	**0.10**	**0.30**

[a] Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993.

[b] Emission Factors from Table A9-11-B, CEQA Air Quality Handbook, SCAQMD, 1993.

[c] Natural Gas Usage Rates from Table A9-12-A, CEQA Air Quality Handbook, SCAQMD, 1993.

[d] Emission Factors from Table A9-12-B, CEQA Air Quality Handbook, SCAQMD, 1993.

[e] The emission factors for NOx in lbs per million cuft of natural gas are 120 for nonresidential uses and 80 for residential uses.

Lake Forest Sports Park

Greenhouse Gas Emissions

(Metric Tons per Year)

	Year 2020 Business as Usual	AB32 Scoping Plan Reductions	Non-mitigated Year 2020 Emissions	Percent Reductions from BAU
Project Condition				
Mobile	6,036	(1,797)	4,239	29.8%
Natural Gas Combustion	169	(15)	154	9.0%
Electricity Demand	506	(167)	339	33.0%
Water Consumption	231	(76)	155	33.0%
Total Project	**6,941.23**	**(2,055.13)**	**4,886.10**	**29.6%**

2020 GHG Emissions Percent Below Business as Usual	29.6%
AB 32 Percentage Below Business as Usual Target Percentage	28.5%
Meet/Exceed AB 32 GHG Reduction Target?	**Yes**

Summary of AB32 Scoping Plan Reductions

Mobile-Source	
Pavley Emissions Standards	19.8%
Low Carbon Fuel Standard	7.2%
Vehicle Efficiency Measures	2.8%
Natural Gas	
Transmission and Distribution Emission Reductions	7.4%
Extraction Emission Reductions	1.6%
Electricity/Water Pumping	
Renewables Portfolio Standard	33.0%

AB 32 Reduction Target Calculation

2020 California CO_2e Emissions Inventory BAU Forecast (MMT)	596.40
1990 California CO_2e Emissions Inventory (MMT)	426.60
AB 32 Reduction Target (MMT)	169.8
Required Reduction from Year 2020 BAU Emissions	28.5%

Electricity Usage

Land Use	1,000 Sqft	Electricity Usage Rate [a] (kWh\sq.ft\yr)	Total Electricity Usage (KWh\year)	Total Electricity Usage (MWh\day)	CO_2	CH_4	N_2O	CO_2e
					Emission Factors (lbs/MWh) [b]			
					804.54	0.0067	0.0037	21/310[c]
Existing					Emissions from Electricity (lbs/day)			
Office	0.0	12.95	-	-	-	-	-	-
Retail	0.0	13.55	-	-	-	-	-	-
Hotel/Motel	0.0	9.95	-	-	-	-	-	-
Restaurant	0.0	47.45	-	-	-	-	-	-
Food Store	0.0	53.30	-	-	-	-	-	-
Warehouse	0.0	4.35	-	-	-	-	-	-
College/University	0.0	11.55	-	-	-	-	-	-
High School	0.0	10.50	-	-	-	-	-	-
Elementary School	0.0	5.90	-	-	-	-	-	-
Hospital	0.0	21.70	-	-	-	-	-	-
Miscellaneous	0.0	10.50	-	-	-	-	-	-
Residential (DU)	0.0	5,627	-	-	-	-	-	-
Total Existing			**-**	**-**	**-**	**-**	**-**	**-**
Project								
Office	0.0	12.95	-	-	-	-	-	-
Retail	0.0	13.55	-	-	-	-	-	-
Hotel/Motel	0.0	9.95	-	-	-	-	-	-
Restaurant	0.0	47.45	-	-	-	-	-	-
Food Store	0.0	53.3	-	-	-	-	-	-
Warehouse	0.0	4.35	-	-	-	-	-	-
College/University	0.0	11.55	-	-	-	-	-	-
High School	0.0	10.5	-	-	-	-	-	-
Elementary School	0.0	5.9	-	-	-	-	-	-
Hospital	0.0	21.7	-	-	-	-	-	-
Miscellaneous	87.7	10.5	920,850.00	2.52	2,029.76	0.02	0.01	2,032.90
Residential (DU)	0.0	5,627	-	-	-	-	-	-
Total Project			**920,850.00**	**2.52**	**2,029.76**	**0.02**	**0.01**	**2,032.90**
Net Emissions From Electricity Usage					**2,029.76**	**0.02**	**0.01**	**2,032.90**

Natural Gas Usage

Land Use	1,000 Sqft	Natural Gas Usage Rate [d] (cu.ft\sq.ft\mo)	Total Natural Gas Usage (cu.ft\mo)	Total Natural Gas Usage (Btu/day)[f]	CO_2	CH_4	N_2O	CO_2e
					Emission Factors (kg/MMBtu) [e]			
					53.05	0.0059	0.0001	21/310[c]
Existing					Emissions from Natural Gas (lbs/day)			
Office	0.0	2.0	-	-	-	-	-	-
Retail	0.0	2.9	-	-	-	-	-	-
Hotel/Motel	0.0	4.8	-	-	-	-	-	-
Restaurant	0.0	4.8	-	-	-	-	-	-
Food Store	0.0	2.9	-	-	-	-	-	-
Warehouse	0.0	2.0	-	-	-	-	-	-
College/University	0.0	4.8	-	-	-	-	-	-
High School	0.0	2.9	-	-	-	-	-	-
Elementary School	0.0	2.0	-	-	-	-	-	-
Hospital	0.0	4.8	-	-	-	-	-	-
Miscellaneous	0.0	2.9	-	-	-	-	-	-
Residential (Single Family DU)	0.0	6,665	-	-	-	-	-	-
Residential (Multi-Family DU)	0.0	4,012	-	-	-	-	-	-
Total Existing			**-**	**-**	**-**	**-**	**-**	**-**
Project								
Office	0.0	2.0	-	-	-	-	-	-
Retail	0.0	2.9	-	-	-	-	-	-
Hotel/Motel	0.0	4.8	-	-	-	-	-	-
Restaurant	0.0	4.8	-	-	-	-	-	-
Food Store	0.0	2.9	-	-	-	-	-	-
Warehouse	0.0	2.0	-	-	-	-	-	-
College/University	0.0	4.8	-	-	-	-	-	-
High School	0.0	2.9	-	-	-	-	-	-
Elementary School	0.0	2.0	-	-	-	-	-	-
Hospital	0.0	4.8	-	-	-	-	-	-
Miscellaneous	87.7	2.9	**254,330.00**	**8,698,086.00**	1,017.29	0.11	0.00	1,020.26
Residential (Single Family DU)	0.0	6,665	-	-	-	-	-	-
Residential (Multi-Family DU)	0.0	4,012	-	-	-	-	-	-
Total Project			**254,330.00**	**8,698,086.00**	**1,017.29**	**0.11**	**0.00**	**1,020.26**
Net Emissions From Natural Gas Usage					**1,017.29**	**0.11**	**0.00**	**1,020.26**

Summary of Stationary Emissions

	CO_2	CH_4	N_2O	CO_2e
Total Existing Emissions (lbs/day)	-	-	-	-
Total Project Emissions (lbs/day)	3,047.04	0.13	0.01	3,053.16
Total Net Emissions (lbs/day)	**3,047.04**	**0.13**	**0.01**	**3,053.16**

[a] Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993.

[b] Emission Factors from Table C.1 and Table C.2, General Reporting Protocol, California Climate Action Registry, March 2007.

[c] Global Warming Potential is 21 for CH_4 and 310 for N_2O, General Reporting Protocol, California Climate Action Registry, March 2007.

[d] Natural Gas Usage Rates from Table A9-12-A, CEQA Air Quality Handbook, SCAQMD, 1993.

[e] Emission Factors from Table C.5 and Table C.6, General Reporting Protocol, California Climate Action Registry, March 2007.

[f] 1 Cubic Foot of natural gas = 1,026 Btu. Energy Information Administration. Available http://www.eia.doe.gov/basics/conversion_basics.html

Mobile Sources

Vehicle Type	Percent Type 0	VMT by Type 0	Emission Factors [a] CH_4	Emission Factors [a] N_2O	CH_4	N_2O	CO_2e 21/310[b]
Existing					**Emissions from Mobile Sources (lbs/day)**		
Light Auto	0.0	-	0.06	0.08	-	-	-
Light Truck < 3750 lbs	0.0	-	0.11	0.14	-	-	-
Light Truck 3751-5750 lbs	0.0	-	0.11	0.14	-	-	-
Med Truck 5751-8500 lbs	0.0	-	0.18	0.09	-	-	-
Lite-Heavy Truck 8501-10,000 lbs	0.0	-	0.18	0.09	-	-	-
Lite-Heavy Truck 10,001-14,000 lbs	0.0	-	0.18	0.09	-	-	-
Med-Heavy Truck 14,001-33,000 lbs	0.0	-	0.08	0.05	-	-	-
Heavy-Heavy Truck 33,001-60,000 lbs	0.0	-	0.08	0.05	-	-	-
Other Bus	0.0	-	0.08	0.05	-	-	-
Urban Bus	0.0	-	0.08	0.05	-	-	-
Motorcycle	0.0	-	0.42	0.01	-	-	-
School Bus	0.0	-	0.08	0.05	-	-	-
Motor Home	0.0	-	0.11	0.14	-	-	-
Total Existing			**1.75**	**1.03**	**-**	**-**	**-**

Vehicle Type	Percent Type 100	VMT by Type 33085.13	Emission Factors [a] CH_4	Emission Factors [a] N_2O	CH_4	N_2O	CO_2e 21/310[b]
Project							
Light Auto	51.6	17,071.93	0.06	0.08	2.26	3.01	980.83
Light Truck < 3750 lbs	7.3	2,415.21	0.11	0.14	0.59	0.75	243.39
Light Truck 3751-5750 lbs	23.0	7,609.58	0.11	0.14	1.85	2.35	766.84
Med Truck 5751-8500 lbs	10.6	3,507.02	0.18	0.09	1.39	0.70	244.94
Lite-Heavy Truck 8501-10,000 lbs	1.6	529.36	0.18	0.09	0.21	0.11	36.97
Lite-Heavy Truck 10,001-14,000 lbs	0.5	165.43	0.18	0.09	0.07	0.03	11.55
Med-Heavy Truck 14,001-33,000 lbs	0.9	297.77	0.08	0.05	0.05	0.03	11.28
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	165.43	0.08	0.05	0.03	0.02	6.27
Other Bus	0.1	33.09	0.08	0.05	0.01	0.00	1.25
Urban Bus	0.1	33.09	0.08	0.05	0.01	0.00	1.25
Motorcycle	2.8	926.38	0.42	0.01	0.86	0.02	24.34
School Bus	0.1	33.09	0.08	0.05	0.01	0.00	1.25
Motor Home	0.9	297.77	0.11	0.14	0.07	0.09	30.01
Total Project			**1.75**	**1.03**	**7.39**	**7.11**	**2,360.18**
Net Emissions From Mobile Sources					**7.39**	**7.11**	**2,360.18**

[a] Emission factors from Table C.4, General Reporting Protocol, California Climate Action Registry, March 2007.

[b] Global Warming Potential is 21 for CH_4 and 310 for N_2O, General Reporting Protocol, California Climate Action Registry, March 2007.

Enter Data in all yellow highlighted cells

Water Importation

using CAMX emission factors

SWP Energy Intensity:	SWP west branch	9,232	kWh/MG (includes losses)
MWD Energy Intensity:	MWD west branch	1,013	kWh/MG (includes losses)
Southern California Average	N/A	9,727	kWh/MG (includes losses)

Category	Water acre/ft	Energy Use (kWh) Importation	CH4	N2O	CO2 (kg/year)	CO2e (metric tons/year)
Imported from SWP		0	0.00	0.00	0	0
Imported from MWD		0	0.00	0.00	0	0
OR						
Southern California Average	198	628,649	8.62	2.30	203,308	204

For all other Sources:

Emission Factor: CO2	0.323405	kg/kWh	CAMX (eGRID)
Emission Factor: CH4	0.000014	kg/kWh	CAMX (eGRID)
Emission Factor: N2O	0.000004	kg/kWh	CAMX (eGRID)

Water Distribution (pumping)

Energy Intensity: 1,272 kWh/MG (includes losses)

	Water acre/ft	Energy Use (kWh) Distribution	CH4	N2O	CO2 (kg/year)	CO2e (metric tons/year)
	198	82,208	1.13	0.30	26,587	27

Water Treatment

Energy Intensity: 111 kWh/MG (includes losses)

Year	Water acre/ft	Energy Use (kWh) treatment	CH4	N2O	CO2 (kg/year)	CO2e (metric tons/year)
	2	64	0.00	0.00	21	0

Wastewater Treatment

Energy Intensity: 1,911 kWh/MG (includes losses)

	Water acre/ft	Energy Use (kWh) wastewater treatment	CH4	N2O	CO2 (kg/year)	CO2e (metric tons/year)
	2	1,102	0.02	0.00	356	0

Summary

Category	Energy Use (kWh)	CO2e (metric tons/year)
Water Supply and Conveyance	628,649	204
Water Treatment	64	0
Water Distribution	82,208	27
Wastewater Treatment	1,102	0
Total	**712,024**	**231**

GRADING PLAN 1 PHASE 1 UNMITIGATED CONSTRUCTION EMISSIONS (pounds per day)

	ROC	NO_X	CO	SO_X	PM_{10}[a]	$PM_{2.5}$[a]	CO_2
Demolition Emissions							
On-site Total	-	-	-	-	-	-	-
Fugitive Dust	-	-	-	-	-	-	-
Off-Road Diesel	-	-	-	-	-	-	-
Off-site Total	-	-	-	-	-	-	-
On-Road Diesel	-	-	-	-	-	-	-
Worker Trips	-	-	-	-	-	-	-
Grand Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Site Grading Emissions							
On-site Total	14.85	135.60	63.00	-	19.85	8.19	12,348.01
Fugitive Dust	-	-	-	-	14.19	2.98	-
Off-Road Diesel	14.85	135.60	63.00	-	5.66	5.21	12,348.01
Off-site Total	0.13	0.25	4.19	0.01	0.04	0.02	497.58
On-Road Diesel	-	-	-	-	-	-	-
Worker Trip	0.13	0.25	4.19	0.01	0.04	0.02	497.58
Grand Total	**14.98**	**135.85**	**67.19**	**0.01**	**19.89**	**8.21**	**12,845.59**
Building Erection/Finishing Emissions							
On-site Total	6.17	35.33	22.05	-	2.74	2.52	3,391.20
Off-Road Diesel, Bldg Cnst	3.77	21.85	13.95	-	1.57	1.45	2,259.28
Arch Coatings Off-Gas	-	-	-	-	-	-	-
Asphalt Off-Gas	0.17	-	-	-	-	-	-
Off-Road Diesel, Asphalt	2.23	13.48	8.10	-	1.17	1.07	1,131.92
Off-site Total	1.23	2.83	38.82	0.05	0.40	0.22	5,037.17
Worker Trips, Bldg Cnst	1.13	2.13	36.77	0.05	0.35	0.19	4,687.18
Vendor Trips, Bldg Cnst	-	-	-	-	-	-	-
Worker Trips, Arch Coatings	-	-	-	-	-	-	-
On-Road Diesel, Asphalt	0.05	0.60	0.23	-	0.03	0.02	101.30
Worker Trips, Asphalt	0.05	0.10	1.82	-	0.02	0.01	248.69
Grand Total	**7.40**	**38.16**	**60.87**	**0.05**	**3.14**	**2.74**	**8,428.37**
On-site Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	14.9	135.6	63.0	-	19.9	8.2	12,348.0
Building Erection/Finishing	6.2	35.3	22.1	-	2.7	2.5	3,391.2
Maximum On-site Emissions	**15**	**136**	**63**	**-**	**20**	**8**	**12,348**
Localized Significance Threshold[b]	--	197	1,830	--	12	8	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**Yes**	**Yes**	**No**
Regional Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	15.0	135.9	67.2	0.0	19.9	8.2	12,845.6
Building Erection/Finishing	7.4	38.2	60.9	0.1	3.1	2.7	8,428.4
Maximum Regional Emissions	**15**	**136**	**67**	**0**	**20**	**8**	**12,846**
Regional Significance Threshold	75	100	550	150	150	55	--
Exceed Threshold?	**No**	**Yes**	**No**	**No**	**No**	**No**	**No**

Notes:

URBEMIS print-out sheets and fugitive PM calculation worksheet are included in Appendix A.

[a] Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with SCAQMD Rule 403 requirements for fugitive dust suppression, which require that no visible dust be present beyond the site boundaries.

[b] The project site is located in SCAQMD SRA No. 19. These LSTs are based on the site location SRA, distance to nearest sensitive receptor location from the project site (25 meters), and project area that could be under construction on any given day (five acres).

GRADING PLAN 1 PHASE 1 MITIGATED CONSTRUCTION EMISSIONS (pounds per day)

	ROC	NO_X	CO	SO_X	PM_{10}[a]	$PM_{2.5}$[a]	CO_2
Demolition Emissions							
On-site Total	-	-	-	-	-	-	-
Fugitive Dust	-	-	-	-	-	-	-
Off-Road Diesel	-	-	-	-	-	-	-
Off-site Total	-	-	-	-	-	-	-
On-Road Diesel	-	-	-	-	-	-	-
Worker Trips	-	-	-	-	-	-	-
Grand Total	-	-	-	-	-	-	-
Site Grading Emissions							
On-site Total	3.54	51.74	63.00	-	16.44	5.05	12,348.01
Fugitive Dust	-	-	-	-	14.19	2.98	-
Off-Road Diesel	3.54	51.74	63.00	-	2.25	2.07	12,348.01
Off-site Total	0.13	0.25	4.19	0.01	0.04	0.02	497.58
On-Road Diesel	-	-	-	-	-	-	-
Worker Trip	0.13	0.25	4.19	0.01	0.04	0.02	497.58
Grand Total	**3.67**	**51.99**	**67.19**	**0.01**	**16.48**	**5.07**	**12,845.59**
Building Erection/Finishing Emissions							
On-site Total	1.53	13.56	22.05	-	1.40	1.29	3,391.20
Off-Road Diesel, Bldg Cnst	0.86	8.38	13.95	-	0.80	0.74	2,259.28
Arch Coatings Off-Gas	-	-	-	-	-	-	-
Asphalt Off-Gas	0.17	-	-	-	-	-	-
Off-Road Diesel, Asphalt	0.51	5.17	8.10	-	0.60	0.55	1,131.92
Off-site Total	1.23	2.83	38.82	0.05	0.40	0.22	5,037.17
Worker Trips, Bldg Cnst	1.13	2.13	36.77	0.05	0.35	0.19	4,687.18
Vendor Trips, Bldg Cnst	-	-	-	-	-	-	-
Worker Trips, Arch Coatings	-	-	-	-	-	-	-
On-Road Diesel, Asphalt	0.05	0.60	0.23	-	0.03	0.02	101.30
Worker Trips, Asphalt	0.05	0.10	1.82	-	0.02	0.01	248.69
Grand Total	**2.76**	**16.39**	**60.87**	**0.05**	**1.80**	**1.51**	**8,428.37**
On-site Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	3.5	51.7	63.0	-	16.4	5.1	12,348.0
Building Erection/Finishing	1.5	13.6	22.1	-	1.4	1.3	3,391.2
Maximum On-site Emissions	**4**	**52**	**63**	**-**	**16**	**5**	**12,348**
Localized Significance Threshold[b]	--	197	1,830	--	12	8	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**Yes**	**No**	**No**
Regional Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	3.7	52.0	67.2	0.0	16.5	5.1	12,845.6
Building Erection/Finishing	2.8	16.4	60.9	0.1	1.8	1.5	8,428.4
Maximum Regional Emissions	**4**	**52**	**67**	**0**	**16**	**5**	**12,846**
Regional Significance Threshold	75	100	550	150	150	55	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Notes:

URBEMIS print-out sheets and fugitive PM calculation worksheet are included in Appendix A.

[a] Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with SCAQMD Rule 403 requirements for fugitive dust suppression, which require that no visible dust be present beyond the site boundaries.

[b] The project site is located in SCAQMD SRA No. 19. These LSTs are based on the site location SRA, distance to nearest sensitive receptor location from the project site (25 meters), and project area that could be under construction on any given day (five acres).

Grading Plan 1 Phase 1
On-site Construction PM10 Emissions

Summary of On-Site Fugitive PM_{10} Emissions

5.0	Dirt pushing emissions
1.9	Dirt/materials handling emissions
7.2	Unpaved surface travel emissions
14.2	**On-site Emissions Total**

Estimating Emissions from Dirt Pushing or Bulldozing Operations [a]

$E = ([0.45 \times (\{[G]^{1.5}\}/\{[H]^{1.4}\})] \times I) \times J$

Where,

E = PM_{10} emissions from dirt pushing
G = Silt content of aggregate in percent
H = Moisture content of the surface material
I = 2.2046; a conversion factor to convert kilograms per hour to pounds per hour
J = Hours of dirt pushing

G =	7.5	I =	2.2046
H =	12.0	J =	8.0
E =	**5.03**		

[a] SCAQMD 1993; CEQA Air Quality Handbook, Table A9-9-F

Estimating Emissions from Dirt Piling or Material Handling [b]

$E = [0.00112 \times (\{[G/5]^{1.3}\}/\{[H/2]^{1.4}\})] \times [I/J]$

Where,

E = PM_{10} emissions from dirt piling or materials handling
G = Mean wind speed in miles per hour
H = Moisture content of the surface material
I = Pounds of dirt handled per day
J = 2,000; a conversion factor to convert pounds to tons

G =	3.4	I =	111,617
H =	12%	J =	2,000
E =	**1.94**		

[b] SCAQMD 1993; CEQA Air Quality Handbook, Table A9-9-G

Estimating Emissions from Vehicle Travel on Unpaved Roads [c]

E = V x F

Where,

E = Emissions for vehicles on unpaved roads
V = Vehicle miles traveled
F = Emissions factor for vehicle travel on unpaved roads.
2.1 x [G/12] x H/30] x {[J/3]0.7} x {[I/4]0.5} x {[365 - K]/365} in pounds per miles traveled

Where,

G = Surface silt loading in percent
H = Mean vehicle speed in miles per hour
I = Mean number of wheels on vehicles
J = Mean vehicle weight in tons
K = Mean number of days per year with at least 0.01 inch of precipitation

G =	7.5	J =	15
H =	5.0	K =	34
I =	6		
F =	0.75	Uncontroled emissions factor	
	(0.51)	Rule 403 control efficency (68 percent)	
	0.24	Controlled emissions factor	
	30.10	On-site VMT	
E =	**7.22**		

[c] SCAQMD 1993; CEQA Air Quality Handbook, Table A9-9-D

Phase I - Demolition

Quantity	Equipment	Unit HP	Total HP	Weighting	Actual Emissions Reductions (percent)			Weighted Emissions Reductions (percent)		
					NOx	ROG	PM	NOx	ROG	PM
0	Aerial Lifts	60	0	0%	56%	84%	50%	0%	0%	0%
0	Air Compressors	106	0	0%	54%	77%	44%	0%	0%	0%
0	Bore/Drill Rigs	291	0	0%	54%	76%	62%	0%	0%	0%
0	Cement and Mortar Mixers	10	0	0%	56%	84%	50%	0%	0%	0%
0	Concrete/Industrial Saws	10	0	0%	56%	84%	50%	0%	0%	0%
0	Cranes	399	0	0%	55%	76%	61%	0%	0%	0%
0	Crawler Tractor	147	0	0%	54%	77%	44%	0%	0%	0%
0	Crushing/Processing Equip	142	0	0%	54%	77%	44%	0%	0%	0%
0	Dumpers/Tenders	16	0	0%	56%	84%	50%	0%	0%	0%
0	Excavators	168	0	0%	54%	77%	44%	0%	0%	0%
0	Forklifts	145	0	0%	54%	77%	44%	0%	0%	0%
0	Generator Sets	49	0	0%	56%	84%	50%	0%	0%	0%
0	Graders	174	0	0%	54%	77%	44%	0%	0%	0%
0	Off Highway Tractors	267	0	0%	54%	76%	62%	0%	0%	0%
0	Off Highway Trucks	479	0	0%	55%	76%	61%	0%	0%	0%
0	Other Equipment	190	0	0%	54%	76%	62%	0%	0%	0%
0	Other General Light Industrial Equipment	238	0	0%	54%	76%	62%	0%	0%	0%
0	Other Material Handling Equipment	191	0	0%	54%	76%	62%	0%	0%	0%
0	Pavers	100	0	0%	54%	77%	44%	0%	0%	0%
0	Paving Equipment	104	0	0%	54%	77%	44%	0%	0%	0%
0	Plate Compactors	8	0	0%	56%	84%	50%	0%	0%	0%
0	Pressure Washers	1	0	0%	56%	84%	50%	0%	0%	0%
0	Pumps	53	0	0%	56%	84%	50%	0%	0%	0%
0	Rollers	95	0	0%	54%	77%	44%	0%	0%	0%
0	Rough Terrain Forklifts	93	0	0%	54%	77%	44%	0%	0%	0%
0	Rubber Tired Dozers	357	0	0%	55%	76%	61%	0%	0%	0%
0	Rubber Tired Loaders	164	0	0%	54%	77%	44%	0%	0%	0%
0	Scrapers	313	0	0%	55%	76%	61%	0%	0%	0%
0	Signal Boards	15	0	0%	56%	84%	50%	0%	0%	0%
0	Skid Steer Loaders	44	0	0%	56%	84%	50%	0%	0%	0%
0	Surfacing Equipment	362	0	0%	55%	76%	61%	0%	0%	0%
0	Sweepers/Scrubbers	91	0	0%	56%	84%	50%	0%	0%	0%
0	Tractors/Loaders/Backhoes	108	0	0%	54%	77%	44%	0%	0%	0%
0	Trenchers	63	0	0%	56%	84%	50%	0%	0%	0%
0	Water Trucks	189	0	0%	54%	76%	62%	0%	0%	0%
0	Welders	45	0	0%	56%	84%	50%	0%	0%	0%
0	**Piece(s) of Equipment**	**Total HP**	**0**	**0%**				**0%**	**0%**	**0%**

Phase II - Site Grading

Quantity	Equipment	Unit HP	Total HP	Weighting	Actual Emissions Reductions (percent)			Weighted Emissions Reductions (percent)		
					NOx	ROG	PM	NOx	ROG	PM
0	Aerial Lifts	60	0	0%	56%	84%	50%	0%	0%	0%
0	Air Compressors	106	0	0%	54%	77%	44%	0%	0%	0%
0	Bore/Drill Rigs	291	0	0%	54%	76%	62%	0%	0%	0%
0	Cement and Mortar Mixers	10	0	0%	56%	84%	50%	0%	0%	0%
0	Concrete/Industrial Saws	10	0	0%	56%	84%	50%	0%	0%	0%
0	Cranes	399	0	0%	55%	76%	61%	0%	0%	0%
0	Crawler Tractor	147	0	0%	54%	77%	44%	0%	0%	0%
0	Crushing/Processing Equip	142	0	0%	54%	77%	44%	0%	0%	0%
0	Dumpers/Tenders	16	0	0%	56%	84%	50%	0%	0%	0%
0	Excavators	168	0	0%	54%	77%	44%	0%	0%	0%
0	Forklifts	145	0	0%	54%	77%	44%	0%	0%	0%
0	Generator Sets	49	0	0%	56%	84%	50%	0%	0%	0%
1	Graders	174	174	5%	54%	77%	44%	3%	4%	2%
1	Off Highway Tractors	267	267	8%	54%	76%	62%	4%	6%	5%
0	Off Highway Trucks	479	0	0%	55%	76%	61%	0%	0%	0%
0	Other Equipment	190	0	0%	54%	76%	62%	0%	0%	0%
0	Other General Light Industrial Equipment	238	0	0%	54%	76%	62%	0%	0%	0%
0	Other Material Handling Equipment	191	0	0%	54%	76%	62%	0%	0%	0%
0	Pavers	100	0	0%	54%	77%	44%	0%	0%	0%
0	Paving Equipment	104	0	0%	54%	77%	44%	0%	0%	0%
3	Plate Compactors	8	24	1%	56%	84%	50%	0%	1%	0%
0	Pressure Washers	1	0	0%	56%	84%	50%	0%	0%	0%
0	Pumps	53	0	0%	56%	84%	50%	0%	0%	0%
0	Rollers	95	0	0%	54%	77%	44%	0%	0%	0%
0	Rough Terrain Forklifts	93	0	0%	54%	77%	44%	0%	0%	0%
2	Rubber Tired Dozers	357	714	20%	55%	76%	61%	11%	16%	12%
0	Rubber Tired Loaders	164	0	0%	54%	77%	44%	0%	0%	0%
5	Scrapers	313	1565	45%	55%	76%	61%	25%	34%	27%
0	Signal Boards	15	0	0%	56%	84%	50%	0%	0%	0%
0	Skid Steer Loaders	44	0	0%	56%	84%	50%	0%	0%	0%
0	Surfacing Equipment	362	0	0%	55%	76%	61%	0%	0%	0%
0	Sweepers/Scrubbers	91	0	0%	56%	84%	50%	0%	0%	0%
0	Tractors/Loaders/Backhoes	108	0	0%	54%	77%	44%	0%	0%	0%
0	Trenchers	63	0	0%	56%	84%	50%	0%	0%	0%
4	Water Trucks	189	756	22%	54%	76%	62%	12%	16%	13%
0	Welders	45	0	0%	56%	84%	50%	0%	0%	0%
16	**Piece(s) of Equipment**	**Total HP**	**3500**	**100%**				**55%**	**76%**	**60%**

Phase III - Building Equipment

Quantity	Equipment	Unit HP	Total HP	Weighting	Actual Emissions Reductions (percent)			Weighted Emissions Reductions (percent)		
					NOx	ROG	PM	NOx	ROG	PM
0	Aerial Lifts	60	0	0%	56%	84%	50%	0%	0%	0%
0	Air Compressors	106	0	0%	54%	77%	44%	0%	0%	0%
0	Bore/Drill Rigs	291	0	0%	54%	76%	62%	0%	0%	0%
4	Cement and Mortar Mixers	10	40	3%	56%	84%	50%	1%	2%	1%
0	Concrete/Industrial Saws	10	0	0%	56%	84%	50%	0%	0%	0%
1	Cranes	399	399	25%	55%	76%	61%	14%	19%	15%
0	Crawler Tractor	147	0	0%	54%	77%	44%	0%	0%	0%
0	Crushing/Processing Equip	142	0	0%	54%	77%	44%	0%	0%	0%
0	Dumpers/Tenders	16	0	0%	56%	84%	50%	0%	0%	0%
0	Excavators	168	0	0%	54%	77%	44%	0%	0%	0%
3	Forklifts	145	435	27%	54%	77%	44%	15%	21%	12%
1	Generator Sets	49	49	3%	56%	84%	50%	2%	3%	2%
0	Graders	174	0	0%	54%	77%	44%	0%	0%	0%
0	Off Highway Tractors	267	0	0%	54%	76%	62%	0%	0%	0%
0	Off Highway Trucks	479	0	0%	55%	76%	61%	0%	0%	0%
0	Other Equipment	190	0	0%	54%	76%	62%	0%	0%	0%
0	Other General Light Industrial Equipment	238	0	0%	54%	76%	62%	0%	0%	0%
0	Other Material Handling Equipment	191	0	0%	54%	76%	62%	0%	0%	0%
1	Pavers	100	100	6%	54%	77%	44%	3%	5%	3%
2	Paving Equipment	104	208	13%	54%	77%	44%	7%	10%	6%
0	Plate Compactors	8	0	0%	56%	84%	50%	0%	0%	0%
0	Pressure Washers	1	0	0%	56%	84%	50%	0%	0%	0%
0	Pumps	53	0	0%	56%	84%	50%	0%	0%	0%
0	Rollers	95	0	0%	54%	77%	44%	0%	0%	0%
0	Rough Terrain Forklifts	93	0	0%	54%	77%	44%	0%	0%	0%
0	Rubber Tired Dozers	357	0	0%	55%	76%	61%	0%	0%	0%
0	Rubber Tired Loaders	164	0	0%	54%	77%	44%	0%	0%	0%
0	Scrapers	313	0	0%	55%	76%	61%	0%	0%	0%
0	Signal Boards	15	0	0%	56%	84%	50%	0%	0%	0%
0	Skid Steer Loaders	44	0	0%	56%	84%	50%	0%	0%	0%
0	Surfacing Equipment	362	0	0%	55%	76%	61%	0%	0%	0%
0	Sweepers/Scrubbers	91	0	0%	56%	84%	50%	0%	0%	0%
3	Tractors/Loaders/Backhoes	108	324	20%	54%	77%	44%	11%	16%	9%
0	Trenchers	63	0	0%	56%	84%	50%	0%	0%	0%
0	Water Trucks	189	0	0%	54%	76%	62%	0%	0%	0%
1	Welders	45	45	3%	56%	84%	50%	2%	2%	1%
16	**Piece(s) of Equipment**	**Total HP**	**1600**	**100%**				**55%**	**77%**	**49%**

GRADING PLAN 1 PHASE 2 UNMITIGATED CONSTRUCTION EMISSIONS (pounds per day)

	ROC	NO_X	CO	SO_X	PM_{10}[a]	$PM_{2.5}$[a]	CO_2
Demolition Emissions							
On-site Total	-	-	-	-	-	-	-
Fugitive Dust	-	-	-	-	-	-	-
Off-Road Diesel	-	-	-	-	-	-	-
Off-site Total	-	-	-	-	-	-	-
On-Road Diesel	-	-	-	-	-	-	-
Worker Trips	-	-	-	-	-	-	-
Grand Total	-	-	-	-	-	-	-
Site Grading Emissions							
On-site Total	9.94	88.39	41.98	-	13.90	5.47	8,917.58
Fugitive Dust	-	-	-	-	10.32	2.17	-
Off-Road Diesel	9.94	88.39	41.98	-	3.58	3.30	8,917.58
Off-site Total	5.21	64.11	26.75	0.10	2.91	2.45	11,144.04
On-Road Diesel	5.15	63.99	24.71	0.10	2.89	2.44	10,864.26
Worker Trip	0.06	0.12	2.04	-	0.02	0.01	279.78
Grand Total	**15.15**	**152.50**	**68.73**	**0.10**	**16.81**	**7.92**	**20,061.62**
Building Erection/Finishing Emissions							
On-site Total	5.77	34.02	22.53	-	2.57	2.36	3,531.32
Off-Road Diesel, Bldg Cnst	3.48	20.42	13.62	-	1.42	1.31	2,259.28
Arch Coatings Off-Gas	-	-	-	-	-	-	-
Asphalt Off-Gas	0.10	-	-	-	-	-	-
Off-Road Diesel, Asphalt	2.19	13.60	8.91	-	1.15	1.05	1,272.04
Off-site Total	0.67	1.52	21.87	0.03	0.25	0.14	3,264.90
Worker Trips, Bldg Cnst	0.59	1.12	20.06	0.03	0.22	0.12	2,957.07
Vendor Trips, Bldg Cnst	-	-	-	-	-	-	-
Worker Trips, Arch Coatings	-	-	-	-	-	-	-
On-Road Diesel, Asphalt	0.03	0.31	0.12	-	0.01	0.01	59.17
Worker Trips, Asphalt	0.05	0.09	1.69	-	0.02	0.01	248.66
Grand Total	**6.44**	**35.54**	**44.40**	**0.03**	**2.82**	**2.50**	**6,796.22**
On-site Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	9.9	88.4	42.0	-	13.9	5.5	8,917.6
Building Erection/Finishing	5.8	34.0	22.5	-	2.6	2.4	3,531.3
Maximum On-site Emissions	**10**	**88**	**42**	**-**	**14**	**5**	**8,918**
Localized Significance Threshold[b]	--	197	1,830	--	12	8	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**Yes**	**No**	**No**
Regional Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	15.2	152.5	68.7	0.1	16.8	7.9	20,061.6
Building Erection/Finishing	6.4	35.5	44.4	0.0	2.8	2.5	6,796.2
Maximum Regional Emissions	**15**	**153**	**69**	**0**	**17**	**8**	**20,062**
Regional Significance Threshold	75	100	550	150	150	55	--
Exceed Threshold?	**No**	**Yes**	**No**	**No**	**No**	**No**	**No**

Notes:

URBEMIS print-out sheets and fugitive PM calculation worksheet are included in Appendix A.

[a] Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with SCAQMD Rule 403 requirements for fugitive dust suppression, which require that no visible dust be present beyond the site boundaries.

[b] The project site is located in SCAQMD SRA No. 19. These LSTs are based on the site location SRA, distance to nearest sensitive receptor location from the project site (25 meters), and project area that could be under construction on any given day (five acres).

GRADING PLAN 1 PHASE 2 MITIGATED CONSTRUCTION EMISSIONS (pounds per day)

	ROC	NO_X	CO	SO_X	PM_{10}[a]	$PM_{2.5}$[a]	CO_2
Demolition Emissions							
On-site Total	-	-	-	-	-	-	-
Fugitive Dust	-	-	-	-	-	-	-
Off-Road Diesel	-	-	-	-	-	-	-
Off-site Total	-	-	-	-	-	-	-
On-Road Diesel	-	-	-	-	-	-	-
Worker Trips	-	-	-	-	-	-	-
Grand Total	-	-	-	-	-	-	-
Site Grading Emissions							
On-site Total	2.37	33.73	41.98	-	11.74	3.48	8,917.58
Fugitive Dust	-	-	-	-	10.32	2.17	-
Off-Road Diesel	2.37	33.73	41.98	-	1.42	1.31	8,917.58
Off-site Total	5.21	64.11	26.75	0.10	2.91	2.45	11,144.04
On-Road Diesel	5.15	63.99	24.71	0.10	2.89	2.44	10,864.26
Worker Trip	0.06	0.12	2.04	-	0.02	0.01	279.78
Grand Total	**7.58**	**97.84**	**68.73**	**0.10**	**14.65**	**5.93**	**20,061.62**
Building Erection/Finishing Emissions							
On-site Total	1.39	13.05	22.53	-	1.31	1.20	3,531.32
Off-Road Diesel, Bldg Cnst	0.79	7.84	13.62	-	0.72	0.67	2,259.28
Arch Coatings Off-Gas	-	-	-	-	-	-	-
Asphalt Off-Gas	0.10	-	-	-	-	-	-
Off-Road Diesel, Asphalt	0.50	5.22	8.91	-	0.59	0.54	1,272.04
Off-site Total	0.67	1.52	21.87	0.03	0.25	0.14	3,264.90
Worker Trips, Bldg Cnst	0.59	1.12	20.06	0.03	0.22	0.12	2,957.07
Vendor Trips, Bldg Cnst	-	-	-	-	-	-	-
Worker Trips, Arch Coatings	-	-	-	-	-	-	-
On-Road Diesel, Asphalt	0.03	0.31	0.12	-	0.01	0.01	59.17
Worker Trips, Asphalt	0.05	0.09	1.69	-	0.02	0.01	248.66
Grand Total	**2.06**	**14.57**	**44.40**	**0.03**	**1.56**	**1.34**	**6,796.22**
On-site Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	2.4	33.7	42.0	-	11.7	3.5	8,917.6
Building Erection/Finishing	1.4	13.1	22.5	-	1.3	1.2	3,531.3
Maximum On-site Emissions	**2**	**34**	**42**	**-**	**12**	**3**	**8,918**
Localized Significance Threshold[b]	--	197	1,830	--	12	8	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Regional Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	7.6	97.8	68.7	0.1	14.7	5.9	20,061.6
Building Erection/Finishing	2.1	14.6	44.4	0.0	1.6	1.3	6,796.2
Maximum Regional Emissions	**8**	**98**	**69**	**0**	**15**	**6**	**20,062**
Regional Significance Threshold	75	100	550	150	150	55	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Notes:

URBEMIS print-out sheets and fugitive PM calculation worksheet are included in Appendix A.

[a] Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with SCAQMD Rule 403 requirements for fugitive dust suppression, which require that no visible dust be present beyond the site boundaries.

[b] The project site is located in SCAQMD SRA No. 19. These LSTs are based on the site location SRA, distance to nearest sensitive receptor location from the project site (25 meters), and project area that could be under construction on any given day (five acres).

Grading Plan 1 Phase 2
On-site Construction PM10 Emissions

Summary of On-Site Fugitive PM_{10} Emissions

5.0	Dirt pushing emissions
0.8	Dirt/materials handling emissions
4.5	Unpaved surface travel emissions
10.3	**On-site Emissions Total**

Estimating Emissions from Dirt Pushing or Bulldozing Operations [a]

$E = ([0.45 \times (\{[G]^{1.5}\}/\{[H]^{1.4}\})] \times I) \times J$

Where,

E = PM_{10} emissions from dirt pushing
G = Silt content of aggregate in percent
H = Moisture content of the surface material
I = 2.2046; a conversion factor to convert kilograms per hour to pounds per hour
J = Hours of dirt pushing

G =	7.5	I =	2.2046
H =	12.0	J =	8.0
E =	**5.03**		

[a] SCAQMD 1993; CEQA Air Quality Handbook, Table A9-9-F

Estimating Emissions from Dirt Piling or Material Handling [b]

$E = [0.00112 \times (\{[G/5]^{1.3}\}/\{[H/2]^{1.4}\})] \times [I/J]$

Where,

E = PM_{10} emissions from dirt piling or materials handling
G = Mean wind speed in miles per hour
H = Moisture content of the surface material
I = Pounds of dirt handled per day
J = 2,000; a conversion factor to convert pounds to tons

G =	3.4	I =	47,596
H =	12%	J =	2,000
E =	**0.83**		

[b] SCAQMD 1993; CEQA Air Quality Handbook, Table A9-9-G

Estimating Emissions from Vehicle Travel on Unpaved Roads [c]

E = V x F

Where,

E = Emissions for vehicles on unpaved roads
V = Vehicle miles traveled
F = Emissions factor for vehicle travel on unpaved roads.
2.1 x [G/12] x H/30] x {[J/3]0.7} x {[I/4]0.5} x {[365 - K]/365} in pounds per miles traveled

Where,

G = Surface silt loading in percent
H = Mean vehicle speed in miles per hour
I = Mean number of wheels on vehicles
J = Mean vehicle weight in tons
K = Mean number of days per year with at least 0.01 inch of precipitation

G =	7.5	J =	15
H =	5.0	K =	34
I =	6		
F =	0.75	Uncontroled emissions factor	
	(0.51)	Rule 403 control efficency (68 percent)	
	0.24	Controlled emissions factor	
	18.60	On-site VMT	
E =	**4.46**		

[c] SCAQMD 1993; CEQA Air Quality Handbook, Table A9-9-D

Phase I - Demolition

Quantity	Equipment	Unit HP	Total HP	Weighting	Actual Emissions Reductions (percent)			Weighted Emissions Reductions (percent)		
					NOx	ROG	PM	NOx	ROG	PM
0	Aerial Lifts	60	0	0%	56%	84%	50%	0%	0%	0%
0	Air Compressors	106	0	0%	54%	77%	44%	0%	0%	0%
0	Bore/Drill Rigs	291	0	0%	54%	76%	62%	0%	0%	0%
0	Cement and Mortar Mixers	10	0	0%	56%	84%	50%	0%	0%	0%
0	Concrete/Industrial Saws	10	0	0%	56%	84%	50%	0%	0%	0%
0	Cranes	399	0	0%	55%	76%	61%	0%	0%	0%
0	Crawler Tractor	147	0	0%	54%	77%	44%	0%	0%	0%
0	Crushing/Processing Equip	142	0	0%	54%	77%	44%	0%	0%	0%
0	Dumpers/Tenders	16	0	0%	56%	84%	50%	0%	0%	0%
0	Excavators	168	0	0%	54%	77%	44%	0%	0%	0%
0	Forklifts	145	0	0%	54%	77%	44%	0%	0%	0%
0	Generator Sets	49	0	0%	56%	84%	50%	0%	0%	0%
0	Graders	174	0	0%	54%	77%	44%	0%	0%	0%
0	Off Highway Tractors	267	0	0%	54%	76%	62%	0%	0%	0%
0	Off Highway Trucks	479	0	0%	55%	76%	61%	0%	0%	0%
0	Other Equipment	190	0	0%	54%	76%	62%	0%	0%	0%
0	Other General Light Industrial Equipment	238	0	0%	54%	76%	62%	0%	0%	0%
0	Other Material Handling Equipment	191	0	0%	54%	76%	62%	0%	0%	0%
0	Pavers	100	0	0%	54%	77%	44%	0%	0%	0%
0	Paving Equipment	104	0	0%	54%	77%	44%	0%	0%	0%
0	Plate Compactors	8	0	0%	56%	84%	50%	0%	0%	0%
0	Pressure Washers	1	0	0%	56%	84%	50%	0%	0%	0%
0	Pumps	53	0	0%	56%	84%	50%	0%	0%	0%
0	Rollers	95	0	0%	54%	77%	44%	0%	0%	0%
0	Rough Terrain Forklifts	93	0	0%	54%	77%	44%	0%	0%	0%
0	Rubber Tired Dozers	357	0	0%	55%	76%	61%	0%	0%	0%
0	Rubber Tired Loaders	164	0	0%	54%	77%	44%	0%	0%	0%
0	Scrapers	313	0	0%	55%	76%	61%	0%	0%	0%
0	Signal Boards	15	0	0%	56%	84%	50%	0%	0%	0%
0	Skid Steer Loaders	44	0	0%	56%	84%	50%	0%	0%	0%
0	Surfacing Equipment	362	0	0%	55%	76%	61%	0%	0%	0%
0	Sweepers/Scrubbers	91	0	0%	56%	84%	50%	0%	0%	0%
0	Tractors/Loaders/Backhoes	108	0	0%	54%	77%	44%	0%	0%	0%
0	Trenchers	63	0	0%	56%	84%	50%	0%	0%	0%
0	Water Trucks	189	0	0%	54%	76%	62%	0%	0%	0%
0	Welders	45	0	0%	56%	84%	50%	0%	0%	0%
0	**Piece(s) of Equipment**	**Total HP**	**0**	**0%**				**0%**	**0%**	**0%**

Phase II - Site Grading

Quantity	Equipment	Unit HP	Total HP	Weighting	Actual Emissions Reductions (percent)			Weighted Emissions Reductions (percent)		
					NOx	ROG	PM	NOx	ROG	PM
0	Aerial Lifts	60	0	0%	56%	84%	50%	0%	0%	0%
0	Air Compressors	106	0	0%	54%	77%	44%	0%	0%	0%
0	Bore/Drill Rigs	291	0	0%	54%	76%	62%	0%	0%	0%
0	Cement and Mortar Mixers	10	0	0%	56%	84%	50%	0%	0%	0%
0	Concrete/Industrial Saws	10	0	0%	56%	84%	50%	0%	0%	0%
0	Cranes	399	0	0%	55%	76%	61%	0%	0%	0%
0	Crawler Tractor	147	0	0%	54%	77%	44%	0%	0%	0%
0	Crushing/Processing Equip	142	0	0%	54%	77%	44%	0%	0%	0%
0	Dumpers/Tenders	16	0	0%	56%	84%	50%	0%	0%	0%
0	Excavators	168	0	0%	54%	77%	44%	0%	0%	0%
0	Forklifts	145	0	0%	54%	77%	44%	0%	0%	0%
0	Generator Sets	49	0	0%	56%	84%	50%	0%	0%	0%
1	Graders	174	174	7%	54%	77%	44%	4%	5%	3%
1	Off Highway Tractors	267	267	11%	54%	76%	62%	6%	8%	7%
0	Off Highway Trucks	479	0	0%	55%	76%	61%	0%	0%	0%
0	Other Equipment	190	0	0%	54%	76%	62%	0%	0%	0%
0	Other General Light Industrial Equipment	238	0	0%	54%	76%	62%	0%	0%	0%
0	Other Material Handling Equipment	191	0	0%	54%	76%	62%	0%	0%	0%
0	Pavers	100	0	0%	54%	77%	44%	0%	0%	0%
0	Paving Equipment	104	0	0%	54%	77%	44%	0%	0%	0%
0	Plate Compactors	8	0	0%	56%	84%	50%	0%	0%	0%
0	Pressure Washers	1	0	0%	56%	84%	50%	0%	0%	0%
0	Pumps	53	0	0%	56%	84%	50%	0%	0%	0%
0	Rollers	95	0	0%	54%	77%	44%	0%	0%	0%
0	Rough Terrain Forklifts	93	0	0%	54%	77%	44%	0%	0%	0%
2	Rubber Tired Dozers	357	714	29%	55%	76%	61%	16%	22%	18%
0	Rubber Tired Loaders	164	0	0%	54%	77%	44%	0%	0%	0%
3	Scrapers	313	939	38%	55%	76%	61%	21%	29%	23%
0	Signal Boards	15	0	0%	56%	84%	50%	0%	0%	0%
0	Skid Steer Loaders	44	0	0%	56%	84%	50%	0%	0%	0%
0	Surfacing Equipment	362	0	0%	55%	76%	61%	0%	0%	0%
0	Sweepers/Scrubbers	91	0	0%	56%	84%	50%	0%	0%	0%
0	Tractors/Loaders/Backhoes	108	0	0%	54%	77%	44%	0%	0%	0%
0	Trenchers	63	0	0%	56%	84%	50%	0%	0%	0%
2	Water Trucks	189	378	15%	54%	76%	62%	8%	12%	9%
0	Welders	45	0	0%	56%	84%	50%	0%	0%	0%
9	**Piece(s) of Equipment**	**Total HP**	**2472**	**100%**				**55%**	**76%**	**60%**

Phase III - Building Equipment

Quantity	Equipment	Unit HP	Total HP	Weighting	Actual Emissions Reductions (percent)			Weighted Emissions Reductions (percent)		
					NOx	ROG	PM	NOx	ROG	PM
0	Aerial Lifts	60	0	0%	56%	84%	50%	0%	0%	0%
0	Air Compressors	106	0	0%	54%	77%	44%	0%	0%	0%
0	Bore/Drill Rigs	291	0	0%	54%	76%	62%	0%	0%	0%
4	Cement and Mortar Mixers	10	40	2%	56%	84%	50%	1%	2%	1%
0	Concrete/Industrial Saws	10	0	0%	56%	84%	50%	0%	0%	0%
1	Cranes	399	399	24%	55%	76%	61%	13%	18%	15%
0	Crawler Tractor	147	0	0%	54%	77%	44%	0%	0%	0%
0	Crushing/Processing Equip	142	0	0%	54%	77%	44%	0%	0%	0%
0	Dumpers/Tenders	16	0	0%	56%	84%	50%	0%	0%	0%
0	Excavators	168	0	0%	54%	77%	44%	0%	0%	0%
3	Forklifts	145	435	26%	54%	77%	44%	14%	20%	12%
1	Generator Sets	49	49	3%	56%	84%	50%	2%	2%	1%
0	Graders	174	0	0%	54%	77%	44%	0%	0%	0%
0	Off Highway Tractors	267	0	0%	54%	76%	62%	0%	0%	0%
0	Off Highway Trucks	479	0	0%	55%	76%	61%	0%	0%	0%
0	Other Equipment	190	0	0%	54%	76%	62%	0%	0%	0%
0	Other General Light Industrial Equipment	238	0	0%	54%	76%	62%	0%	0%	0%
0	Other Material Handling Equipment	191	0	0%	54%	76%	62%	0%	0%	0%
1	Pavers	100	100	6%	54%	77%	44%	3%	5%	3%
1	Paving Equipment	104	104	6%	54%	77%	44%	3%	5%	3%
0	Plate Compactors	8	0	0%	56%	84%	50%	0%	0%	0%
0	Pressure Washers	1	0	0%	56%	84%	50%	0%	0%	0%
0	Pumps	53	0	0%	56%	84%	50%	0%	0%	0%
1	Rollers	95	95	6%	54%	77%	44%	3%	4%	3%
0	Rough Terrain Forklifts	93	0	0%	54%	77%	44%	0%	0%	0%
0	Rubber Tired Dozers	357	0	0%	55%	76%	61%	0%	0%	0%
0	Rubber Tired Loaders	164	0	0%	54%	77%	44%	0%	0%	0%
0	Scrapers	313	0	0%	55%	76%	61%	0%	0%	0%
0	Signal Boards	15	0	0%	56%	84%	50%	0%	0%	0%
0	Skid Steer Loaders	44	0	0%	56%	84%	50%	0%	0%	0%
0	Surfacing Equipment	362	0	0%	55%	76%	61%	0%	0%	0%
0	Sweepers/Scrubbers	91	0	0%	56%	84%	50%	0%	0%	0%
4	Tractors/Loaders/Backhoes	108	432	26%	54%	77%	44%	14%	20%	12%
0	Trenchers	63	0	0%	56%	84%	50%	0%	0%	0%
0	Water Trucks	189	0	0%	54%	76%	62%	0%	0%	0%
0	Welders	45	0	0%	56%	84%	50%	0%	0%	0%
16	**Piece(s) of Equipment**	**Total HP**	**1654**	**100%**				**55%**	**77%**	**49%**

GRADING PLAN 1 PHASE 3 UNMITIGATED CONSTRUCTION EMISSIONS (pounds per day)

	ROC	NO_X	CO	SO_X	PM_{10}[a]	$PM_{2.5}$[a]	CO_2
Demolition Emissions							
On-site Total	-	-	-	-	-	-	-
Fugitive Dust	-	-	-	-	-	-	-
Off-Road Diesel	-	-	-	-	-	-	-
Off-site Total	-	-	-	-	-	-	-
On-Road Diesel	-	-	-	-	-	-	-
Worker Trips	-	-	-	-	-	-	-
Grand Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Site Grading Emissions							
On-site Total	6.48	54.15	27.06	-	12.61	4.20	6,071.51
Fugitive Dust	-	-	-	-	10.42	2.19	-
Off-Road Diesel	6.48	54.15	27.06	-	2.19	2.01	6,071.51
Off-site Total	0.98	11.15	5.69	0.02	0.52	0.42	2,651.22
On-Road Diesel	0.94	11.07	4.31	0.02	0.50	0.41	2,433.66
Worker Trip	0.04	0.08	1.38	-	0.02	0.01	217.56
Grand Total	**7.46**	**65.30**	**32.75**	**0.02**	**13.13**	**4.62**	**8,722.73**
Building Erection/Finishing Emissions							
On-site Total	5.35	31.30	22.88	-	2.22	2.04	3,677.72
Off-Road Diesel, Bldg Cnst	2.93	17.65	13.06	-	1.11	1.02	2,259.28
Arch Coatings Off-Gas	-	-	-	-	-	-	-
Asphalt Off-Gas	0.22	-	-	-	-	-	-
Off-Road Diesel, Asphalt	2.20	13.65	9.82	-	1.11	1.02	1,418.44
Off-site Total	0.70	1.76	23.40	0.04	0.32	0.18	4,068.11
Worker Trips, Bldg Cnst	0.61	1.17	21.55	0.04	0.28	0.15	3,661.54
Vendor Trips, Bldg Cnst	-	-	-	-	-	-	-
Worker Trips, Arch Coatings	-	-	-	-	-	-	-
On-Road Diesel, Asphalt	0.04	0.50	0.20	-	0.02	0.02	126.88
Worker Trips, Asphalt	0.05	0.09	1.65	-	0.02	0.01	279.69
Grand Total	**6.05**	**33.06**	**46.28**	**0.04**	**2.54**	**2.22**	**7,745.83**
On-site Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	6.5	54.2	27.1	-	12.6	4.2	6,071.5
Building Erection/Finishing	5.4	31.3	22.9	-	2.2	2.0	3,677.7
Maximum On-site Emissions	**6**	**54**	**27**	**-**	**13**	**4**	**6,072**
Localized Significance Threshold[b]	--	197	1,830	--	12	8	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**Yes**	**No**	**No**
Regional Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	7.5	65.3	32.8	0.0	13.1	4.6	8,722.7
Building Erection/Finishing	6.1	33.1	46.3	0.0	2.5	2.2	7,745.8
Maximum Regional Emissions	**7**	**65**	**46**	**0**	**13**	**5**	**8,723**
Regional Significance Threshold	75	100	550	150	150	55	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Notes:

URBEMIS print-out sheets and fugitive PM calculation worksheet are included in Appendix A.

[a] Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with SCAQMD Rule 403 requirements for fugitive dust suppression, which require that no visible dust be present beyond the site boundaries.

[b] The project site is located in SCAQMD SRA No. 19. These LSTs are based on the site location SRA, distance to nearest sensitive receptor location from the project site (25 meters), and project area that could be under construction on any given day (five acres).

GRADING PLAN 1 PHASE 3 MITIGATED CONSTRUCTION EMISSIONS (pounds per day)

	ROC	NO_X	CO	SO_X	PM_{10}[a]	$PM_{2.5}$[a]	CO_2
Demolition Emissions							
On-site Total	-	-	-	-	-	-	-
Fugitive Dust	-	-	-	-	-	-	-
Off-Road Diesel	-	-	-	-	-	-	-
Off-site Total	-	-	-	-	-	-	-
On-Road Diesel	-	-	-	-	-	-	-
Worker Trips	-	-	-	-	-	-	-
Grand Total	-	-	-	-	-	-	-
Site Grading Emissions							
On-site Total	1.55	20.71	27.06	-	11.20	2.98	6,071.51
Fugitive Dust	-	-	-	-	10.32	2.17	-
Off-Road Diesel	1.55	20.71	27.06	-	0.88	0.81	6,071.51
Off-site Total	0.98	11.15	5.69	0.02	0.52	0.42	2,651.22
On-Road Diesel	0.94	11.07	4.31	0.02	0.50	0.41	2,433.66
Worker Trip	0.04	0.08	1.38	-	0.02	0.01	217.56
Grand Total	**2.53**	**31.86**	**32.75**	**0.02**	**11.72**	**3.40**	**8,722.73**
Building Erection/Finishing Emissions							
On-site Total	1.40	12.03	22.88	-	1.14	1.05	3,677.72
Off-Road Diesel, Bldg Cnst	0.67	6.78	13.06	-	0.57	0.53	2,259.28
Arch Coatings Off-Gas	-	-	-	-	-	-	-
Asphalt Off-Gas	0.22	-	-	-	-	-	-
Off-Road Diesel, Asphalt	0.50	5.25	9.82	-	0.57	0.53	1,418.44
Off-site Total	0.70	1.76	23.40	0.04	0.32	0.18	4,068.11
Worker Trips, Bldg Cnst	0.61	1.17	21.55	0.04	0.28	0.15	3,661.54
Vendor Trips, Bldg Cnst	-	-	-	-	-	-	-
Worker Trips, Arch Coatings	-	-	-	-	-	-	-
On-Road Diesel, Asphalt	0.04	0.50	0.20	-	0.02	0.02	126.88
Worker Trips, Asphalt	0.05	0.09	1.65	-	0.02	0.01	279.69
Grand Total	**2.10**	**13.79**	**46.28**	**0.04**	**1.46**	**1.23**	**7,745.83**
On-site Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	1.5	20.7	27.1	-	11.2	3.0	6,071.5
Building Erection/Finishing	1.4	12.0	22.9	-	1.1	1.1	3,677.7
Maximum On-site Emissions	**2**	**21**	**27**	**-**	**11**	**3**	**6,072**
Localized Significance Threshold[b]	--	197	1,830	--	12	8	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Regional Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	2.5	31.9	32.8	0.0	11.7	3.4	8,722.7
Building Erection/Finishing	2.1	13.8	46.3	0.0	1.5	1.2	7,745.8
Maximum Regional Emissions	**3**	**32**	**46**	**0**	**12**	**3**	**8,723**
Regional Significance Threshold	75	100	550	150	150	55	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Notes:

URBEMIS print-out sheets and fugitive PM calculation worksheet are included in Appendix A.

[a] Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with SCAQMD Rule 403 requirements for fugitive dust suppression, which require that no visible dust be present beyond the site boundaries.

[b] The project site is located in SCAQMD SRA No. 19. These LSTs are based on the site location SRA, distance to nearest sensitive receptor location from the project site (25 meters), and project area that could be under construction on any given day (five acres).

Grading Plan 1 Phase 3
On-site Construction PM10 Emissions

Summary of On-Site Fugitive PM_{10} Emissions

5.0	Dirt pushing emissions
0.4	Dirt/materials handling emissions
4.9	Unpaved surface travel emissions
10.4	**On-site Emissions Total**

Estimating Emissions from Dirt Pushing or Bulldozing Operations [a]

$E = ([0.45 \times (\{[G]^{1.5}\}/\{[H]^{1.4}\})] \times I) \times J$

Where,

E = PM_{10} emissions from dirt pushing
G = Silt content of aggregate in percent
H = Moisture content of the surface material
I = 2.2046; a conversion factor to convert kilograms per hour to pounds per hour
J = Hours of dirt pushing

G =	7.5	I =	2.2046
H =	12.0	J =	8.0
E =	**5.03**		

[a] SCAQMD 1993; CEQA Air Quality Handbook, Table A9-9-F

Estimating Emissions from Dirt Piling or Material Handling [b]

$E = [0.00112 \times (\{[G/5]^{1.3}\}/\{[H/2]^{1.4}\})] \times [I/J]$

Where,

E = PM_{10} emissions from dirt piling or materials handling
G = Mean wind speed in miles per hour
H = Moisture content of the surface material
I = Pounds of dirt handled per day
J = 2,000; a conversion factor to convert pounds to tons

G =	3.4	I =	25,633
H =	12%	J =	2,000
E =	**0.45**		

[b] SCAQMD 1993; CEQA Air Quality Handbook, Table A9-9-G

Estimating Emissions from Vehicle Travel on Unpaved Roads [c]

E = V x F

Where,

E = Emissions for vehicles on unpaved roads
V = Vehicle miles traveled
F = Emissions factor for vehicle travel on unpaved roads.
2.1 x [G/12] x H/30] x {[J/3]0.7} x {[I/4]0.5} x {[365 - K]/365} in pounds per miles traveled

Where,

G = Surface silt loading in percent
H = Mean vehicle speed in miles per hour
I = Mean number of wheels on vehicles
J = Mean vehicle weight in tons
K = Mean number of days per year with at least 0.01 inch of precipitation

G =	7.5	J =	15
H =	5.0	K =	34
I =	6		
F =	0.75	Uncontroled emissions factor	
	(0.51)	Rule 403 control efficency (68 percent)	
	0.24	Controlled emissions factor	
	20.62	On-site VMT	
E =	**4.95**		

[c] SCAQMD 1993; CEQA Air Quality Handbook, Table A9-9-D

Phase I - Demolition

Quantity	Equipment	Unit HP	Total HP	Weighting	Actual Emissions Reductions (percent)			Weighted Emissions Reductions (percent)		
					NOx	ROG	PM	NOx	ROG	PM
0	Aerial Lifts	60	0	0%	56%	84%	50%	0%	0%	0%
0	Air Compressors	106	0	0%	54%	77%	44%	0%	0%	0%
0	Bore/Drill Rigs	291	0	0%	54%	76%	62%	0%	0%	0%
0	Cement and Mortar Mixers	10	0	0%	56%	84%	50%	0%	0%	0%
0	Concrete/Industrial Saws	10	0	0%	56%	84%	50%	0%	0%	0%
0	Cranes	399	0	0%	55%	76%	61%	0%	0%	0%
0	Crawler Tractor	147	0	0%	54%	77%	44%	0%	0%	0%
0	Crushing/Processing Equip	142	0	0%	54%	77%	44%	0%	0%	0%
0	Dumpers/Tenders	16	0	0%	56%	84%	50%	0%	0%	0%
0	Excavators	168	0	0%	54%	77%	44%	0%	0%	0%
0	Forklifts	145	0	0%	54%	77%	44%	0%	0%	0%
0	Generator Sets	49	0	0%	56%	84%	50%	0%	0%	0%
0	Graders	174	0	0%	54%	77%	44%	0%	0%	0%
0	Off Highway Tractors	267	0	0%	54%	76%	62%	0%	0%	0%
0	Off Highway Trucks	479	0	0%	55%	76%	61%	0%	0%	0%
0	Other Equipment	190	0	0%	54%	76%	62%	0%	0%	0%
0	Other General Light Industrial Equipment	238	0	0%	54%	76%	62%	0%	0%	0%
0	Other Material Handling Equipment	191	0	0%	54%	76%	62%	0%	0%	0%
0	Pavers	100	0	0%	54%	77%	44%	0%	0%	0%
0	Paving Equipment	104	0	0%	54%	77%	44%	0%	0%	0%
0	Plate Compactors	8	0	0%	56%	84%	50%	0%	0%	0%
0	Pressure Washers	1	0	0%	56%	84%	50%	0%	0%	0%
0	Pumps	53	0	0%	56%	84%	50%	0%	0%	0%
0	Rollers	95	0	0%	54%	77%	44%	0%	0%	0%
0	Rough Terrain Forklifts	93	0	0%	54%	77%	44%	0%	0%	0%
0	Rubber Tired Dozers	357	0	0%	55%	76%	61%	0%	0%	0%
0	Rubber Tired Loaders	164	0	0%	54%	77%	44%	0%	0%	0%
0	Scrapers	313	0	0%	55%	76%	61%	0%	0%	0%
0	Signal Boards	15	0	0%	56%	84%	50%	0%	0%	0%
0	Skid Steer Loaders	44	0	0%	56%	84%	50%	0%	0%	0%
0	Surfacing Equipment	362	0	0%	55%	76%	61%	0%	0%	0%
0	Sweepers/Scrubbers	91	0	0%	56%	84%	50%	0%	0%	0%
0	Tractors/Loaders/Backhoes	108	0	0%	54%	77%	44%	0%	0%	0%
0	Trenchers	63	0	0%	56%	84%	50%	0%	0%	0%
0	Water Trucks	189	0	0%	54%	76%	62%	0%	0%	0%
0	Welders	45	0	0%	56%	84%	50%	0%	0%	0%
0	**Piece(s) of Equipment**	**Total HP**	**0**	**0%**				**0%**	**0%**	**0%**

Phase II - Site Grading

Quantity	Equipment	Unit HP	Total HP	Weighting	Actual Emissions Reductions (percent)			Weighted Emissions Reductions (percent)		
					NOx	ROG	PM	NOx	ROG	PM
0	Aerial Lifts	60	0	0%	56%	84%	50%	0%	0%	0%
0	Air Compressors	106	0	0%	54%	77%	44%	0%	0%	0%
0	Bore/Drill Rigs	291	0	0%	54%	76%	62%	0%	0%	0%
0	Cement and Mortar Mixers	10	0	0%	56%	84%	50%	0%	0%	0%
0	Concrete/Industrial Saws	10	0	0%	56%	84%	50%	0%	0%	0%
0	Cranes	399	0	0%	55%	76%	61%	0%	0%	0%
0	Crawler Tractor	147	0	0%	54%	77%	44%	0%	0%	0%
0	Crushing/Processing Equip	142	0	0%	54%	77%	44%	0%	0%	0%
0	Dumpers/Tenders	16	0	0%	56%	84%	50%	0%	0%	0%
0	Excavators	168	0	0%	54%	77%	44%	0%	0%	0%
0	Forklifts	145	0	0%	54%	77%	44%	0%	0%	0%
0	Generator Sets	49	0	0%	56%	84%	50%	0%	0%	0%
1	Graders	174	174	9%	54%	77%	44%	5%	7%	4%
1	Off Highway Tractors	267	267	14%	54%	76%	62%	8%	11%	9%
0	Off Highway Trucks	479	0	0%	55%	76%	61%	0%	0%	0%
0	Other Equipment	190	0	0%	54%	76%	62%	0%	0%	0%
0	Other General Light Industrial Equipment	238	0	0%	54%	76%	62%	0%	0%	0%
0	Other Material Handling Equipment	191	0	0%	54%	76%	62%	0%	0%	0%
0	Pavers	100	0	0%	54%	77%	44%	0%	0%	0%
0	Paving Equipment	104	0	0%	54%	77%	44%	0%	0%	0%
0	Plate Compactors	8	0	0%	56%	84%	50%	0%	0%	0%
0	Pressure Washers	1	0	0%	56%	84%	50%	0%	0%	0%
0	Pumps	53	0	0%	56%	84%	50%	0%	0%	0%
0	Rollers	95	0	0%	54%	77%	44%	0%	0%	0%
0	Rough Terrain Forklifts	93	0	0%	54%	77%	44%	0%	0%	0%
2	Rubber Tired Dozers	357	714	39%	55%	76%	61%	21%	29%	23%
0	Rubber Tired Loaders	164	0	0%	54%	77%	44%	0%	0%	0%
1	Scrapers	313	313	17%	55%	76%	61%	9%	13%	10%
0	Signal Boards	15	0	0%	56%	84%	50%	0%	0%	0%
0	Skid Steer Loaders	44	0	0%	56%	84%	50%	0%	0%	0%
0	Surfacing Equipment	362	0	0%	55%	76%	61%	0%	0%	0%
0	Sweepers/Scrubbers	91	0	0%	56%	84%	50%	0%	0%	0%
0	Tractors/Loaders/Backhoes	108	0	0%	54%	77%	44%	0%	0%	0%
0	Trenchers	63	0	0%	56%	84%	50%	0%	0%	0%
2	Water Trucks	189	378	20%	54%	76%	62%	11%	16%	13%
0	Welders	45	0	0%	56%	84%	50%	0%	0%	0%
7	**Piece(s) of Equipment**	**Total HP**	**1846**	**100%**				**55%**	**76%**	**60%**

Phase III - Building Equipment

Quantity	Equipment	Unit HP	Total HP	Weighting	Actual Emissions Reductions (percent)			Weighted Emissions Reductions (percent)		
					NOx	ROG	PM	NOx	ROG	PM
0	Aerial Lifts	60	0	0%	56%	84%	50%	0%	0%	0%
0	Air Compressors	106	0	0%	54%	77%	44%	0%	0%	0%
0	Bore/Drill Rigs	291	0	0%	54%	76%	62%	0%	0%	0%
4	Cement and Mortar Mixers	10	40	2%	56%	84%	50%	1%	2%	1%
0	Concrete/Industrial Saws	10	0	0%	56%	84%	50%	0%	0%	0%
1	Cranes	399	399	23%	55%	76%	61%	13%	17%	14%
0	Crawler Tractor	147	0	0%	54%	77%	44%	0%	0%	0%
0	Crushing/Processing Equip	142	0	0%	54%	77%	44%	0%	0%	0%
0	Dumpers/Tenders	16	0	0%	56%	84%	50%	0%	0%	0%
0	Excavators	168	0	0%	54%	77%	44%	0%	0%	0%
3	Forklifts	145	435	25%	54%	77%	44%	13%	19%	11%
1	Generator Sets	49	49	3%	56%	84%	50%	2%	2%	1%
0	Graders	174	0	0%	54%	77%	44%	0%	0%	0%
0	Off Highway Tractors	267	0	0%	54%	76%	62%	0%	0%	0%
0	Off Highway Trucks	479	0	0%	55%	76%	61%	0%	0%	0%
0	Other Equipment	190	0	0%	54%	76%	62%	0%	0%	0%
0	Other General Light Industrial Equipment	238	0	0%	54%	76%	62%	0%	0%	0%
0	Other Material Handling Equipment	191	0	0%	54%	76%	62%	0%	0%	0%
1	Pavers	100	100	6%	54%	77%	44%	3%	4%	3%
2	Paving Equipment	104	208	12%	54%	77%	44%	6%	9%	5%
0	Plate Compactors	8	0	0%	56%	84%	50%	0%	0%	0%
0	Pressure Washers	1	0	0%	56%	84%	50%	0%	0%	0%
0	Pumps	53	0	0%	56%	84%	50%	0%	0%	0%
1	Rollers	95	95	5%	54%	77%	44%	3%	4%	2%
0	Rough Terrain Forklifts	93	0	0%	54%	77%	44%	0%	0%	0%
0	Rubber Tired Dozers	357	0	0%	55%	76%	61%	0%	0%	0%
0	Rubber Tired Loaders	164	0	0%	54%	77%	44%	0%	0%	0%
0	Scrapers	313	0	0%	55%	76%	61%	0%	0%	0%
0	Signal Boards	15	0	0%	56%	84%	50%	0%	0%	0%
0	Skid Steer Loaders	44	0	0%	56%	84%	50%	0%	0%	0%
0	Surfacing Equipment	362	0	0%	55%	76%	61%	0%	0%	0%
0	Sweepers/Scrubbers	91	0	0%	56%	84%	50%	0%	0%	0%
4	Tractors/Loaders/Backhoes	108	432	25%	54%	77%	44%	13%	19%	11%
0	Trenchers	63	0	0%	56%	84%	50%	0%	0%	0%
0	Water Trucks	189	0	0%	54%	76%	62%	0%	0%	0%
0	Welders	45	0	0%	56%	84%	50%	0%	0%	0%
17	**Piece(s) of Equipment**	**Total HP**	**1758**	**100%**				**55%**	**77%**	**48%**

GRADING PLAN 2 PHASE 1 UNMITIGATED CONSTRUCTION EMISSIONS (pounds per day)

	ROC	NO_X	CO	SO_X	PM_{10} [a]	$PM_{2.5}$ [a]	CO_2
Demolition Emissions							
On-site Total	-	-	-	-	-	-	-
Fugitive Dust	-	-	-	-	-	-	-
Off-Road Diesel	-	-	-	-	-	-	-
Off-site Total	-	-	-	-	-	-	-
On-Road Diesel	-	-	-	-	-	-	-
Worker Trips	-	-	-	-	-	-	-
Grand Total	-	-	-	-	-	-	-
Site Grading Emissions							
On-site Total	21.51	195.79	91.05	-	22.23	10.46	17,818.23
Fugitive Dust	-	-	-	-	14.08	2.96	-
Off-Road Diesel	21.51	195.79	91.05	-	8.15	7.50	17,818.23
Off-site Total	9.97	128.39	53.64	0.17	5.87	5.04	17,965.14
On-Road Diesel	9.83	128.13	49.19	0.16	5.83	5.02	17,436.46
Worker Trip	0.14	0.26	4.45	0.01	0.04	0.02	528.68
Grand Total	**31.48**	**324.18**	**144.69**	**0.17**	**28.10**	**15.50**	**35,783.37**
Building Erection/Finishing Emissions							
On-site Total	6.17	35.33	22.05	-	2.74	2.52	3,391.20
Off-Road Diesel, Bldg Cnst	3.77	21.85	13.95	-	1.57	1.45	2,259.28
Arch Coatings Off-Gas	-	-	-	-	-	-	-
Asphalt Off-Gas	0.17	-	-	-	-	-	-
Off-Road Diesel, Asphalt	2.23	13.48	8.10	-	1.17	1.07	1,131.92
Off-site Total	1.23	2.83	38.82	0.05	0.40	0.22	5,037.17
Worker Trips, Bldg Cnst	1.13	2.13	36.77	0.05	0.35	0.19	4,687.18
Vendor Trips, Bldg Cnst	-	-	-	-	-	-	-
Worker Trips, Arch Coatings	-	-	-	-	-	-	-
On-Road Diesel, Asphalt	0.05	0.60	0.23	-	0.03	0.02	101.30
Worker Trips, Asphalt	0.05	0.10	1.82	-	0.02	0.01	248.69
Grand Total	**7.40**	**38.16**	**60.87**	**0.05**	**3.14**	**2.74**	**8,428.37**
On-site Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	21.5	195.8	91.1	-	22.2	10.5	17,818.2
Building Erection/Finishing	6.2	35.3	22.1	-	2.7	2.5	3,391.2
Maximum On-site Emissions	**22**	**196**	**91**	**-**	**22**	**10**	**17,818**
Localized Significance Threshold [b]	--	197	1,830	--	12	8	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**Yes**	**Yes**	**No**
Regional Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	31.5	324.2	144.7	0.2	28.1	15.5	35,783.4
Building Erection/Finishing	7.4	38.2	60.9	0.1	3.1	2.7	8,428.4
Maximum Regional Emissions	**31**	**324**	**145**	**0**	**28**	**15**	**35,783**
Regional Significance Threshold	75	100	550	150	150	55	--
Exceed Threshold?	**No**	**Yes**	**No**	**No**	**No**	**No**	**No**

Notes:

URBEMIS print-out sheets and fugitive PM calculation worksheet are included in Appendix A.

[a] Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with SCAQMD Rule 403 requirements for fugitive dust suppression, which require that no visible dust be present beyond the site boundaries.

[b] The project site is located in SCAQMD SRA No. 19. These LSTs are based on the site location SRA, distance to nearest sensitive receptor location from the project site (25 meters), and project area that could be under construction on any given day (five acres).

GRADING PLAN 2 PHASE 1 MITIGATED CONSTRUCTION EMISSIONS (pounds per day)

	ROC	NO_X	CO	SO_X	PM_{10}[a]	$PM_{2.5}$[a]	CO_2
Demolition Emissions							
On-site Total	-	-	-	-	-	-	-
Fugitive Dust	-	-	-	-	-	-	-
Off-Road Diesel	-	-	-	-	-	-	-
Off-site Total	-	-	-	-	-	-	-
On-Road Diesel	-	-	-	-	-	-	-
Worker Trips	-	-	-	-	-	-	-
Grand Total	-	-	-	-	-	-	-
Site Grading Emissions							
On-site Total	5.13	74.57	91.05	-	17.31	5.92	17,818.23
Fugitive Dust	-	-	-	-	14.08	2.96	-
Off-Road Diesel	5.13	74.57	91.05	-	3.22	2.97	17,818.23
Off-site Total	9.97	128.39	53.64	0.17	5.87	5.04	17,965.14
On-Road Diesel	9.83	128.13	49.19	0.16	5.83	5.02	17,436.46
Worker Trip	0.14	0.26	4.45	0.01	0.04	0.02	528.68
Grand Total	**15.10**	**202.96**	**144.69**	**0.17**	**23.18**	**10.96**	**35,783.37**
Building Erection/Finishing Emissions							
On-site Total	1.54	13.58	22.05	-	1.41	1.30	3,391.20
Off-Road Diesel, Bldg Cnst	0.86	8.40	13.95	-	0.81	0.75	2,259.28
Arch Coatings Off-Gas	-	-	-	-	-	-	-
Asphalt Off-Gas	0.17	-	-	-	-	-	-
Off-Road Diesel, Asphalt	0.51	5.18	8.10	-	0.60	0.55	1,131.92
Off-site Total	1.23	2.83	38.82	0.05	0.40	0.22	5,037.17
Worker Trips, Bldg Cnst	1.13	2.13	36.77	0.05	0.35	0.19	4,687.18
Vendor Trips, Bldg Cnst	-	-	-	-	-	-	-
Worker Trips, Arch Coatings	-	-	-	-	-	-	-
On-Road Diesel, Asphalt	0.05	0.60	0.23	-	0.03	0.02	101.30
Worker Trips, Asphalt	0.05	0.10	1.82	-	0.02	0.01	248.69
Grand Total	**2.77**	**16.41**	**60.87**	**0.05**	**1.81**	**1.52**	**8,428.37**
On-site Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	5.1	74.6	91.1	-	17.3	5.9	17,818.2
Building Erection/Finishing	1.5	13.6	22.1	-	1.4	1.3	3,391.2
Maximum On-site Emissions	**5**	**75**	**91**	**-**	**17**	**6**	**17,818**
Localized Significance Threshold[b]	--	197	1,830	--	12	8	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**Yes**	**No**	**No**
Regional Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	15.1	203.0	144.7	0.2	23.2	11.0	35,783.4
Building Erection/Finishing	2.8	16.4	60.9	0.1	1.8	1.5	8,428.4
Maximum Regional Emissions	**15**	**203**	**145**	**0**	**23**	**11**	**35,783**
Regional Significance Threshold	75	100	550	150	150	55	--
Exceed Threshold?	**No**	**Yes**	**No**	**No**	**No**	**No**	**No**

Notes:

URBEMIS print-out sheets and fugitive PM calculation worksheet are included in Appendix A.

[a] Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with SCAQMD Rule 403 requirements for fugitive dust suppression, which require that no visible dust be present beyond the site boundaries.

[b] The project site is located in SCAQMD SRA No. 19. These LSTs are based on the site location SRA, distance to nearest sensitive receptor location from the project site (25 meters), and project area that could be under construction on any given day (five acres).

Grading Plan 2 Phase 1
On-site Construction PM10 Emissions

Summary of On-Site Fugitive PM_{10} Emissions

5.0	Dirt pushing emissions
1.8	Dirt/materials handling emissions
7.2	Unpaved surface travel emissions
14.1	**On-site Emissions Total**

Estimating Emissions from Dirt Pushing or Bulldozing Operations [a]

$E = ([0.45 \times (\{[G]^{1.5}\}/\{[H]^{1.4}\})] \times I) \times J$

Where,

E = PM_{10} emissions from dirt pushing
G = Silt content of aggregate in percent
H = Moisture content of the surface material
I = 2.2046; a conversion factor to convert kilograms per hour to pounds per hour
J = Hours of dirt pushing

G =	7.5	I =	2.2046
H =	12.0	J =	8.0
E =	**5.03**		

[a] SCAQMD 1993; CEQA Air Quality Handbook, Table A9-9-F

Estimating Emissions from Dirt Piling or Material Handling [b]

$E = [0.00112 \times (\{[G/5]^{1.3}\}/\{[H/2]^{1.4}\})] \times [I/J]$

Where,

E = PM_{10} emissions from dirt piling or materials handling
G = Mean wind speed in miles per hour
H = Moisture content of the surface material
I = Pounds of dirt handled per day
J = 2,000; a conversion factor to convert pounds to tons

G =	3.4	I =	105,404
H =	12%	J =	2,000
E =	**1.84**		

[b] SCAQMD 1993; CEQA Air Quality Handbook, Table A9-9-G

Estimating Emissions from Vehicle Travel on Unpaved Roads [c]

E = V x F

Where,

E = Emissions for vehicles on unpaved roads
V = Vehicle miles traveled
F = Emissions factor for vehicle travel on unpaved roads.
2.1 x [G/12] x H/30] x {[J/3]0.7} x {[I/4]0.5} x {[365 - K]/365} in pounds per miles traveled

Where,

G = Surface silt loading in percent
H = Mean vehicle speed in miles per hour
I = Mean number of wheels on vehicles
J = Mean vehicle weight in tons
K = Mean number of days per year with at least 0.01 inch of precipitation

G =	7.5	J =	15
H =	5.0	K =	34
I =	6		
F =	0.75	Uncontroled emissions factor	
	(0.51)	Rule 403 control efficency (68 percent)	
	0.24	Controlled emissions factor	
	30.10	On-site VMT	
E =	**7.22**		

[c] SCAQMD 1993; CEQA Air Quality Handbook, Table A9-9-D

Phase I - Demolition

Quantity	Equipment	Unit HP	Total HP	Weighting	Actual Emissions Reductions (percent)			Weighted Emissions Reductions (percent)		
					NOx	ROG	PM	NOx	ROG	PM
0	Aerial Lifts	60	0	0%	56%	84%	50%	0%	0%	0%
0	Air Compressors	106	0	0%	54%	77%	44%	0%	0%	0%
0	Bore/Drill Rigs	291	0	0%	54%	76%	62%	0%	0%	0%
0	Cement and Mortar Mixers	10	0	0%	56%	84%	50%	0%	0%	0%
0	Concrete/Industrial Saws	10	0	0%	56%	84%	50%	0%	0%	0%
0	Cranes	399	0	0%	55%	76%	61%	0%	0%	0%
0	Crawler Tractor	147	0	0%	54%	77%	44%	0%	0%	0%
0	Crushing/Processing Equip	142	0	0%	54%	77%	44%	0%	0%	0%
0	Dumpers/Tenders	16	0	0%	56%	84%	50%	0%	0%	0%
0	Excavators	168	0	0%	54%	77%	44%	0%	0%	0%
0	Forklifts	145	0	0%	54%	77%	44%	0%	0%	0%
0	Generator Sets	49	0	0%	56%	84%	50%	0%	0%	0%
0	Graders	174	0	0%	54%	77%	44%	0%	0%	0%
0	Off Highway Tractors	267	0	0%	54%	76%	62%	0%	0%	0%
0	Off Highway Trucks	479	0	0%	55%	76%	61%	0%	0%	0%
0	Other Equipment	190	0	0%	54%	76%	62%	0%	0%	0%
0	Other General Light Industrial Equipment	238	0	0%	54%	76%	62%	0%	0%	0%
0	Other Material Handling Equipment	191	0	0%	54%	76%	62%	0%	0%	0%
0	Pavers	100	0	0%	54%	77%	44%	0%	0%	0%
0	Paving Equipment	104	0	0%	54%	77%	44%	0%	0%	0%
0	Plate Compactors	8	0	0%	56%	84%	50%	0%	0%	0%
0	Pressure Washers	1	0	0%	56%	84%	50%	0%	0%	0%
0	Pumps	53	0	0%	56%	84%	50%	0%	0%	0%
0	Rollers	95	0	0%	54%	77%	44%	0%	0%	0%
0	Rough Terrain Forklifts	93	0	0%	54%	77%	44%	0%	0%	0%
0	Rubber Tired Dozers	357	0	0%	55%	76%	61%	0%	0%	0%
0	Rubber Tired Loaders	164	0	0%	54%	77%	44%	0%	0%	0%
0	Scrapers	313	0	0%	55%	76%	61%	0%	0%	0%
0	Signal Boards	15	0	0%	56%	84%	50%	0%	0%	0%
0	Skid Steer Loaders	44	0	0%	56%	84%	50%	0%	0%	0%
0	Surfacing Equipment	362	0	0%	55%	76%	61%	0%	0%	0%
0	Sweepers/Scrubbers	91	0	0%	56%	84%	50%	0%	0%	0%
0	Tractors/Loaders/Backhoes	108	0	0%	54%	77%	44%	0%	0%	0%
0	Trenchers	63	0	0%	56%	84%	50%	0%	0%	0%
0	Water Trucks	189	0	0%	54%	76%	62%	0%	0%	0%
0	Welders	45	0	0%	56%	84%	50%	0%	0%	0%
0	**Piece(s) of Equipment**	**Total HP**	**0**	**0%**				**0%**	**0%**	**0%**

Phase II - Site Grading

Quantity	Equipment	Unit HP	Total HP	Weighting	Actual Emissions Reductions (percent)			Weighted Emissions Reductions (percent)		
					NOx	ROG	PM	NOx	ROG	PM
0	Aerial Lifts	60	0	0%	56%	84%	50%	0%	0%	0%
0	Air Compressors	106	0	0%	54%	77%	44%	0%	0%	0%
0	Bore/Drill Rigs	291	0	0%	54%	76%	62%	0%	0%	0%
0	Cement and Mortar Mixers	10	0	0%	56%	84%	50%	0%	0%	0%
0	Concrete/Industrial Saws	10	0	0%	56%	84%	50%	0%	0%	0%
0	Cranes	399	0	0%	55%	76%	61%	0%	0%	0%
0	Crawler Tractor	147	0	0%	54%	77%	44%	0%	0%	0%
0	Crushing/Processing Equip	142	0	0%	54%	77%	44%	0%	0%	0%
0	Dumpers/Tenders	16	0	0%	56%	84%	50%	0%	0%	0%
0	Excavators	168	0	0%	54%	77%	44%	0%	0%	0%
0	Forklifts	145	0	0%	54%	77%	44%	0%	0%	0%
0	Generator Sets	49	0	0%	56%	84%	50%	0%	0%	0%
1	Graders	174	174	4%	54%	77%	44%	2%	3%	2%
1	Off Highway Tractors	267	267	6%	54%	76%	62%	3%	4%	3%
0	Off Highway Trucks	479	0	0%	55%	76%	61%	0%	0%	0%
0	Other Equipment	190	0	0%	54%	76%	62%	0%	0%	0%
0	Other General Light Industrial Equipment	238	0	0%	54%	76%	62%	0%	0%	0%
0	Other Material Handling Equipment	191	0	0%	54%	76%	62%	0%	0%	0%
0	Pavers	100	0	0%	54%	77%	44%	0%	0%	0%
0	Paving Equipment	104	0	0%	54%	77%	44%	0%	0%	0%
0	Plate Compactors	8	0	0%	56%	84%	50%	0%	0%	0%
0	Pressure Washers	1	0	0%	56%	84%	50%	0%	0%	0%
0	Pumps	53	0	0%	56%	84%	50%	0%	0%	0%
0	Rollers	95	0	0%	54%	77%	44%	0%	0%	0%
0	Rough Terrain Forklifts	93	0	0%	54%	77%	44%	0%	0%	0%
3	Rubber Tired Dozers	357	1071	22%	55%	76%	61%	12%	17%	14%
0	Rubber Tired Loaders	164	0	0%	54%	77%	44%	0%	0%	0%
8	Scrapers	313	2504	52%	55%	76%	61%	29%	40%	32%
0	Signal Boards	15	0	0%	56%	84%	50%	0%	0%	0%
0	Skid Steer Loaders	44	0	0%	56%	84%	50%	0%	0%	0%
0	Surfacing Equipment	362	0	0%	55%	76%	61%	0%	0%	0%
0	Sweepers/Scrubbers	91	0	0%	56%	84%	50%	0%	0%	0%
0	Tractors/Loaders/Backhoes	108	0	0%	54%	77%	44%	0%	0%	0%
0	Trenchers	63	0	0%	56%	84%	50%	0%	0%	0%
4	Water Trucks	189	756	16%	54%	76%	62%	9%	12%	10%
0	Welders	45	0	0%	56%	84%	50%	0%	0%	0%
17	**Piece(s) of Equipment**	**Total HP**	**4772**	**100%**				**55%**	**76%**	**60%**

Phase III - Building Equipment

Quantity	Equipment	Unit HP	Total HP	Weighting	Actual Emissions Reductions (percent)			Weighted Emissions Reductions (percent)		
					NOx	ROG	PM	NOx	ROG	PM
0	Aerial Lifts	60	0	0%	56%	84%	50%	0%	0%	0%
0	Air Compressors	106	0	0%	54%	77%	44%	0%	0%	0%
0	Bore/Drill Rigs	291	0	0%	54%	76%	62%	0%	0%	0%
4	Cement and Mortar Mixers	10	40	2%	56%	84%	50%	1%	2%	1%
0	Concrete/Industrial Saws	10	0	0%	56%	84%	50%	0%	0%	0%
1	Cranes	399	399	23%	55%	76%	61%	13%	17%	14%
0	Crawler Tractor	147	0	0%	54%	77%	44%	0%	0%	0%
0	Crushing/Processing Equip	142	0	0%	54%	77%	44%	0%	0%	0%
0	Dumpers/Tenders	16	0	0%	56%	84%	50%	0%	0%	0%
0	Excavators	168	0	0%	54%	77%	44%	0%	0%	0%
3	Forklifts	145	435	25%	54%	77%	44%	13%	19%	11%
1	Generator Sets	49	49	3%	56%	84%	50%	2%	2%	1%
0	Graders	174	0	0%	54%	77%	44%	0%	0%	0%
0	Off Highway Tractors	267	0	0%	54%	76%	62%	0%	0%	0%
0	Off Highway Trucks	479	0	0%	55%	76%	61%	0%	0%	0%
0	Other Equipment	190	0	0%	54%	76%	62%	0%	0%	0%
0	Other General Light Industrial Equipment	238	0	0%	54%	76%	62%	0%	0%	0%
0	Other Material Handling Equipment	191	0	0%	54%	76%	62%	0%	0%	0%
1	Pavers	100	100	6%	54%	77%	44%	3%	4%	3%
2	Paving Equipment	104	208	12%	54%	77%	44%	6%	9%	5%
0	Plate Compactors	8	0	0%	56%	84%	50%	0%	0%	0%
0	Pressure Washers	1	0	0%	56%	84%	50%	0%	0%	0%
0	Pumps	53	0	0%	56%	84%	50%	0%	0%	0%
1	Rollers	95	95	5%	54%	77%	44%	3%	4%	2%
0	Rough Terrain Forklifts	93	0	0%	54%	77%	44%	0%	0%	0%
0	Rubber Tired Dozers	357	0	0%	55%	76%	61%	0%	0%	0%
0	Rubber Tired Loaders	164	0	0%	54%	77%	44%	0%	0%	0%
0	Scrapers	313	0	0%	55%	76%	61%	0%	0%	0%
0	Signal Boards	15	0	0%	56%	84%	50%	0%	0%	0%
0	Skid Steer Loaders	44	0	0%	56%	84%	50%	0%	0%	0%
0	Surfacing Equipment	362	0	0%	55%	76%	61%	0%	0%	0%
0	Sweepers/Scrubbers	91	0	0%	56%	84%	50%	0%	0%	0%
4	Tractors/Loaders/Backhoes	108	432	25%	54%	77%	44%	13%	19%	11%
0	Trenchers	63	0	0%	56%	84%	50%	0%	0%	0%
0	Water Trucks	189	0	0%	54%	76%	62%	0%	0%	0%
0	Welders	45	0	0%	56%	84%	50%	0%	0%	0%
17	**Piece(s) of Equipment**	**Total HP**	**1758**	**100%**				**55%**	**77%**	**48%**

GRADING PLAN 2 PHASE 2 UNMITIGATED CONSTRUCTION EMISSIONS (pounds per day)

	ROC	NO_X	CO	SO_X	PM_{10} [a]	$PM_{2.5}$ [a]	CO_2
Demolition Emissions							
On-site Total	-	-	-	-	-	-	-
Fugitive Dust	-	-	-	-	-	-	-
Off-Road Diesel	-	-	-	-	-	-	-
Off-site Total	-	-	-	-	-	-	-
On-Road Diesel	-	-	-	-	-	-	-
Worker Trips	-	-	-	-	-	-	-
Grand Total	-	-	-	-	-	-	-
Site Grading Emissions							
On-site Total	14.42	128.62	60.68	-	15.75	6.99	13,009.24
Fugitive Dust	-	-	-	-	10.57	2.22	-
Off-Road Diesel	14.42	128.62	60.68	-	5.18	4.77	13,009.24
Off-site Total	7.19	88.45	36.81	0.14	4.01	3.38	15,363.03
On-Road Diesel	7.11	88.29	34.09	0.14	3.98	3.37	14,989.99
Worker Trip	0.08	0.16	2.72	-	0.03	0.01	373.04
Grand Total	**21.61**	**217.07**	**97.49**	**0.14**	**19.76**	**10.37**	**28,372.27**
Building Erection/Finishing Emissions							
On-site Total	5.77	34.02	22.53	-	2.57	2.36	3,531.32
Off-Road Diesel, Bldg Cnst	3.48	20.42	13.62	-	1.42	1.31	2,259.28
Arch Coatings Off-Gas	-	-	-	-	-	-	-
Asphalt Off-Gas	0.10	-	-	-	-	-	-
Off-Road Diesel, Asphalt	2.19	13.60	8.91	-	1.15	1.05	1,272.04
Off-site Total	0.73	1.63	23.40	0.03	0.25	0.14	3,265.22
Worker Trips, Bldg Cnst	0.65	1.23	21.59	0.03	0.22	0.12	2,957.42
Vendor Trips, Bldg Cnst	-	-	-	-	-	-	-
Worker Trips, Arch Coatings	-	-	-	-	-	-	-
On-Road Diesel, Asphalt	0.03	0.31	0.12	-	0.01	0.01	59.14
Worker Trips, Asphalt	0.05	0.09	1.69	-	0.02	0.01	248.66
Grand Total	**6.50**	**35.65**	**45.93**	**0.03**	**2.82**	**2.50**	**6,796.54**
On-site Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	14.4	128.6	60.7	-	15.8	7.0	13,009.2
Building Erection/Finishing	5.8	34.0	22.5	-	2.6	2.4	3,531.3
Maximum On-site Emissions	**14**	**129**	**61**	**-**	**16**	**7**	**13,009**
Localized Significance Threshold [b]	--	197	1,830	--	12	8	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**Yes**	**No**	**No**
Regional Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	21.6	217.1	97.5	0.1	19.8	10.4	28,372.3
Building Erection/Finishing	6.5	35.7	45.9	0.0	2.8	2.5	6,796.5
Maximum Regional Emissions	**22**	**217**	**97**	**0**	**20**	**10**	**28,372**
Regional Significance Threshold	75	100	550	150	150	55	--
Exceed Threshold?	**No**	**Yes**	**No**	**No**	**No**	**No**	**No**

Notes:

URBEMIS print-out sheets and fugitive PM calculation worksheet are included in Appendix A.

[a] Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with SCAQMD Rule 403 requirements for fugitive dust suppression, which require that no visible dust be present beyond the site boundaries.

[b] The project site is located in SCAQMD SRA No. 19. These LSTs are based on the site location SRA, distance to nearest sensitive receptor location from the project site (25 meters), and project area that could be under construction on any given day (five acres).

GRADING PLAN 2 PHASE 2 MITIGATED CONSTRUCTION EMISSIONS (pounds per day)

	ROC	NO_X	CO	SO_X	PM_{10}[a]	$PM_{2.5}$[a]	CO_2
Demolition Emissions							
On-site Total	-	-	-	-	-	-	-
Fugitive Dust	-	-	-	-	-	-	-
Off-Road Diesel	-	-	-	-	-	-	-
Off-site Total	-	-	-	-	-	-	-
On-Road Diesel	-	-	-	-	-	-	-
Worker Trips	-	-	-	-	-	-	-
Grand Total	-	-	-	-	-	-	-
Site Grading Emissions							
On-site Total	3.44	49.05	60.68	-	12.63	4.11	13,009.24
Fugitive Dust	-	-	-	-	10.57	2.22	-
Off-Road Diesel	3.44	49.05	60.68	-	2.05	1.89	13,009.24
Off-site Total	7.19	88.45	36.81	0.14	4.01	3.38	15,363.03
On-Road Diesel	7.11	88.29	34.09	0.14	3.98	3.37	14,989.99
Worker Trip	0.08	0.16	2.72	-	0.03	0.01	373.04
Grand Total	**10.63**	**137.50**	**97.49**	**0.14**	**16.64**	**7.49**	**28,372.27**
Building Erection/Finishing Emissions							
On-site Total	1.40	13.07	22.53	-	1.32	1.21	3,531.32
Off-Road Diesel, Bldg Cnst	0.80	7.85	13.62	-	0.73	0.67	2,259.28
Arch Coatings Off-Gas	-	-	-	-	-	-	-
Asphalt Off-Gas	0.10	-	-	-	-	-	-
Off-Road Diesel, Asphalt	0.50	5.22	8.91	-	0.59	0.54	1,272.04
Off-site Total	0.73	1.63	23.40	0.03	0.25	0.14	3,265.22
Worker Trips, Bldg Cnst	0.65	1.23	21.59	0.03	0.22	0.12	2,957.42
Vendor Trips, Bldg Cnst	-	-	-	-	-	-	-
Worker Trips, Arch Coatings	-	-	-	-	-	-	-
On-Road Diesel, Asphalt	0.03	0.31	0.12	-	0.01	0.01	59.14
Worker Trips, Asphalt	0.05	0.09	1.69	-	0.02	0.01	248.66
Grand Total	**2.13**	**14.70**	**45.93**	**0.03**	**1.57**	**1.35**	**6,796.54**
On-site Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	3.4	49.0	60.7	-	12.6	4.1	13,009.2
Building Erection/Finishing	1.4	13.1	22.5	-	1.3	1.2	3,531.3
Maximum On-site Emissions	**3**	**49**	**61**	**-**	**13**	**4**	**13,009**
Localized Significance Threshold[b]	--	197	1,830	--	12	8	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**Yes**	**No**	**No**
Regional Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	10.6	137.5	97.5	0.1	16.6	7.5	28,372.3
Building Erection/Finishing	2.1	14.7	45.9	0.0	1.6	1.4	6,796.5
Maximum Regional Emissions	**11**	**137**	**97**	**0**	**17**	**7**	**28,372**
Regional Significance Threshold	75	100	550	150	150	55	--
Exceed Threshold?	**No**	**Yes**	**No**	**No**	**No**	**No**	**No**

Notes:

URBEMIS print-out sheets and fugitive PM calculation worksheet are included in Appendix A.

[a] Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with SCAQMD Rule 403 requirements for fugitive dust suppression, which require that no visible dust be present beyond the site boundaries.

[b] The project site is located in SCAQMD SRA No. 19. These LSTs are based on the site location SRA, distance to nearest sensitive receptor location from the project site (25 meters), and project area that could be under construction on any given day (five acres).

Grading Plan 2 Phase 2
On-site Construction PM10 Emissions

Summary of On-Site Fugitive PM_{10} Emissions

5.0	Dirt pushing emissions
1.1	Dirt/materials handling emissions
4.5	Unpaved surface travel emissions
10.6	**On-site Emissions Total**

Estimating Emissions from Dirt Pushing or Bulldozing Operations [a]

$E = ([0.45 \times (\{[G]^{1.5}\}/\{[H]^{1.4}\})] \times I) \times J$

Where,

E = PM_{10} emissions from dirt pushing
G = Silt content of aggregate in percent
H = Moisture content of the surface material
I = 2.2046; a conversion factor to convert kilograms per hour to pounds per hour
J = Hours of dirt pushing

G =	7.5	I =	2.2046
H =	12.0	J =	8.0
E =	**5.03**		

[a] SCAQMD 1993; CEQA Air Quality Handbook, Table A9-9-F

Estimating Emissions from Dirt Piling or Material Handling [b]

$E = [0.00112 \times (\{[G/5]^{1.3}\}/\{[H/2]^{1.4}\})] \times [I/J]$

Where,

E = PM_{10} emissions from dirt piling or materials handling
G = Mean wind speed in miles per hour
H = Moisture content of the surface material
I = Pounds of dirt handled per day
J = 2,000; a conversion factor to convert pounds to tons

G =	3.4	I =	62,256
H =	12%	J =	2,000
E =	**1.08**		

[b] SCAQMD 1993; CEQA Air Quality Handbook, Table A9-9-G

Estimating Emissions from Vehicle Travel on Unpaved Roads [c]

E = V x F

Where,

E = Emissions for vehicles on unpaved roads
V = Vehicle miles traveled
F = Emissions factor for vehicle travel on unpaved roads.
2.1 x [G/12] x H/30] x {[J/3]0.7} x {[I/4]0.5} x {[365 - K]/365} in pounds per miles traveled

Where,

G = Surface silt loading in percent
H = Mean vehicle speed in miles per hour
I = Mean number of wheels on vehicles
J = Mean vehicle weight in tons
K = Mean number of days per year with at least 0.01 inch of precipitation

G =	7.5	J =	15
H =	5.0	K =	34
I =	6		
F =	0.75	Uncontroled emissions factor	
	(0.51)	Rule 403 control efficency (68 percent)	
	0.24	Controlled emissions factor	
	18.60	On-site VMT	
E =	**4.46**		

[c] SCAQMD 1993; CEQA Air Quality Handbook, Table A9-9-D

Phase I - Demolition

Quantity	Equipment	Unit HP	Total HP	Weighting	Actual Emissions Reductions (percent)			Weighted Emissions Reductions (percent)		
					NOx	ROG	PM	NOx	ROG	PM
0	Aerial Lifts	60	0	0%	56%	84%	50%	0%	0%	0%
0	Air Compressors	106	0	0%	54%	77%	44%	0%	0%	0%
0	Bore/Drill Rigs	291	0	0%	54%	76%	62%	0%	0%	0%
0	Cement and Mortar Mixers	10	0	0%	56%	84%	50%	0%	0%	0%
0	Concrete/Industrial Saws	10	0	0%	56%	84%	50%	0%	0%	0%
0	Cranes	399	0	0%	55%	76%	61%	0%	0%	0%
0	Crawler Tractor	147	0	0%	54%	77%	44%	0%	0%	0%
0	Crushing/Processing Equip	142	0	0%	54%	77%	44%	0%	0%	0%
0	Dumpers/Tenders	16	0	0%	56%	84%	50%	0%	0%	0%
0	Excavators	168	0	0%	54%	77%	44%	0%	0%	0%
0	Forklifts	145	0	0%	54%	77%	44%	0%	0%	0%
0	Generator Sets	49	0	0%	56%	84%	50%	0%	0%	0%
0	Graders	174	0	0%	54%	77%	44%	0%	0%	0%
0	Off Highway Tractors	267	0	0%	54%	76%	62%	0%	0%	0%
0	Off Highway Trucks	479	0	0%	55%	76%	61%	0%	0%	0%
0	Other Equipment	190	0	0%	54%	76%	62%	0%	0%	0%
0	Other General Light Industrial Equipment	238	0	0%	54%	76%	62%	0%	0%	0%
0	Other Material Handling Equipment	191	0	0%	54%	76%	62%	0%	0%	0%
0	Pavers	100	0	0%	54%	77%	44%	0%	0%	0%
0	Paving Equipment	104	0	0%	54%	77%	44%	0%	0%	0%
0	Plate Compactors	8	0	0%	56%	84%	50%	0%	0%	0%
0	Pressure Washers	1	0	0%	56%	84%	50%	0%	0%	0%
0	Pumps	53	0	0%	56%	84%	50%	0%	0%	0%
0	Rollers	95	0	0%	54%	77%	44%	0%	0%	0%
0	Rough Terrain Forklifts	93	0	0%	54%	77%	44%	0%	0%	0%
0	Rubber Tired Dozers	357	0	0%	55%	76%	61%	0%	0%	0%
0	Rubber Tired Loaders	164	0	0%	54%	77%	44%	0%	0%	0%
0	Scrapers	313	0	0%	55%	76%	61%	0%	0%	0%
0	Signal Boards	15	0	0%	56%	84%	50%	0%	0%	0%
0	Skid Steer Loaders	44	0	0%	56%	84%	50%	0%	0%	0%
0	Surfacing Equipment	362	0	0%	55%	76%	61%	0%	0%	0%
0	Sweepers/Scrubbers	91	0	0%	56%	84%	50%	0%	0%	0%
0	Tractors/Loaders/Backhoes	108	0	0%	54%	77%	44%	0%	0%	0%
0	Trenchers	63	0	0%	56%	84%	50%	0%	0%	0%
0	Water Trucks	189	0	0%	54%	76%	62%	0%	0%	0%
0	Welders	45	0	0%	56%	84%	50%	0%	0%	0%
0	**Piece(s) of Equipment**	**Total HP**	**0**	**0%**				**0%**	**0%**	**0%**

Phase II - Site Grading

Quantity	Equipment	Unit HP	Total HP	Weighting	Actual Emissions Reductions (percent)			Weighted Emissions Reductions (percent)		
					NOx	ROG	PM	NOx	ROG	PM
0	Aerial Lifts	60	0	0%	56%	84%	50%	0%	0%	0%
0	Air Compressors	106	0	0%	54%	77%	44%	0%	0%	0%
0	Bore/Drill Rigs	291	0	0%	54%	76%	62%	0%	0%	0%
0	Cement and Mortar Mixers	10	0	0%	56%	84%	50%	0%	0%	0%
0	Concrete/Industrial Saws	10	0	0%	56%	84%	50%	0%	0%	0%
0	Cranes	399	0	0%	55%	76%	61%	0%	0%	0%
0	Crawler Tractor	147	0	0%	54%	77%	44%	0%	0%	0%
0	Crushing/Processing Equip	142	0	0%	54%	77%	44%	0%	0%	0%
0	Dumpers/Tenders	16	0	0%	56%	84%	50%	0%	0%	0%
0	Excavators	168	0	0%	54%	77%	44%	0%	0%	0%
0	Forklifts	145	0	0%	54%	77%	44%	0%	0%	0%
0	Generator Sets	49	0	0%	56%	84%	50%	0%	0%	0%
1	Graders	174	174	5%	54%	77%	44%	2%	3%	2%
1	Off Highway Tractors	267	267	7%	54%	76%	62%	4%	5%	4%
0	Off Highway Trucks	479	0	0%	55%	76%	61%	0%	0%	0%
0	Other Equipment	190	0	0%	54%	76%	62%	0%	0%	0%
0	Other General Light Industrial Equipment	238	0	0%	54%	76%	62%	0%	0%	0%
0	Other Material Handling Equipment	191	0	0%	54%	76%	62%	0%	0%	0%
0	Pavers	100	0	0%	54%	77%	44%	0%	0%	0%
0	Paving Equipment	104	0	0%	54%	77%	44%	0%	0%	0%
0	Plate Compactors	8	0	0%	56%	84%	50%	0%	0%	0%
0	Pressure Washers	1	0	0%	56%	84%	50%	0%	0%	0%
0	Pumps	53	0	0%	56%	84%	50%	0%	0%	0%
0	Rollers	95	0	0%	54%	77%	44%	0%	0%	0%
0	Rough Terrain Forklifts	93	0	0%	54%	77%	44%	0%	0%	0%
3	Rubber Tired Dozers	357	1071	28%	55%	76%	61%	15%	21%	17%
0	Rubber Tired Loaders	164	0	0%	54%	77%	44%	0%	0%	0%
5	Scrapers	313	1565	41%	55%	76%	61%	23%	31%	25%
0	Signal Boards	15	0	0%	56%	84%	50%	0%	0%	0%
0	Skid Steer Loaders	44	0	0%	56%	84%	50%	0%	0%	0%
0	Surfacing Equipment	362	0	0%	55%	76%	61%	0%	0%	0%
0	Sweepers/Scrubbers	91	0	0%	56%	84%	50%	0%	0%	0%
0	Tractors/Loaders/Backhoes	108	0	0%	54%	77%	44%	0%	0%	0%
0	Trenchers	63	0	0%	56%	84%	50%	0%	0%	0%
4	Water Trucks	189	756	20%	54%	76%	62%	11%	15%	12%
0	Welders	45	0	0%	56%	84%	50%	0%	0%	0%
14	**Piece(s) of Equipment**	**Total HP**	**3833**	**100%**				**55%**	**76%**	**60%**

Phase III - Building Equipment

Quantity	Equipment	Unit HP	Total HP	Weighting	Actual Emissions Reductions (percent)			Weighted Emissions Reductions (percent)		
					NOx	ROG	PM	NOx	ROG	PM
0	Aerial Lifts	60	0	0%	56%	84%	50%	0%	0%	0%
0	Air Compressors	106	0	0%	54%	77%	44%	0%	0%	0%
0	Bore/Drill Rigs	291	0	0%	54%	76%	62%	0%	0%	0%
4	Cement and Mortar Mixers	10	40	2%	56%	84%	50%	1%	2%	1%
0	Concrete/Industrial Saws	10	0	0%	56%	84%	50%	0%	0%	0%
1	Cranes	399	399	24%	55%	76%	61%	13%	18%	15%
0	Crawler Tractor	147	0	0%	54%	77%	44%	0%	0%	0%
0	Crushing/Processing Equip	142	0	0%	54%	77%	44%	0%	0%	0%
0	Dumpers/Tenders	16	0	0%	56%	84%	50%	0%	0%	0%
0	Excavators	168	0	0%	54%	77%	44%	0%	0%	0%
3	Forklifts	145	435	26%	54%	77%	44%	14%	20%	12%
1	Generator Sets	49	49	3%	56%	84%	50%	2%	2%	1%
0	Graders	174	0	0%	54%	77%	44%	0%	0%	0%
0	Off Highway Tractors	267	0	0%	54%	76%	62%	0%	0%	0%
0	Off Highway Trucks	479	0	0%	55%	76%	61%	0%	0%	0%
0	Other Equipment	190	0	0%	54%	76%	62%	0%	0%	0%
0	Other General Light Industrial Equipment	238	0	0%	54%	76%	62%	0%	0%	0%
0	Other Material Handling Equipment	191	0	0%	54%	76%	62%	0%	0%	0%
1	Pavers	100	100	6%	54%	77%	44%	3%	5%	3%
1	Paving Equipment	104	104	6%	54%	77%	44%	3%	5%	3%
0	Plate Compactors	8	0	0%	56%	84%	50%	0%	0%	0%
0	Pressure Washers	1	0	0%	56%	84%	50%	0%	0%	0%
0	Pumps	53	0	0%	56%	84%	50%	0%	0%	0%
1	Rollers	95	95	6%	54%	77%	44%	3%	4%	3%
0	Rough Terrain Forklifts	93	0	0%	54%	77%	44%	0%	0%	0%
0	Rubber Tired Dozers	357	0	0%	55%	76%	61%	0%	0%	0%
0	Rubber Tired Loaders	164	0	0%	54%	77%	44%	0%	0%	0%
0	Scrapers	313	0	0%	55%	76%	61%	0%	0%	0%
0	Signal Boards	15	0	0%	56%	84%	50%	0%	0%	0%
0	Skid Steer Loaders	44	0	0%	56%	84%	50%	0%	0%	0%
0	Surfacing Equipment	362	0	0%	55%	76%	61%	0%	0%	0%
0	Sweepers/Scrubbers	91	0	0%	56%	84%	50%	0%	0%	0%
4	Tractors/Loaders/Backhoes	108	432	26%	54%	77%	44%	14%	20%	12%
0	Trenchers	63	0	0%	56%	84%	50%	0%	0%	0%
0	Water Trucks	189	0	0%	54%	76%	62%	0%	0%	0%
0	Welders	45	0	0%	56%	84%	50%	0%	0%	0%
16	**Piece(s) of Equipment**	**Total HP**	**1654**	**100%**				**55%**	**77%**	**49%**

GRADING PLAN 2 PHASE 3 UNMITIGATED CONSTRUCTION EMISSIONS (pounds per day)

	ROC	NO_X	CO	SO_X	PM_{10} [a]	$PM_{2.5}$ [a]	CO_2
Demolition Emissions							
On-site Total	-	-	-	-	-	-	-
Fugitive Dust	-	-	-	-	-	-	-
Off-Road Diesel	-	-	-	-	-	-	-
Off-site Total	-	-	-	-	-	-	-
On-Road Diesel	-	-	-	-	-	-	-
Worker Trips	-	-	-	-	-	-	-
Grand Total	-	-	-	-	-	-	-
Site Grading Emissions							
On-site Total	9.19	77.29	37.13	-	13.52	5.03	8,917.58
Fugitive Dust	-	-	-	-	10.43	2.19	-
Off-Road Diesel	9.19	77.29	37.13	-	3.09	2.84	8,917.58
Off-site Total	1.80	20.62	9.77	0.04	0.95	0.77	4,791.57
On-Road Diesel	1.75	20.52	8.00	0.04	0.93	0.76	4,511.85
Worker Trip	0.05	0.10	1.77	-	0.02	0.01	279.72
Grand Total	**10.99**	**97.91**	**46.90**	**0.04**	**14.47**	**5.80**	**13,709.15**
Building Erection/Finishing Emissions							
On-site Total	5.35	31.30	22.88	-	2.22	2.04	3,677.72
Off-Road Diesel, Bldg Cnst	2.93	17.65	13.06	-	1.11	1.02	2,259.28
Arch Coatings Off-Gas	-	-	-	-	-	-	-
Asphalt Off-Gas	0.22	-	-	-	-	-	-
Off-Road Diesel, Asphalt	2.20	13.65	9.82	-	1.11	1.02	1,418.44
Off-site Total	0.70	1.76	23.40	0.04	0.32	0.18	4,068.11
Worker Trips, Bldg Cnst	0.61	1.17	21.55	0.04	0.28	0.15	3,661.54
Vendor Trips, Bldg Cnst	-	-	-	-	-	-	-
Worker Trips, Arch Coatings	-	-	-	-	-	-	-
On-Road Diesel, Asphalt	0.04	0.50	0.20	-	0.02	0.02	126.88
Worker Trips, Asphalt	0.05	0.09	1.65	-	0.02	0.01	279.69
Grand Total	**6.05**	**33.06**	**46.28**	**0.04**	**2.54**	**2.22**	**7,745.83**
On-site Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	9.2	77.3	37.1	-	13.5	5.0	8,917.6
Building Erection/Finishing	5.4	31.3	22.9	-	2.2	2.0	3,677.7
Maximum On-site Emissions	**9**	**77**	**37**	**-**	**14**	**5**	**8,918**
Localized Significance Threshold [b]	--	197	1,830	--	12	8	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**Yes**	**No**	**No**
Regional Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	11.0	97.9	46.9	0.0	14.5	5.8	13,709.2
Building Erection/Finishing	6.1	33.1	46.3	0.0	2.5	2.2	7,745.8
Maximum Regional Emissions	**11**	**98**	**47**	**0**	**14**	**6**	**13,709**
Regional Significance Threshold	75	100	550	150	150	55	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Notes:

URBEMIS print-out sheets and fugitive PM calculation worksheet are included in Appendix A.

[a] Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with SCAQMD Rule 403 requirements for fugitive dust suppression, which require that no visible dust be present beyond the site boundaries.

[b] The project site is located in SCAQMD SRA No. 19. These LSTs are based on the site location SRA, distance to nearest sensitive receptor location from the project site (25 meters), and project area that could be under construction on any given day (five acres).

GRADING PLAN 2 PHASE 3 MITIGATED CONSTRUCTION EMISSIONS (pounds per day)

	ROC	NO_X	CO	SO_X	PM_{10}[a]	$PM_{2.5}$[a]	CO_2
Demolition Emissions							
On-site Total	-	-	-	-	-	-	-
Fugitive Dust	-	-	-	-	-	-	-
Off-Road Diesel	-	-	-	-	-	-	-
Off-site Total	-	-	-	-	-	-	-
On-Road Diesel	-	-	-	-	-	-	-
Worker Trips	-	-	-	-	-	-	-
Grand Total	-	-	-	-	-	-	-
Site Grading Emissions							
On-site Total	2.19	29.49	37.13	-	11.67	3.33	8,917.58
Fugitive Dust	-	-	-	-	10.43	2.19	-
Off-Road Diesel	2.19	29.49	37.13	-	1.24	1.14	8,917.58
Off-site Total	1.80	20.62	9.77	0.04	0.95	0.77	4,791.57
On-Road Diesel	1.75	20.52	8.00	0.04	0.93	0.76	4,511.85
Worker Trip	0.05	0.10	1.77	-	0.02	0.01	279.72
Grand Total	**3.99**	**50.11**	**46.90**	**0.04**	**12.62**	**4.10**	**13,709.15**
Building Erection/Finishing Emissions							
On-site Total	1.40	12.03	22.88	-	1.14	1.05	3,677.72
Off-Road Diesel, Bldg Cnst	0.67	6.78	13.06	-	0.57	0.53	2,259.28
Arch Coatings Off-Gas	-	-	-	-	-	-	-
Asphalt Off-Gas	0.22	-	-	-	-	-	-
Off-Road Diesel, Asphalt	0.50	5.25	9.82	-	0.57	0.53	1,418.44
Off-site Total	0.70	1.76	23.40	0.04	0.32	0.18	4,068.11
Worker Trips, Bldg Cnst	0.61	1.17	21.55	0.04	0.28	0.15	3,661.54
Vendor Trips, Bldg Cnst	-	-	-	-	-	-	-
Worker Trips, Arch Coatings	-	-	-	-	-	-	-
On-Road Diesel, Asphalt	0.04	0.50	0.20	-	0.02	0.02	126.88
Worker Trips, Asphalt	0.05	0.09	1.65	-	0.02	0.01	279.69
Grand Total	**2.10**	**13.79**	**46.28**	**0.04**	**1.46**	**1.23**	**7,745.83**
On-site Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	2.2	29.5	37.1	-	11.7	3.3	8,917.6
Building Erection/Finishing	1.4	12.0	22.9	-	1.1	1.1	3,677.7
Maximum On-site Emissions	**2**	**29**	**37**	**-**	**12**	**3**	**8,918**
Localized Significance Threshold[b]	--	197	1,830	--	12	8	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**
Regional Emissions Totals							
Demolition	-	-	-	-	-	-	-
Site Grading	4.0	50.1	46.9	0.0	12.6	4.1	13,709.2
Building Erection/Finishing	2.1	13.8	46.3	0.0	1.5	1.2	7,745.8
Maximum Regional Emissions	**4**	**50**	**47**	**0**	**13**	**4**	**13,709**
Regional Significance Threshold	75	100	550	150	150	55	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Notes:

URBEMIS print-out sheets and fugitive PM calculation worksheet are included in Appendix A.

[a] Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with SCAQMD Rule 403 requirements for fugitive dust suppression, which require that no visible dust be present beyond the site boundaries.

[b] The project site is located in SCAQMD SRA No. 19. These LSTs are based on the site location SRA, distance to nearest sensitive receptor location from the project site (25 meters), and project area that could be under construction on any given day (five acres).

Grading Plan 2 Phase 3
On-site Construction PM10 Emissions

Summary of On-Site Fugitive PM_{10} Emissions

5.0	Dirt pushing emissions
0.5	Dirt/materials handling emissions
4.9	Unpaved surface travel emissions
10.4	**On-site Emissions Total**

Estimating Emissions from Dirt Pushing or Bulldozing Operations [a]

$E = ([0.45 \times (\{[G]^{1.5}\}/\{[H]^{1.4}\})] \times I) \times J$

Where,

E = PM_{10} emissions from dirt pushing
G = Silt content of aggregate in percent
H = Moisture content of the surface material
I = 2.2046; a conversion factor to convert kilograms per hour to pounds per hour
J = Hours of dirt pushing

G =	7.5	I =	2.2046
H =	12.0	J =	8.0
E =	**5.03**		

[a] SCAQMD 1993; CEQA Air Quality Handbook, Table A9-9-F

Estimating Emissions from Dirt Piling or Material Handling [b]

$E = [0.00112 \times (\{[G/5]^{1.3}\}/\{[H/2]^{1.4}\})] \times [I/J]$

Where,

E = PM_{10} emissions from dirt piling or materials handling
G = Mean wind speed in miles per hour
H = Moisture content of the surface material
I = Pounds of dirt handled per day
J = 2,000; a conversion factor to convert pounds to tons

G =	3.4	I =	26,065
H =	12%	J =	2,000
E =	**0.45**		

[b] SCAQMD 1993; CEQA Air Quality Handbook, Table A9-9-G

Estimating Emissions from Vehicle Travel on Unpaved Roads [c]

E = V x F

Where,

E = Emissions for vehicles on unpaved roads
V = Vehicle miles traveled
F = Emissions factor for vehicle travel on unpaved roads.
2.1 x [G/12] x H/30] x {[J/3]0.7} x {[I/4]0.5} x {[365 - K]/365} in pounds per miles traveled

Where,

G = Surface silt loading in percent
H = Mean vehicle speed in miles per hour
I = Mean number of wheels on vehicles
J = Mean vehicle weight in tons
K = Mean number of days per year with at least 0.01 inch of precipitation

G =	7.5	J =	15
H =	5.0	K =	34
I =	6		
F =	0.75	Uncontroled emissions factor	
	(0.51)	Rule 403 control efficency (68 percent)	
	0.24	Controlled emissions factor	
	20.62	On-site VMT	
E =	**4.95**		

[c] SCAQMD 1993; CEQA Air Quality Handbook, Table A9-9-D

Phase I - Demolition

Quantity	Equipment	Unit HP	Total HP	Weighting	Actual Emissions Reductions (percent)			Weighted Emissions Reductions (percent)		
					NOx	ROG	PM	NOx	ROG	PM
0	Aerial Lifts	60	0	0%	56%	84%	50%	0%	0%	0%
0	Air Compressors	106	0	0%	54%	77%	44%	0%	0%	0%
0	Bore/Drill Rigs	291	0	0%	54%	76%	62%	0%	0%	0%
0	Cement and Mortar Mixers	10	0	0%	56%	84%	50%	0%	0%	0%
0	Concrete/Industrial Saws	10	0	0%	56%	84%	50%	0%	0%	0%
0	Cranes	399	0	0%	55%	76%	61%	0%	0%	0%
0	Crawler Tractor	147	0	0%	54%	77%	44%	0%	0%	0%
0	Crushing/Processing Equip	142	0	0%	54%	77%	44%	0%	0%	0%
0	Dumpers/Tenders	16	0	0%	56%	84%	50%	0%	0%	0%
0	Excavators	168	0	0%	54%	77%	44%	0%	0%	0%
0	Forklifts	145	0	0%	54%	77%	44%	0%	0%	0%
0	Generator Sets	49	0	0%	56%	84%	50%	0%	0%	0%
0	Graders	174	0	0%	54%	77%	44%	0%	0%	0%
0	Off Highway Tractors	267	0	0%	54%	76%	62%	0%	0%	0%
0	Off Highway Trucks	479	0	0%	55%	76%	61%	0%	0%	0%
0	Other Equipment	190	0	0%	54%	76%	62%	0%	0%	0%
0	Other General Light Industrial Equipment	238	0	0%	54%	76%	62%	0%	0%	0%
0	Other Material Handling Equipment	191	0	0%	54%	76%	62%	0%	0%	0%
0	Pavers	100	0	0%	54%	77%	44%	0%	0%	0%
0	Paving Equipment	104	0	0%	54%	77%	44%	0%	0%	0%
0	Plate Compactors	8	0	0%	56%	84%	50%	0%	0%	0%
0	Pressure Washers	1	0	0%	56%	84%	50%	0%	0%	0%
0	Pumps	53	0	0%	56%	84%	50%	0%	0%	0%
0	Rollers	95	0	0%	54%	77%	44%	0%	0%	0%
0	Rough Terrain Forklifts	93	0	0%	54%	77%	44%	0%	0%	0%
0	Rubber Tired Dozers	357	0	0%	55%	76%	61%	0%	0%	0%
0	Rubber Tired Loaders	164	0	0%	54%	77%	44%	0%	0%	0%
0	Scrapers	313	0	0%	55%	76%	61%	0%	0%	0%
0	Signal Boards	15	0	0%	56%	84%	50%	0%	0%	0%
0	Skid Steer Loaders	44	0	0%	56%	84%	50%	0%	0%	0%
0	Surfacing Equipment	362	0	0%	55%	76%	61%	0%	0%	0%
0	Sweepers/Scrubbers	91	0	0%	56%	84%	50%	0%	0%	0%
0	Tractors/Loaders/Backhoes	108	0	0%	54%	77%	44%	0%	0%	0%
0	Trenchers	63	0	0%	56%	84%	50%	0%	0%	0%
0	Water Trucks	189	0	0%	54%	76%	62%	0%	0%	0%
0	Welders	45	0	0%	56%	84%	50%	0%	0%	0%
0	**Piece(s) of Equipment**	**Total HP**	**0**	**0%**				**0%**	**0%**	**0%**

Phase II - Site Grading

Quantity	Equipment	Unit HP	Total HP	Weighting	Actual Emissions Reductions (percent)			Weighted Emissions Reductions (percent)		
					NOx	ROG	PM	NOx	ROG	PM
0	Aerial Lifts	60	0	0%	56%	84%	50%	0%	0%	0%
0	Air Compressors	106	0	0%	54%	77%	44%	0%	0%	0%
0	Bore/Drill Rigs	291	0	0%	54%	76%	62%	0%	0%	0%
0	Cement and Mortar Mixers	10	0	0%	56%	84%	50%	0%	0%	0%
0	Concrete/Industrial Saws	10	0	0%	56%	84%	50%	0%	0%	0%
0	Cranes	399	0	0%	55%	76%	61%	0%	0%	0%
0	Crawler Tractor	147	0	0%	54%	77%	44%	0%	0%	0%
0	Crushing/Processing Equip	142	0	0%	54%	77%	44%	0%	0%	0%
0	Dumpers/Tenders	16	0	0%	56%	84%	50%	0%	0%	0%
0	Excavators	168	0	0%	54%	77%	44%	0%	0%	0%
0	Forklifts	145	0	0%	54%	77%	44%	0%	0%	0%
0	Generator Sets	49	0	0%	56%	84%	50%	0%	0%	0%
1	Graders	174	174	7%	54%	77%	44%	4%	5%	3%
1	Off Highway Tractors	267	267	11%	54%	76%	62%	6%	8%	7%
0	Off Highway Trucks	479	0	0%	55%	76%	61%	0%	0%	0%
0	Other Equipment	190	0	0%	54%	76%	62%	0%	0%	0%
0	Other General Light Industrial Equipment	238	0	0%	54%	76%	62%	0%	0%	0%
0	Other Material Handling Equipment	191	0	0%	54%	76%	62%	0%	0%	0%
0	Pavers	100	0	0%	54%	77%	44%	0%	0%	0%
0	Paving Equipment	104	0	0%	54%	77%	44%	0%	0%	0%
0	Plate Compactors	8	0	0%	56%	84%	50%	0%	0%	0%
0	Pressure Washers	1	0	0%	56%	84%	50%	0%	0%	0%
0	Pumps	53	0	0%	56%	84%	50%	0%	0%	0%
0	Rollers	95	0	0%	54%	77%	44%	0%	0%	0%
0	Rough Terrain Forklifts	93	0	0%	54%	77%	44%	0%	0%	0%
2	Rubber Tired Dozers	357	714	29%	55%	76%	61%	16%	22%	18%
0	Rubber Tired Loaders	164	0	0%	54%	77%	44%	0%	0%	0%
3	Scrapers	313	939	38%	55%	76%	61%	21%	29%	23%
0	Signal Boards	15	0	0%	56%	84%	50%	0%	0%	0%
0	Skid Steer Loaders	44	0	0%	56%	84%	50%	0%	0%	0%
0	Surfacing Equipment	362	0	0%	55%	76%	61%	0%	0%	0%
0	Sweepers/Scrubbers	91	0	0%	56%	84%	50%	0%	0%	0%
0	Tractors/Loaders/Backhoes	108	0	0%	54%	77%	44%	0%	0%	0%
0	Trenchers	63	0	0%	56%	84%	50%	0%	0%	0%
2	Water Trucks	189	378	15%	54%	76%	62%	8%	12%	9%
0	Welders	45	0	0%	56%	84%	50%	0%	0%	0%
9	**Piece(s) of Equipment**	**Total HP**	**2472**	**100%**				**55%**	**76%**	**60%**

Phase III - Building Equipment

Quantity	Equipment	Unit HP	Total HP	Weighting	Actual Emissions Reductions (percent)			Weighted Emissions Reductions (percent)		
					NOx	ROG	PM	NOx	ROG	PM
0	Aerial Lifts	60	0	0%	56%	84%	50%	0%	0%	0%
0	Air Compressors	106	0	0%	54%	77%	44%	0%	0%	0%
0	Bore/Drill Rigs	291	0	0%	54%	76%	62%	0%	0%	0%
4	Cement and Mortar Mixers	10	40	2%	56%	84%	50%	1%	2%	1%
0	Concrete/Industrial Saws	10	0	0%	56%	84%	50%	0%	0%	0%
1	Cranes	399	399	23%	55%	76%	61%	13%	17%	14%
0	Crawler Tractor	147	0	0%	54%	77%	44%	0%	0%	0%
0	Crushing/Processing Equip	142	0	0%	54%	77%	44%	0%	0%	0%
0	Dumpers/Tenders	16	0	0%	56%	84%	50%	0%	0%	0%
0	Excavators	168	0	0%	54%	77%	44%	0%	0%	0%
3	Forklifts	145	435	25%	54%	77%	44%	13%	19%	11%
1	Generator Sets	49	49	3%	56%	84%	50%	2%	2%	1%
0	Graders	174	0	0%	54%	77%	44%	0%	0%	0%
0	Off Highway Tractors	267	0	0%	54%	76%	62%	0%	0%	0%
0	Off Highway Trucks	479	0	0%	55%	76%	61%	0%	0%	0%
0	Other Equipment	190	0	0%	54%	76%	62%	0%	0%	0%
0	Other General Light Industrial Equipment	238	0	0%	54%	76%	62%	0%	0%	0%
0	Other Material Handling Equipment	191	0	0%	54%	76%	62%	0%	0%	0%
1	Pavers	100	100	6%	54%	77%	44%	3%	4%	3%
2	Paving Equipment	104	208	12%	54%	77%	44%	6%	9%	5%
0	Plate Compactors	8	0	0%	56%	84%	50%	0%	0%	0%
0	Pressure Washers	1	0	0%	56%	84%	50%	0%	0%	0%
0	Pumps	53	0	0%	56%	84%	50%	0%	0%	0%
1	Rollers	95	95	5%	54%	77%	44%	3%	4%	2%
0	Rough Terrain Forklifts	93	0	0%	54%	77%	44%	0%	0%	0%
0	Rubber Tired Dozers	357	0	0%	55%	76%	61%	0%	0%	0%
0	Rubber Tired Loaders	164	0	0%	54%	77%	44%	0%	0%	0%
0	Scrapers	313	0	0%	55%	76%	61%	0%	0%	0%
0	Signal Boards	15	0	0%	56%	84%	50%	0%	0%	0%
0	Skid Steer Loaders	44	0	0%	56%	84%	50%	0%	0%	0%
0	Surfacing Equipment	362	0	0%	55%	76%	61%	0%	0%	0%
0	Sweepers/Scrubbers	91	0	0%	56%	84%	50%	0%	0%	0%
4	Tractors/Loaders/Backhoes	108	432	25%	54%	77%	44%	13%	19%	11%
0	Trenchers	63	0	0%	56%	84%	50%	0%	0%	0%
0	Water Trucks	189	0	0%	54%	76%	62%	0%	0%	0%
0	Welders	45	0	0%	56%	84%	50%	0%	0%	0%
17	**Piece(s) of Equipment**	**Total HP**	**1758**	**100%**				**55%**	**77%**	**48%**

ALTERNATIVE 7 UNMITIGATED CONSTRUCTION EMISSIONS (pounds per day)

	ROC	NO_X	CO	SO_X	PM_{10}[a]	$PM_{2.5}$[a]	CO_2
Demolition Emissions							
On-site Total	-	-	-	-	-	-	-
Fugitive Dust	-	-	-	-	-	-	-
Off-Road Diesel	-	-	-	-	-	-	-
Off-site Total	-	-	-	-	-	-	-
On-Road Diesel	-	-	-	-	-	-	-
Worker Trips	-	-	-	-	-	-	-
Grand Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Site Grading Emissions							
On-site Total	14.01	127.63	58.83	-	66.23	17.48	12,348.01
Fugitive Dust	-	-	-	-	61.10	12.76	-
Off-Road Diesel	14.01	127.63	58.83	-	5.13	4.72	12,348.01
Off-site Total	0.12	0.23	3.90	0.01	0.04	0.02	497.47
On-Road Diesel	-	-	-	-	-	-	-
Worker Trip	0.12	0.23	3.90	0.01	0.04	0.02	497.47
Grand Total	**14.13**	**127.86**	**62.73**	**0.01**	**66.27**	**17.50**	**12,845.48**
Building Erection/Finishing Emissions							
On-site Total	30.15	35.33	22.05	-	2.74	2.52	3,391.20
Off-Road Diesel, Bldg Cnst	3.77	21.85	13.95	-	1.57	1.45	2,259.28
Arch Coatings Off-Gas	23.68	-	-	-	-	-	-
Asphalt Off-Gas	0.47	-	-	-	-	-	-
Off-Road Diesel, Asphalt	2.23	13.48	8.10	-	1.17	1.07	1,131.92
Off-site Total	14.31	130.68	204.29	0.38	7.03	5.54	38,991.13
Worker Trips, Bldg Cnst	3.49	6.57	113.34	0.15	1.08	0.58	14,448.35
Vendor Trips, Bldg Cnst	10.64	122.42	88.51	0.23	5.86	4.89	24,023.46
Worker Trips, Arch Coatings	-	-	-	-	-	-	-
On-Road Diesel, Asphalt	0.13	1.59	0.62	-	0.07	0.06	270.63
Worker Trips, Asphalt	0.05	0.10	1.82	-	0.02	0.01	248.69
Grand Total	**44.46**	**166.01**	**226.34**	**0.38**	**9.77**	**8.06**	**42,382.33**
On-site Emissions Totals							
Site Grading	14.0	127.6	58.8	-	66.2	17.5	12,348.0
Building Erection/Finishing	30.2	35.3	22.1	-	2.7	2.5	3,391.2
Maximum Concurrent	17.8	149.5	72.8	-	67.8	18.9	14,607.3
Maximum On-site Emissions	**30**	**149**	**73**	**-**	**68**	**19**	**14,607**
Localized Significance Threshold[b]	--	197	1,830	--	12	8	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**Yes**	**Yes**	**No**
Regional Emissions Totals							
Site Grading	14.1	127.9	62.7	0.0	66.3	17.5	12,845.5
Building Erection/Finishing	44.5	166.0	226.3	0.4	9.8	8.1	42,382.3
Maximum Concurrent	32.0	278.7	278.5	0.4	74.8	24.4	53,576.6
Maximum Regional Emissions	**44**	**279**	**279**	**0**	**75**	**24**	**53,577**
Regional Significance Threshold	75	100	550	150	150	55	--
Exceed Threshold?	**No**	**Yes**	**No**	**No**	**No**	**No**	**No**

Notes:

URBEMIS print-out sheets and fugitive PM calculation worksheet are included in Appendix A.

[a] Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with SCAQMD Rule 403 requirements for fugitive dust suppression, which require that no visible dust be present beyond the site boundaries.

[b] The project site is located in SCAQMD SRA No. 19. These LSTs are based on the site location SRA, distance to nearest sensitive receptor location from the project site (25 meters), and project area that could be under construction on any given day (five acres).

ALTERNATIVE 7 MITIGATED CONSTRUCTION EMISSIONS (pounds per day)

	ROC	NO_X	CO	SO_X	PM_{10}[a]	$PM_{2.5}$[a]	CO_2
Demolition Emissions							
On-site Total	-	-	-	-	-	-	-
Fugitive Dust	-	-	-	-	-	-	-
Off-Road Diesel	-	-	-	-	-	-	-
Off-site Total	-	-	-	-	-	-	-
On-Road Diesel	-	-	-	-	-	-	-
Worker Trips	-	-	-	-	-	-	-
Grand Total	-	-	-	-	-	-	-
Site Grading Emissions							
On-site Total	3.34	48.70	58.83	-	63.14	14.64	12,348.01
Fugitive Dust	-	-	-	-	61.10	12.76	-
Off-Road Diesel	3.34	48.70	58.83	-	2.04	1.88	12,348.01
Off-site Total	0.12	0.23	3.90	0.01	0.04	0.02	497.47
On-Road Diesel	-	-	-	-	-	-	-
Worker Trip	0.12	0.23	3.90	0.01	0.04	0.02	497.47
Grand Total	**3**	**49**	**63**	**0**	**63**	**15**	**12,845**
Building Erection/Finishing Emissions							
On-site Total	25.52	13.56	22.05	-	1.40	1.29	3,391.20
Off-Road Diesel, Bldg Cnst	0.86	8.38	13.95	-	0.80	0.74	2,259.28
Arch Coatings Off-Gas	23.68	-	-	-	-	-	-
Asphalt Off-Gas	0.47	-	-	-	-	-	-
Off-Road Diesel, Asphalt	0.51	5.17	8.10	-	0.60	0.55	1,131.92
Off-site Total	14.31	130.68	204.29	0.38	7.03	5.54	38,991.13
Worker Trips, Bldg Cnst	3.49	6.57	113.34	0.15	1.08	0.58	14,448.35
Vendor Trips, Bldg Cnst	10.64	122.42	88.51	0.23	5.86	4.89	24,023.46
Worker Trips, Arch Coatings	-	-	-	-	-	-	-
On-Road Diesel, Asphalt	0.13	1.59	0.62	-	0.07	0.06	270.63
Worker Trips, Asphalt	0.05	0.10	1.82	-	0.02	0.01	248.69
Grand Total	**40**	**144**	**226**	**0**	**8**	**7**	**42,382**
On-site Emissions Totals							
Site Grading	3.3	48.7	58.8	-	63.1	14.6	12,348.0
Building Erection/Finishing	25.5	13.6	22.1	-	1.4	1.3	3,391.2
Maximum Concurrent	4.2	57.1	72.8	-	63.9	15.4	14,607.3
Maximum On-site Emissions	**26**	**57**	**73**	**-**	**64**	**15**	**14,607**
Localized Significance Threshold[b]	--	197	1,830	--	12	8	--
Exceed Threshold?	**No**	**No**	**No**	**No**	**Yes**	**Yes**	**No**
Regional Emissions Totals							
Site Grading	3.5	48.9	62.7	0.0	63.2	14.7	12,845.5
Building Erection/Finishing	39.8	144.2	226.3	0.4	8.4	6.8	42,382.3
Maximum Concurrent	18.4	186.3	278.5	0.4	70.9	20.9	53,576.6
Maximum Regional Emissions	**40**	**186**	**279**	**0**	**71**	**21**	**53,577**
Regional Significance Threshold	75	100	550	150	150	55	--
Exceed Threshold?	**No**	**Yes**	**No**	**No**	**No**	**No**	**No**

Notes:

URBEMIS print-out sheets and fugitive PM calculation worksheet are included in Appendix A.

[a] Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with SCAQMD Rule 403 requirements for fugitive dust suppression, which require that no visible dust be present beyond the site boundaries.

[b] The project site is located in SCAQMD SRA No. 19. These LSTs are based on the site location SRA, distance to nearest sensitive receptor location from the project site (25 meters), and project area that could be under construction on any given day (five acres).

Phase I - Demolition

Quantity	Equipment	Unit HP	Total HP	Weighting	Actual Emissions Reductions (percent)			Weighted Emissions Reductions (percent)		
					NOx	ROG	PM	NOx	ROG	PM
0	Aerial Lifts	60	0	0%	56%	84%	50%	0%	0%	0%
0	Air Compressors	106	0	0%	54%	77%	44%	0%	0%	0%
0	Bore/Drill Rigs	291	0	0%	54%	76%	62%	0%	0%	0%
0	Cement and Mortar Mixers	10	0	0%	56%	84%	50%	0%	0%	0%
0	Concrete/Industrial Saws	10	0	0%	56%	84%	50%	0%	0%	0%
0	Cranes	399	0	0%	55%	76%	61%	0%	0%	0%
0	Crawler Tractor	147	0	0%	54%	77%	44%	0%	0%	0%
0	Crushing/Processing Equip	142	0	0%	54%	77%	44%	0%	0%	0%
0	Dumpers/Tenders	16	0	0%	56%	84%	50%	0%	0%	0%
0	Excavators	168	0	0%	54%	77%	44%	0%	0%	0%
0	Forklifts	145	0	0%	54%	77%	44%	0%	0%	0%
0	Generator Sets	49	0	0%	56%	84%	50%	0%	0%	0%
0	Graders	174	0	0%	54%	77%	44%	0%	0%	0%
0	Off Highway Tractors	267	0	0%	54%	76%	62%	0%	0%	0%
0	Off Highway Trucks	479	0	0%	55%	76%	61%	0%	0%	0%
0	Other Equipment	190	0	0%	54%	76%	62%	0%	0%	0%
0	Other General Light Industrial Equipment	238	0	0%	54%	76%	62%	0%	0%	0%
0	Other Material Handling Equipment	191	0	0%	54%	76%	62%	0%	0%	0%
0	Pavers	100	0	0%	54%	77%	44%	0%	0%	0%
0	Paving Equipment	104	0	0%	54%	77%	44%	0%	0%	0%
0	Plate Compactors	8	0	0%	56%	84%	50%	0%	0%	0%
0	Pressure Washers	1	0	0%	56%	84%	50%	0%	0%	0%
0	Pumps	53	0	0%	56%	84%	50%	0%	0%	0%
0	Rollers	95	0	0%	54%	77%	44%	0%	0%	0%
0	Rough Terrain Forklifts	93	0	0%	54%	77%	44%	0%	0%	0%
0	Rubber Tired Dozers	357	0	0%	55%	76%	61%	0%	0%	0%
0	Rubber Tired Loaders	164	0	0%	54%	77%	44%	0%	0%	0%
0	Scrapers	313	0	0%	55%	76%	61%	0%	0%	0%
0	Signal Boards	15	0	0%	56%	84%	50%	0%	0%	0%
0	Skid Steer Loaders	44	0	0%	56%	84%	50%	0%	0%	0%
0	Surfacing Equipment	362	0	0%	55%	76%	61%	0%	0%	0%
0	Sweepers/Scrubbers	91	0	0%	56%	84%	50%	0%	0%	0%
0	Tractors/Loaders/Backhoes	108	0	0%	54%	77%	44%	0%	0%	0%
0	Trenchers	63	0	0%	56%	84%	50%	0%	0%	0%
0	Water Trucks	189	0	0%	54%	76%	62%	0%	0%	0%
0	Welders	45	0	0%	56%	84%	50%	0%	0%	0%
0	**Piece(s) of Equipment**	**Total HP**	**0**	**0%**				**0%**	**0%**	**0%**

Phase II - Site Grading

Quantity	Equipment	Unit HP	Total HP	Weighting	Actual Emissions Reductions (percent)			Weighted Emissions Reductions (percent)		
					NOx	ROG	PM	NOx	ROG	PM
0	Aerial Lifts	60	0	0%	56%	84%	50%	0%	0%	0%
0	Air Compressors	106	0	0%	54%	77%	44%	0%	0%	0%
0	Bore/Drill Rigs	291	0	0%	54%	76%	62%	0%	0%	0%
0	Cement and Mortar Mixers	10	0	0%	56%	84%	50%	0%	0%	0%
0	Concrete/Industrial Saws	10	0	0%	56%	84%	50%	0%	0%	0%
0	Cranes	399	0	0%	55%	76%	61%	0%	0%	0%
0	Crawler Tractor	147	0	0%	54%	77%	44%	0%	0%	0%
0	Crushing/Processing Equip	142	0	0%	54%	77%	44%	0%	0%	0%
0	Dumpers/Tenders	16	0	0%	56%	84%	50%	0%	0%	0%
0	Excavators	168	0	0%	54%	77%	44%	0%	0%	0%
0	Forklifts	145	0	0%	54%	77%	44%	0%	0%	0%
0	Generator Sets	49	0	0%	56%	84%	50%	0%	0%	0%
1	Graders	174	174	5%	54%	77%	44%	3%	4%	2%
1	Off Highway Tractors	267	267	8%	54%	76%	62%	4%	6%	5%
0	Off Highway Trucks	479	0	0%	55%	76%	61%	0%	0%	0%
0	Other Equipment	190	0	0%	54%	76%	62%	0%	0%	0%
0	Other General Light Industrial Equipment	238	0	0%	54%	76%	62%	0%	0%	0%
0	Other Material Handling Equipment	191	0	0%	54%	76%	62%	0%	0%	0%
0	Pavers	100	0	0%	54%	77%	44%	0%	0%	0%
0	Paving Equipment	104	0	0%	54%	77%	44%	0%	0%	0%
3	Plate Compactors	8	24	1%	56%	84%	50%	0%	1%	0%
0	Pressure Washers	1	0	0%	56%	84%	50%	0%	0%	0%
0	Pumps	53	0	0%	56%	84%	50%	0%	0%	0%
0	Rollers	95	0	0%	54%	77%	44%	0%	0%	0%
0	Rough Terrain Forklifts	93	0	0%	54%	77%	44%	0%	0%	0%
2	Rubber Tired Dozers	357	714	20%	55%	76%	61%	11%	16%	12%
0	Rubber Tired Loaders	164	0	0%	54%	77%	44%	0%	0%	0%
5	Scrapers	313	1565	45%	55%	76%	61%	25%	34%	27%
0	Signal Boards	15	0	0%	56%	84%	50%	0%	0%	0%
0	Skid Steer Loaders	44	0	0%	56%	84%	50%	0%	0%	0%
0	Surfacing Equipment	362	0	0%	55%	76%	61%	0%	0%	0%
0	Sweepers/Scrubbers	91	0	0%	56%	84%	50%	0%	0%	0%
0	Tractors/Loaders/Backhoes	108	0	0%	54%	77%	44%	0%	0%	0%
0	Trenchers	63	0	0%	56%	84%	50%	0%	0%	0%
4	Water Trucks	189	756	22%	54%	76%	62%	12%	16%	13%
0	Welders	45	0	0%	56%	84%	50%	0%	0%	0%
16	**Piece(s) of Equipment**	**Total HP**	**3500**	**100%**				**55%**	**76%**	**60%**

Phase III - Building Equipment

Quantity	Equipment	Unit HP	Total HP	Weighting	Actual Emissions Reductions (percent)			Weighted Emissions Reductions (percent)		
					NOx	ROG	PM	NOx	ROG	PM
0	Aerial Lifts	60	0	0%	56%	84%	50%	0%	0%	0%
0	Air Compressors	106	0	0%	54%	77%	44%	0%	0%	0%
0	Bore/Drill Rigs	291	0	0%	54%	76%	62%	0%	0%	0%
4	Cement and Mortar Mixers	10	40	3%	56%	84%	50%	1%	2%	1%
0	Concrete/Industrial Saws	10	0	0%	56%	84%	50%	0%	0%	0%
1	Cranes	399	399	25%	55%	76%	61%	14%	19%	15%
0	Crawler Tractor	147	0	0%	54%	77%	44%	0%	0%	0%
0	Crushing/Processing Equip	142	0	0%	54%	77%	44%	0%	0%	0%
0	Dumpers/Tenders	16	0	0%	56%	84%	50%	0%	0%	0%
0	Excavators	168	0	0%	54%	77%	44%	0%	0%	0%
3	Forklifts	145	435	27%	54%	77%	44%	15%	21%	12%
1	Generator Sets	49	49	3%	56%	84%	50%	2%	3%	2%
0	Graders	174	0	0%	54%	77%	44%	0%	0%	0%
0	Off Highway Tractors	267	0	0%	54%	76%	62%	0%	0%	0%
0	Off Highway Trucks	479	0	0%	55%	76%	61%	0%	0%	0%
0	Other Equipment	190	0	0%	54%	76%	62%	0%	0%	0%
0	Other General Light Industrial Equipment	238	0	0%	54%	76%	62%	0%	0%	0%
0	Other Material Handling Equipment	191	0	0%	54%	76%	62%	0%	0%	0%
1	Pavers	100	100	6%	54%	77%	44%	3%	5%	3%
2	Paving Equipment	104	208	13%	54%	77%	44%	7%	10%	6%
0	Plate Compactors	8	0	0%	56%	84%	50%	0%	0%	0%
0	Pressure Washers	1	0	0%	56%	84%	50%	0%	0%	0%
0	Pumps	53	0	0%	56%	84%	50%	0%	0%	0%
0	Rollers	95	0	0%	54%	77%	44%	0%	0%	0%
0	Rough Terrain Forklifts	93	0	0%	54%	77%	44%	0%	0%	0%
0	Rubber Tired Dozers	357	0	0%	55%	76%	61%	0%	0%	0%
0	Rubber Tired Loaders	164	0	0%	54%	77%	44%	0%	0%	0%
0	Scrapers	313	0	0%	55%	76%	61%	0%	0%	0%
0	Signal Boards	15	0	0%	56%	84%	50%	0%	0%	0%
0	Skid Steer Loaders	44	0	0%	56%	84%	50%	0%	0%	0%
0	Surfacing Equipment	362	0	0%	55%	76%	61%	0%	0%	0%
0	Sweepers/Scrubbers	91	0	0%	56%	84%	50%	0%	0%	0%
3	Tractors/Loaders/Backhoes	108	324	20%	54%	77%	44%	11%	16%	9%
0	Trenchers	63	0	0%	56%	84%	50%	0%	0%	0%
0	Water Trucks	189	0	0%	54%	76%	62%	0%	0%	0%
1	Welders	45	45	3%	56%	84%	50%	2%	2%	1%
16	**Piece(s) of Equipment**	**Total HP**	**1600**	**100%**				**55%**	**77%**	**49%**

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: G:\Los Angeles\3_Projects_Air Quality\City of Lake Forest Sports Park\Impact Analysis\URBEMIS\Lake Forest GP1P1.urb924

Project Name: Lake Forest Sports Park Grading Plan 1 - Phase 1

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2010 TOTALS (lbs/day unmitigated)	14.99	135.84	67.20	0.01	0.02	5.68	5.70	0.01	5.22	5.23	12,845.59
2011 TOTALS (lbs/day unmitigated)	14.13	127.85	62.74	0.05	0.22	5.14	5.16	0.08	4.73	4.74	12,845.48
2012 TOTALS (lbs/day unmitigated)	2.51	14.18	10.14	0.00	0.02	1.20	1.21	0.01	1.10	1.11	1,481.91

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

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Time Slice 8/2/2010-12/31/2010 Active Days: 131	**14.99**	**135.84**	**67.20**	0.01	0.02	**5.68**	**5.70**	0.01	**5.22**	**5.23**	**12,845.59**
Mass Grading 08/01/2010-01/31/2011	14.99	135.84	67.20	0.01	0.02	5.68	5.70	0.01	5.22	5.23	12,845.59
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	14.85	135.60	63.00	0.00	0.00	5.66	5.66	0.00	5.21	5.21	12,348.01
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.13	0.25	4.19	0.01	0.02	0.01	0.04	0.01	0.01	0.02	497.58
Time Slice 1/1/2011-1/31/2011 Active Days: 26	14.13	127.85	62.74	0.01	0.02	5.14	5.16	0.01	4.73	4.74	12,845.48
Mass Grading 08/01/2010-01/31/2011	14.13	127.85	62.74	0.01	0.02	5.14	5.16	0.01	4.73	4.74	12,845.48
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	14.01	127.63	58.83	0.00	0.00	5.13	5.13	0.00	4.72	4.72	12,348.01
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.12	0.23	3.90	0.01	0.02	0.01	0.04	0.01	0.01	0.02	497.47
Time Slice 2/1/2011-12/31/2011 Active Days: 287	4.90	23.98	50.71	**0.05**	**0.22**	1.70	1.92	**0.08**	1.56	1.64	6,946.46
Building 02/01/2011-12/31/2011	4.90	23.98	50.71	0.05	0.22	1.70	1.92	0.08	1.56	1.64	6,946.46
Building Off Road Diesel	3.77	21.85	13.95	0.00	0.00	1.57	1.57	0.00	1.45	1.45	2,259.28
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	1.13	2.13	36.77	0.05	0.22	0.13	0.35	0.08	0.11	0.19	4,687.18

Time Slice 1/2/2012-3/31/2012 Active Days: 78	2.51	14.18	10.14	0.00	0.02	1.20	1.21	0.01	1.10	1.11	1,481.91
Asphalt 01/01/2012-03/31/2012	2.51	14.18	10.14	0.00	0.02	1.20	1.21	0.01	1.10	1.11	1,481.91
Paving Off-Gas	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.23	13.48	8.10	0.00	0.00	1.17	1.17	0.00	1.07	1.07	1,131.92
Paving On Road Diesel	0.05	0.60	0.23	0.00	0.00	0.02	0.03	0.00	0.02	0.02	101.30
Paving Worker Trips	0.05	0.10	1.82	0.00	0.01	0.01	0.02	0.00	0.01	0.01	248.69

Phase Assumptions

Phase: Mass Grading 8/1/2010 - 1/31/2011 - Phase 1

Total Acres Disturbed: 34.3

Maximum Daily Acreage Disturbed: 5

Fugitive Dust Level of Detail: Default

0 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Off Highway Tractors (267 hp) operating at a 0.65 load factor for 8 hours per day

3 Plate Compactors (8 hp) operating at a 0.43 load factor for 8 hours per day

2 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

5 Scrapers (313 hp) operating at a 0.72 load factor for 7 hours per day

4 Water Trucks (189 hp) operating at a 0.5 load factor for 4 hours per day

Phase: Paving 1/1/2012 - 3/31/2012 - Phase 1

Acres to be Paved: 5.26

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 2/1/2011 - 12/31/2011 - Phase 1

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: G:\Los Angeles\3_Projects_Air Quality\City of Lake Forest Sports Park\Impact Analysis\URBEMIS\Lake Forest GP1P1.urb924

Project Name: Lake Forest Sports Park Grading Plan 1 - Phase 1

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2010 TOTALS (tons/year unmitigated)	0.98	8.90	4.40	0.00	0.00	0.37	0.37	0.00	0.34	0.34	841.39
2011 TOTALS (tons/year unmitigated)	0.89	5.10	8.09	0.01	0.03	0.31	0.34	0.01	0.28	0.30	1,163.81
2012 TOTALS (tons/year unmitigated)	0.10	0.55	0.40	0.00	0.00	0.05	0.05	0.00	0.04	0.04	57.79

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

2010	0.98	8.90	4.40	0.00	0.00	0.37	0.37	0.00	0.34	0.34	841.39
Mass Grading 08/01/2010-01/31/2011	0.98	8.90	4.40	0.00	0.00	0.37	0.37	0.00	0.34	0.34	841.39
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	0.97	8.88	4.13	0.00	0.00	0.37	0.37	0.00	0.34	0.34	808.79
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.01	0.02	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	32.59
2011	0.89	5.10	8.09	0.01	0.03	0.31	0.34	0.01	0.28	0.30	1,163.81
Mass Grading 08/01/2010-01/31/2011	0.18	1.66	0.82	0.00	0.00	0.07	0.07	0.00	0.06	0.06	166.99
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	0.18	1.66	0.76	0.00	0.00	0.07	0.07	0.00	0.06	0.06	160.52
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.47
Building 02/01/2011-12/31/2011	0.70	3.44	7.28	0.01	0.03	0.24	0.28	0.01	0.22	0.23	996.82
Building Off Road Diesel	0.54	3.13	2.00	0.00	0.00	0.23	0.23	0.00	0.21	0.21	324.21
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.16	0.31	5.28	0.01	0.03	0.02	0.05	0.01	0.02	0.03	672.61
2012	0.10	0.55	0.40	0.00	0.00	0.05	0.05	0.00	0.04	0.04	57.79
Asphalt 01/01/2012-03/31/2012	0.10	0.55	0.40	0.00	0.00	0.05	0.05	0.00	0.04	0.04	57.79
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.09	0.53	0.32	0.00	0.00	0.05	0.05	0.00	0.04	0.04	44.14
Paving On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.95
Paving Worker Trips	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.70

Phase Assumptions

Phase: Mass Grading 8/1/2010 - 1/31/2011 - Phase 1

Total Acres Disturbed: 34.3

Maximum Daily Acreage Disturbed: 5

Fugitive Dust Level of Detail: Default

0 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Off Highway Tractors (267 hp) operating at a 0.65 load factor for 8 hours per day

3 Plate Compactors (8 hp) operating at a 0.43 load factor for 8 hours per day

2 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

5 Scrapers (313 hp) operating at a 0.72 load factor for 7 hours per day

4 Water Trucks (189 hp) operating at a 0.5 load factor for 4 hours per day

Phase: Paving 1/1/2012 - 3/31/2012 - Phase 1

Acres to be Paved: 5.26

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 2/1/2011 - 12/31/2011 - Phase 1

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

4/1/2010 3:20:07 PM

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: G:\Los Angeles\3_Projects_Air Quality\City of Lake Forest Sports Park\Impact Analysis\URBEMIS\Lake Forest GP1P2.urb924

Project Name: Lake Forest Sports Park Grading Plan 1 - Phase 2

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (lbs/day unmitigated)	15.16	152.50	68.73	0.10	0.37	6.11	6.49	0.12	5.62	5.75	20,061.61
2013 TOTALS (lbs/day unmitigated)	3.78	20.16	33.40	0.03	0.14	1.35	1.49	0.05	1.23	1.28	5,216.35

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

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Time Slice 5/1/2012-10/31/2012 Active Days: 158	**15.16**	**152.50**	**68.73**	**0.10**	**0.37**	**6.11**	**6.49**	**0.12**	**5.62**	**5.75**	**20,061.61**
Mass Grading 05/01/2012-10/31/2012	15.16	152.50	68.73	0.10	0.37	6.11	6.49	0.12	5.62	5.75	20,061.61
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	9.94	88.39	41.98	0.00	0.00	3.58	3.58	0.00	3.30	3.30	8,917.58
Mass Grading On Road Diesel	5.15	63.99	24.71	0.10	0.36	2.52	2.89	0.12	2.32	2.44	10,864.26
Mass Grading Worker Trips	0.06	0.12	2.04	0.00	0.01	0.01	0.02	0.00	0.01	0.01	279.78
Time Slice 11/1/2012-12/31/2012 Active Days: 52	4.13	21.66	35.21	0.03	0.14	1.50	1.64	0.05	1.38	1.43	5,216.70
Building 11/01/2012-08/31/2013	4.13	21.66	35.21	0.03	0.14	1.50	1.64	0.05	1.38	1.43	5,216.70
Building Off Road Diesel	3.48	20.42	13.62	0.00	0.00	1.42	1.42	0.00	1.31	1.31	2,259.28
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.65	1.23	21.59	0.03	0.14	0.08	0.22	0.05	0.07	0.12	2,957.42
Time Slice 1/1/2013-8/31/2013 Active Days: 209	3.78	20.16	33.40	0.03	0.14	1.35	1.49	0.05	1.23	1.28	5,216.35
Building 11/01/2012-08/31/2013	3.78	20.16	33.40	0.03	0.14	1.35	1.49	0.05	1.23	1.28	5,216.35
Building Off Road Diesel	3.19	19.04	13.34	0.00	0.00	1.26	1.26	0.00	1.16	1.16	2,259.28
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.59	1.12	20.06	0.03	0.14	0.08	0.22	0.05	0.07	0.12	2,957.07
Time Slice 9/2/2013-10/31/2013 Active Days: 52	2.37	14.00	10.72	0.00	0.01	1.16	1.18	0.00	1.07	1.08	1,579.83
Asphalt 09/01/2013-10/31/2013	2.37	14.00	10.72	0.00	0.01	1.16	1.18	0.00	1.07	1.08	1,579.83
Paving Off-Gas	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.19	13.60	8.91	0.00	0.00	1.15	1.15	0.00	1.05	1.05	1,272.04
Paving On Road Diesel	0.03	0.31	0.12	0.00	0.00	0.01	0.01	0.00	0.01	0.01	59.14
Paving Worker Trips	0.05	0.09	1.69	0.00	0.01	0.01	0.02	0.00	0.01	0.01	248.66

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Phase Assumptions

Phase: Mass Grading 5/1/2012 - 10/31/2012 - Phase 2

Total Acres Disturbed: 13.1

Maximum Daily Acreage Disturbed: 3.27

Fugitive Dust Level of Detail: Default

0 lbs per acre-day

On Road Truck Travel (VMT): 2563.29

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Off Highway Tractors (267 hp) operating at a 0.65 load factor for 8 hours per day

2 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

3 Scrapers (313 hp) operating at a 0.72 load factor for 7 hours per day

2 Water Trucks (189 hp) operating at a 0.5 load factor for 4 hours per day

Phase: Paving 9/1/2013 - 10/31/2013 - Phase 2

Acres to be Paved: 2.06

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 11/1/2012 - 8/31/2013 - Phase 2

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

4/1/2010 3:23:41 PM

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

4/1/2010 3:23:31 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: G:\Los Angeles\3_Projects_Air Quality\City of Lake Forest Sports Park\Impact Analysis\URBEMIS\Lake Forest GP1P2.urb924

Project Name: Lake Forest Sports Park Grading Plan 1 - Phase 2

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (tons/year unmitigated)	1.30	12.61	6.34	0.01	0.03	0.52	0.56	0.01	0.48	0.49	1,720.50
2013 TOTALS (tons/year unmitigated)	0.46	2.47	3.77	0.00	0.01	0.17	0.19	0.01	0.16	0.16	586.18

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

2012	1.30	12.61	6.34	0.01	0.03	0.52	0.56	0.01	0.48	0.49	1,720.50
Mass Grading 05/01/2012-10/31/2012	1.20	12.05	5.43	0.01	0.03	0.48	0.51	0.01	0.44	0.45	1,584.87
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	0.79	6.98	3.32	0.00	0.00	0.28	0.28	0.00	0.26	0.26	704.49
Mass Grading On Road Diesel	0.41	5.06	1.95	0.01	0.03	0.20	0.23	0.01	0.18	0.19	858.28
Mass Grading Worker Trips	0.00	0.01	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.10
Building 11/01/2012-08/31/2013	0.11	0.56	0.92	0.00	0.00	0.04	0.04	0.00	0.04	0.04	135.63
Building Off Road Diesel	0.09	0.53	0.35	0.00	0.00	0.04	0.04	0.00	0.03	0.03	58.74
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.02	0.03	0.56	0.00	0.00	0.00	0.01	0.00	0.00	0.00	76.89
2013	0.46	2.47	3.77	0.00	0.01	0.17	0.19	0.01	0.16	0.16	586.18
Building 11/01/2012-08/31/2013	0.40	2.11	3.49	0.00	0.01	0.14	0.16	0.01	0.13	0.13	545.11
Building Off Road Diesel	0.33	1.99	1.39	0.00	0.00	0.13	0.13	0.00	0.12	0.12	236.09
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.06	0.12	2.10	0.00	0.01	0.01	0.02	0.01	0.01	0.01	309.01
Asphalt 09/01/2013-10/31/2013	0.06	0.36	0.28	0.00	0.00	0.03	0.03	0.00	0.03	0.03	41.08
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.06	0.35	0.23	0.00	0.00	0.03	0.03	0.00	0.03	0.03	33.07
Paving On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.54
Paving Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.47

Phase Assumptions

Phase: Mass Grading 5/1/2012 - 10/31/2012 - Phase 2

Total Acres Disturbed: 13.1

4/1/2010 3:23:31 PM

Maximum Daily Acreage Disturbed: 3.27

Fugitive Dust Level of Detail: Default

0 lbs per acre-day

On Road Truck Travel (VMT): 2563.29

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Off Highway Tractors (267 hp) operating at a 0.65 load factor for 8 hours per day

2 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

3 Scrapers (313 hp) operating at a 0.72 load factor for 7 hours per day

2 Water Trucks (189 hp) operating at a 0.5 load factor for 4 hours per day

Phase: Paving 9/1/2013 - 10/31/2013 - Phase 2

Acres to be Paved: 2.06

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 11/1/2012 - 8/31/2013 - Phase 2

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: G:\Los Angeles\3_Projects_Air Quality\City of Lake Forest Sports Park\Impact Analysis\URBEMIS\Lake Forest GP1P3.urb924

Project Name: Lake Forest Sports Park Grading Plan 1 - Phase 3

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2014 TOTALS (lbs/day unmitigated)	7.47	65.30	36.21	0.04	0.17	2.61	2.70	0.06	2.40	2.43	8,722.73
2015 TOTALS (lbs/day unmitigated)	3.30	17.35	34.35	0.04	0.17	1.14	1.31	0.06	1.05	1.10	5,920.82

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

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Time Slice 1/1/2014-6/30/2014 Active Days: 155	**7.47**	**65.30**	32.75	0.03	0.09	**2.61**	**2.70**	0.03	**2.40**	**2.43**	**8,722.73**
Mass Grading 01/01/2014-06/30/2014	7.47	65.30	32.75	0.03	0.09	2.61	2.70	0.03	2.40	2.43	8,722.73
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	6.48	54.15	27.06	0.00	0.00	2.19	2.19	0.00	2.01	2.01	6,071.51
Mass Grading On Road Diesel	0.94	11.07	4.31	0.02	0.08	0.42	0.50	0.03	0.39	0.41	2,433.66
Mass Grading Worker Trips	0.04	0.08	1.38	0.00	0.01	0.01	0.02	0.00	0.01	0.01	217.56
Time Slice 7/1/2014-12/31/2014 Active Days: 158	3.60	18.93	**36.21**	**0.04**	**0.17**	1.22	1.39	**0.06**	1.11	1.17	5,921.13
Building 07/01/2014-05/31/2015	3.60	18.93	36.21	0.04	0.17	1.22	1.39	0.06	1.11	1.17	5,921.13
Building Off Road Diesel	2.93	17.65	13.06	0.00	0.00	1.11	1.11	0.00	1.02	1.02	2,259.28
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.67	1.28	23.14	0.04	0.17	0.11	0.28	0.06	0.09	0.15	3,661.85
Time Slice 1/1/2015-5/30/2015 Active Days: 129	3.30	17.35	34.35	**0.04**	**0.17**	1.13	1.31	**0.06**	1.03	1.10	5,920.82
Building 07/01/2014-05/31/2015	3.30	17.35	34.35	0.04	0.17	1.13	1.31	0.06	1.03	1.10	5,920.82
Building Off Road Diesel	2.69	16.17	12.80	0.00	0.00	1.03	1.03	0.00	0.94	0.94	2,259.28
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.61	1.17	21.55	0.04	0.17	0.11	0.28	0.06	0.09	0.15	3,661.54
Time Slice 6/1/2015-7/31/2015 Active Days: 53	2.51	14.24	11.66	0.00	0.02	1.14	1.16	0.01	1.05	1.05	1,825.02
Asphalt 06/01/2015-07/31/2015	2.51	14.24	11.66	0.00	0.02	1.14	1.16	0.01	1.05	1.05	1,825.02
Paving Off-Gas	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.20	13.65	9.82	0.00	0.00	1.11	1.11	0.00	1.02	1.02	1,418.44
Paving On Road Diesel	0.04	0.50	0.20	0.00	0.00	0.02	0.02	0.00	0.02	0.02	126.88
Paving Worker Trips	0.05	0.09	1.65	0.00	0.01	0.01	0.02	0.00	0.01	0.01	279.69

4/1/2010 3:26:00 PM

Phase Assumptions

Phase: Mass Grading 1/1/2014 - 6/30/2014 - Phase 3

Total Acres Disturbed: 16.1

Maximum Daily Acreage Disturbed: 4.02

Fugitive Dust Level of Detail: Default

0 lbs per acre-day

On Road Truck Travel (VMT): 574.19

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Off Highway Tractors (267 hp) operating at a 0.65 load factor for 8 hours per day

2 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

1 Scrapers (313 hp) operating at a 0.72 load factor for 7 hours per day

2 Water Trucks (189 hp) operating at a 0.5 load factor for 4 hours per day

Phase: Paving 6/1/2015 - 7/31/2015 - Phase 3

Acres to be Paved: 4.42

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 7/1/2014 - 5/31/2015 - Phase 3

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

4/1/2010 3:26:00 PM

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: G:\Los Angeles\3_Projects_Air Quality\City of Lake Forest Sports Park\Impact Analysis\URBEMIS\Lake Forest GP1P3.urb924

Project Name: Lake Forest Sports Park Grading Plan 1 - Phase 3

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2014 TOTALS (tons/year unmitigated)	0.86	6.56	5.40	0.00	0.02	0.30	0.32	0.01	0.27	0.28	1,143.78
2015 TOTALS (tons/year unmitigated)	0.28	1.50	2.52	0.00	0.01	0.10	0.11	0.00	0.09	0.10	430.26

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

2014	0.86	6.56	5.40	0.00	0.02	0.30	0.32	0.01	0.27	0.28	1,143.78
Mass Grading 01/01/2014-06/30/2014	0.58	5.06	2.54	0.00	0.01	0.20	0.21	0.00	0.19	0.19	676.01
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	0.50	4.20	2.10	0.00	0.00	0.17	0.17	0.00	0.16	0.16	470.54
Mass Grading On Road Diesel	0.07	0.86	0.33	0.00	0.01	0.03	0.04	0.00	0.03	0.03	188.61
Mass Grading Worker Trips	0.00	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.86
Building 07/01/2014-05/31/2015	0.28	1.50	2.86	0.00	0.01	0.10	0.11	0.00	0.09	0.09	467.77
Building Off Road Diesel	0.23	1.39	1.03	0.00	0.00	0.09	0.09	0.00	0.08	0.08	178.48
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.05	0.10	1.83	0.00	0.01	0.01	0.02	0.00	0.01	0.01	289.29
2015	0.28	1.50	2.52	0.00	0.01	0.10	0.11	0.00	0.09	0.10	430.26
Building 07/01/2014-05/31/2015	0.21	1.12	2.22	0.00	0.01	0.07	0.08	0.00	0.07	0.07	381.89
Building Off Road Diesel	0.17	1.04	0.83	0.00	0.00	0.07	0.07	0.00	0.06	0.06	145.72
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.04	0.08	1.39	0.00	0.01	0.01	0.02	0.00	0.01	0.01	236.17
Asphalt 06/01/2015-07/31/2015	0.07	0.38	0.31	0.00	0.00	0.03	0.03	0.00	0.03	0.03	48.36
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.06	0.36	0.26	0.00	0.00	0.03	0.03	0.00	0.03	0.03	37.59
Paving On Road Diesel	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.36
Paving Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.41

Phase Assumptions

Phase: Mass Grading 1/1/2014 - 6/30/2014 - Phase 3

Total Acres Disturbed: 16.1

4/1/2010 3:25:49 PM

Maximum Daily Acreage Disturbed: 4.02

Fugitive Dust Level of Detail: Default

0 lbs per acre-day

On Road Truck Travel (VMT): 574.19

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Off Highway Tractors (267 hp) operating at a 0.65 load factor for 8 hours per day

2 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

1 Scrapers (313 hp) operating at a 0.72 load factor for 7 hours per day

2 Water Trucks (189 hp) operating at a 0.5 load factor for 4 hours per day

Phase: Paving 6/1/2015 - 7/31/2015 - Phase 3

Acres to be Paved: 4.42

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 7/1/2014 - 5/31/2015 - Phase 3

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

4/1/2010 3:28:24 PM

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: G:\Los Angeles\3_Projects_Air Quality\City of Lake Forest Sports Park\Impact Analysis\URBEMIS\Lake Forest GP2P1.urb924

Project Name: Lake Forest Sports Park Grading Plan 2 - Phase 1

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2010 TOTALS (lbs/day unmitigated)	31.38	324.18	144.70	0.17	0.60	13.41	14.02	0.20	12.34	12.54	35,783.37
2011 TOTALS (lbs/day unmitigated)	29.36	299.86	133.37	0.17	0.60	12.02	12.63	0.20	11.06	11.26	35,783.25
2012 TOTALS (lbs/day unmitigated)	2.51	14.18	10.14	0.00	0.02	1.20	1.21	0.01	1.10	1.11	1,481.91

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

4/1/2010 3:28:24 PM

Time Slice 8/2/2010-12/31/2010 Active Days: 131	**31.38**	**324.18**	**144.70**	**0.17**	**0.60**	**13.41**	**14.02**	**0.20**	**12.34**	**12.54**	**35,783.37**
Mass Grading 08/01/2010-01/31/2011	31.38	324.18	144.70	0.17	0.60	13.41	14.02	0.20	12.34	12.54	35,783.37
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	21.41	195.79	91.05	0.00	0.00	8.15	8.15	0.00	7.50	7.50	17,818.23
Mass Grading On Road Diesel	9.83	128.13	49.19	0.16	0.58	5.25	5.83	0.19	4.83	5.02	17,436.46
Mass Grading Worker Trips	0.14	0.26	4.45	0.01	0.02	0.01	0.04	0.01	0.01	0.02	528.68
Time Slice 1/1/2011-1/31/2011 Active Days: 26	29.36	299.86	133.37	**0.17**	**0.60**	12.02	12.63	**0.20**	11.06	11.26	35,783.25
Mass Grading 08/01/2010-01/31/2011	29.36	299.86	133.37	0.17	0.60	12.02	12.63	0.20	11.06	11.26	35,783.25
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	20.18	184.33	84.87	0.00	0.00	7.38	7.38	0.00	6.79	6.79	17,818.23
Mass Grading On Road Diesel	9.05	115.29	44.36	0.16	0.58	4.63	5.21	0.19	4.26	4.45	17,436.46
Mass Grading Worker Trips	0.13	0.24	4.15	0.01	0.02	0.01	0.04	0.01	0.01	0.02	528.56
Time Slice 2/1/2011-12/31/2011 Active Days: 287	4.90	23.98	50.71	0.05	0.22	1.70	1.92	0.08	1.56	1.64	6,946.46
Building 02/01/2011-12/31/2011	4.90	23.98	50.71	0.05	0.22	1.70	1.92	0.08	1.56	1.64	6,946.46
Building Off Road Diesel	3.77	21.85	13.95	0.00	0.00	1.57	1.57	0.00	1.45	1.45	2,259.28
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	1.13	2.13	36.77	0.05	0.22	0.13	0.35	0.08	0.11	0.19	4,687.18

Time Slice 1/2/2012-3/31/2012 Active Days: 78	2.51	14.18	10.14	0.00	0.02	1.20	1.21	0.01	1.10	1.11	1,481.91
Asphalt 01/01/2012-03/31/2012	2.51	14.18	10.14	0.00	0.02	1.20	1.21	0.01	1.10	1.11	1,481.91
Paving Off-Gas	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.23	13.48	8.10	0.00	0.00	1.17	1.17	0.00	1.07	1.07	1,131.92
Paving On Road Diesel	0.05	0.60	0.23	0.00	0.00	0.02	0.03	0.00	0.02	0.02	101.30
Paving Worker Trips	0.05	0.10	1.82	0.00	0.01	0.01	0.02	0.00	0.01	0.01	248.69

Phase Assumptions

Phase: Mass Grading 8/1/2010 - 1/31/2011 - Phase 1

Total Acres Disturbed: 34.3

Maximum Daily Acreage Disturbed: 5

Fugitive Dust Level of Detail: Default

0 lbs per acre-day

On Road Truck Travel (VMT): 4113.92

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Off Highway Tractors (267 hp) operating at a 0.65 load factor for 8 hours per day

3 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

8 Scrapers (313 hp) operating at a 0.72 load factor for 7 hours per day

4 Water Trucks (189 hp) operating at a 0.5 load factor for 4 hours per day

Phase: Paving 1/1/2012 - 3/31/2012 - Phase 1

Acres to be Paved: 5.26

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 2/1/2011 - 12/31/2011 - Phase 1

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

4/1/2010 3:28:15 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: G:\Los Angeles\3_Projects_Air Quality\City of Lake Forest Sports Park\Impact Analysis\URBEMIS\Lake Forest GP2P1.urb924

Project Name: Lake Forest Sports Park Grading Plan 2 - Phase 1

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2010 TOTALS (tons/year unmitigated)	2.06	21.23	9.48	0.01	0.04	0.88	0.92	0.01	0.81	0.82	2,343.81
2011 TOTALS (tons/year unmitigated)	1.08	7.34	9.01	0.01	0.04	0.40	0.44	0.01	0.37	0.38	1,462.00
2012 TOTALS (tons/year unmitigated)	0.10	0.55	0.40	0.00	0.00	0.05	0.05	0.00	0.04	0.04	57.79

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

2010	2.06	21.23	9.48	0.01	0.04	0.88	0.92	0.01	0.81	0.82	2,343.81
Mass Grading 08/01/2010-01/31/2011	2.06	21.23	9.48	0.01	0.04	0.88	0.92	0.01	0.81	0.82	2,343.81
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	1.40	12.82	5.96	0.00	0.00	0.53	0.53	0.00	0.49	0.49	1,167.09
Mass Grading On Road Diesel	0.64	8.39	3.22	0.01	0.04	0.34	0.38	0.01	0.32	0.33	1,142.09
Mass Grading Worker Trips	0.01	0.02	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34.63
2011	1.08	7.34	9.01	0.01	0.04	0.40	0.44	0.01	0.37	0.38	1,462.00
Mass Grading 08/01/2010-01/31/2011	0.38	3.90	1.73	0.00	0.01	0.16	0.16	0.00	0.14	0.15	465.18
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	0.26	2.40	1.10	0.00	0.00	0.10	0.10	0.00	0.09	0.09	231.64
Mass Grading On Road Diesel	0.12	1.50	0.58	0.00	0.01	0.06	0.07	0.00	0.06	0.06	226.67
Mass Grading Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.87
Building 02/01/2011-12/31/2011	0.70	3.44	7.28	0.01	0.03	0.24	0.28	0.01	0.22	0.23	996.82
Building Off Road Diesel	0.54	3.13	2.00	0.00	0.00	0.23	0.23	0.00	0.21	0.21	324.21
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.16	0.31	5.28	0.01	0.03	0.02	0.05	0.01	0.02	0.03	672.61
2012	0.10	0.55	0.40	0.00	0.00	0.05	0.05	0.00	0.04	0.04	57.79
Asphalt 01/01/2012-03/31/2012	0.10	0.55	0.40	0.00	0.00	0.05	0.05	0.00	0.04	0.04	57.79
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.09	0.53	0.32	0.00	0.00	0.05	0.05	0.00	0.04	0.04	44.14
Paving On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.95
Paving Worker Trips	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.70

Phase Assumptions

Phase: Mass Grading 8/1/2010 - 1/31/2011 - Phase 1

Total Acres Disturbed: 34.3

Maximum Daily Acreage Disturbed: 5

Fugitive Dust Level of Detail: Default

0 lbs per acre-day

On Road Truck Travel (VMT): 4113.92

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Off Highway Tractors (267 hp) operating at a 0.65 load factor for 8 hours per day

3 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

8 Scrapers (313 hp) operating at a 0.72 load factor for 7 hours per day

4 Water Trucks (189 hp) operating at a 0.5 load factor for 4 hours per day

Phase: Paving 1/1/2012 - 3/31/2012 - Phase 1

Acres to be Paved: 5.26

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 2/1/2011 - 12/31/2011 - Phase 1

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: G:\Los Angeles\3_Projects_Air Quality\City of Lake Forest Sports Park\Impact Analysis\URBEMIS\Lake Forest GP2P2.urb924

Project Name: Lake Forest Sports Park Grading Plan 2 - Phase 2

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (lbs/day unmitigated)	21.61	217.07	97.49	0.14	0.52	8.67	9.19	0.17	7.98	8.15	28,372.27
2013 TOTALS (lbs/day unmitigated)	3.78	20.16	33.40	0.03	0.14	1.35	1.49	0.05	1.23	1.28	5,216.35

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

4/1/2010 3:30:12 PM

Time Slice 5/1/2012-10/31/2012 Active Days: 158	**21.61**	**217.07**	**97.49**	**0.14**	**0.52**	**8.67**	**9.19**	**0.17**	**7.98**	**8.15**	**28,372.27**
Mass Grading 05/01/2012-10/31/2012	21.61	217.07	97.49	0.14	0.52	8.67	9.19	0.17	7.98	8.15	28,372.27
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	14.42	128.62	60.68	0.00	0.00	5.18	5.18	0.00	4.77	4.77	13,009.24
Mass Grading On Road Diesel	7.11	88.29	34.09	0.14	0.50	3.48	3.98	0.16	3.20	3.37	14,989.99
Mass Grading Worker Trips	0.08	0.16	2.72	0.00	0.02	0.01	0.03	0.01	0.01	0.01	373.04
Time Slice 11/1/2012-12/31/2012 Active Days: 52	4.13	21.66	35.21	0.03	0.14	1.50	1.64	0.05	1.38	1.43	5,216.70
Building 11/01/2012-08/31/2013	4.13	21.66	35.21	0.03	0.14	1.50	1.64	0.05	1.38	1.43	5,216.70
Building Off Road Diesel	3.48	20.42	13.62	0.00	0.00	1.42	1.42	0.00	1.31	1.31	2,259.28
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.65	1.23	21.59	0.03	0.14	0.08	0.22	0.05	0.07	0.12	2,957.42
Time Slice 1/1/2013-8/31/2013 Active Days: 209	3.78	20.16	33.40	0.03	0.14	1.35	1.49	0.05	1.23	1.28	5,216.35
Building 11/01/2012-08/31/2013	3.78	20.16	33.40	0.03	0.14	1.35	1.49	0.05	1.23	1.28	5,216.35
Building Off Road Diesel	3.19	19.04	13.34	0.00	0.00	1.26	1.26	0.00	1.16	1.16	2,259.28
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.59	1.12	20.06	0.03	0.14	0.08	0.22	0.05	0.07	0.12	2,957.07
Time Slice 9/2/2013-10/31/2013 Active Days: 52	2.37	14.00	10.72	0.00	0.01	1.16	1.18	0.00	1.07	1.08	1,579.83
Asphalt 09/01/2013-10/31/2013	2.37	14.00	10.72	0.00	0.01	1.16	1.18	0.00	1.07	1.08	1,579.83
Paving Off-Gas	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.19	13.60	8.91	0.00	0.00	1.15	1.15	0.00	1.05	1.05	1,272.04
Paving On Road Diesel	0.03	0.31	0.12	0.00	0.00	0.01	0.01	0.00	0.01	0.01	59.14
Paving Worker Trips	0.05	0.09	1.69	0.00	0.01	0.01	0.02	0.00	0.01	0.01	248.66

Phase Assumptions

Phase: Mass Grading 5/1/2012 - 10/31/2012 - Phase 2

Total Acres Disturbed: 13.1

Maximum Daily Acreage Disturbed: 3.27

Fugitive Dust Level of Detail: Default

0 lbs per acre-day

On Road Truck Travel (VMT): 3536.71

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Off Highway Tractors (267 hp) operating at a 0.65 load factor for 8 hours per day

3 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

5 Scrapers (313 hp) operating at a 0.72 load factor for 7 hours per day

2 Water Trucks (189 hp) operating at a 0.5 load factor for 4 hours per day

Phase: Paving 9/1/2013 - 10/31/2013 - Phase 2

Acres to be Paved: 2.06

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 11/1/2012 - 8/31/2013 - Phase 2

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

4/1/2010 3:30:12 PM

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: G:\Los Angeles\3_Projects_Air Quality\City of Lake Forest Sports Park\Impact Analysis\URBEMIS\Lake Forest GP2P2.urb924

Project Name: Lake Forest Sports Park Grading Plan 2 - Phase 2

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (tons/year unmitigated)	1.81	17.71	8.62	0.01	0.04	0.72	0.77	0.01	0.67	0.68	2,377.04
2013 TOTALS (tons/year unmitigated)	0.46	2.47	3.77	0.00	0.01	0.17	0.19	0.01	0.16	0.16	586.18

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

2012	1.81	17.71	8.62	0.01	0.04	0.72	0.77	0.01	0.67	0.68	2,377.04
Mass Grading 05/01/2012-10/31/2012	1.71	17.15	7.70	0.01	0.04	0.69	0.73	0.01	0.63	0.64	2,241.41
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	1.14	10.16	4.79	0.00	0.00	0.41	0.41	0.00	0.38	0.38	1,027.73
Mass Grading On Road Diesel	0.56	6.98	2.69	0.01	0.04	0.28	0.31	0.01	0.25	0.27	1,184.21
Mass Grading Worker Trips	0.01	0.01	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29.47
Building 11/01/2012-08/31/2013	0.11	0.56	0.92	0.00	0.00	0.04	0.04	0.00	0.04	0.04	135.63
Building Off Road Diesel	0.09	0.53	0.35	0.00	0.00	0.04	0.04	0.00	0.03	0.03	58.74
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.02	0.03	0.56	0.00	0.00	0.00	0.01	0.00	0.00	0.00	76.89
2013	0.46	2.47	3.77	0.00	0.01	0.17	0.19	0.01	0.16	0.16	586.18
Building 11/01/2012-08/31/2013	0.40	2.11	3.49	0.00	0.01	0.14	0.16	0.01	0.13	0.13	545.11
Building Off Road Diesel	0.33	1.99	1.39	0.00	0.00	0.13	0.13	0.00	0.12	0.12	236.09
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.06	0.12	2.10	0.00	0.01	0.01	0.02	0.01	0.01	0.01	309.01
Asphalt 09/01/2013-10/31/2013	0.06	0.36	0.28	0.00	0.00	0.03	0.03	0.00	0.03	0.03	41.08
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.06	0.35	0.23	0.00	0.00	0.03	0.03	0.00	0.03	0.03	33.07
Paving On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.54
Paving Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.47

Phase Assumptions

Phase: Mass Grading 5/1/2012 - 10/31/2012 - Phase 2

Total Acres Disturbed: 13.1

4/1/2010 3:30:03 PM

Maximum Daily Acreage Disturbed: 3.27

Fugitive Dust Level of Detail: Default

0 lbs per acre-day

On Road Truck Travel (VMT): 3536.71

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Off Highway Tractors (267 hp) operating at a 0.65 load factor for 8 hours per day

3 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

5 Scrapers (313 hp) operating at a 0.72 load factor for 7 hours per day

2 Water Trucks (189 hp) operating at a 0.5 load factor for 4 hours per day

Phase: Paving 9/1/2013 - 10/31/2013 - Phase 2

Acres to be Paved: 2.06

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 11/1/2012 - 8/31/2013 - Phase 2

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

4/1/2010 3:31:50 PM

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: G:\Los Angeles\3_Projects_Air Quality\City of Lake Forest Sports Park\Impact Analysis\URBEMIS\Lake Forest GP2P3.urb924

Project Name: Lake Forest Sports Park Grading Plan 2 - Phase 3

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2014 TOTALS (lbs/day unmitigated)	10.99	97.91	46.90	0.05	0.17	3.87	4.04	0.06	3.56	3.62	13,709.14
2015 TOTALS (lbs/day unmitigated)	3.30	17.35	34.35	0.04	0.17	1.14	1.31	0.06	1.05	1.10	5,920.82

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

4/1/2010 3:31:50 PM

Time Slice 1/1/2014-6/30/2014 Active Days: 155	**10.99**	**97.91**	**46.90**	**0.05**	0.16	**3.87**	**4.04**	0.05	**3.56**	**3.62**	**13,709.14**
Mass Grading 01/01/2014-06/30/2014	10.99	97.91	46.90	0.05	0.16	3.87	4.04	0.05	3.56	3.62	13,709.14
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	9.19	77.29	37.13	0.00	0.00	3.09	3.09	0.00	2.84	2.84	8,917.58
Mass Grading On Road Diesel	1.75	20.52	8.00	0.04	0.15	0.78	0.93	0.05	0.71	0.76	4,511.85
Mass Grading Worker Trips	0.05	0.10	1.77	0.00	0.01	0.01	0.02	0.00	0.01	0.01	279.72
Time Slice 7/1/2014-12/31/2014 Active Days: 158	3.60	18.93	36.21	0.04	**0.17**	1.22	1.39	**0.06**	1.11	1.17	5,921.13
Building 07/01/2014-05/31/2015	3.60	18.93	36.21	0.04	0.17	1.22	1.39	0.06	1.11	1.17	5,921.13
Building Off Road Diesel	2.93	17.65	13.06	0.00	0.00	1.11	1.11	0.00	1.02	1.02	2,259.28
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.67	1.28	23.14	0.04	0.17	0.11	0.28	0.06	0.09	0.15	3,661.85
Time Slice 1/1/2015-5/30/2015 Active Days: 129	3.30	17.35	34.35	0.04	**0.17**	1.13	1.31	**0.06**	1.03	1.10	5,920.82
Building 07/01/2014-05/31/2015	3.30	17.35	34.35	0.04	0.17	1.13	1.31	0.06	1.03	1.10	5,920.82
Building Off Road Diesel	2.69	16.17	12.80	0.00	0.00	1.03	1.03	0.00	0.94	0.94	2,259.28
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.61	1.17	21.55	0.04	0.17	0.11	0.28	0.06	0.09	0.15	3,661.54
Time Slice 6/1/2015-7/31/2015 Active Days: 53	2.51	14.24	11.66	0.00	0.02	1.14	1.16	0.01	1.05	1.05	1,825.02
Asphalt 06/01/2015-07/31/2015	2.51	14.24	11.66	0.00	0.02	1.14	1.16	0.01	1.05	1.05	1,825.02
Paving Off-Gas	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.20	13.65	9.82	0.00	0.00	1.11	1.11	0.00	1.02	1.02	1,418.44
Paving On Road Diesel	0.04	0.50	0.20	0.00	0.00	0.02	0.02	0.00	0.02	0.02	126.88
Paving Worker Trips	0.05	0.09	1.65	0.00	0.01	0.01	0.02	0.00	0.01	0.01	279.69

Phase Assumptions

Phase: Mass Grading 1/1/2014 - 6/30/2014 - Phase 3

Total Acres Disturbed: 16.1

Maximum Daily Acreage Disturbed: 4.02

Fugitive Dust Level of Detail: Default

0 lbs per acre-day

On Road Truck Travel (VMT): 1064.52

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Off Highway Tractors (267 hp) operating at a 0.65 load factor for 8 hours per day

2 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

3 Scrapers (313 hp) operating at a 0.72 load factor for 7 hours per day

2 Water Trucks (189 hp) operating at a 0.5 load factor for 4 hours per day

Phase: Paving 6/1/2015 - 7/31/2015 - Phase 3

Acres to be Paved: 4.42

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 7/1/2014 - 5/31/2015 - Phase 3

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

4/1/2010 3:31:50 PM

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

4/1/2010 3:31:41 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: G:\Los Angeles\3_Projects_Air Quality\City of Lake Forest Sports Park\Impact Analysis\URBEMIS\Lake Forest GP2P3.urb924

Project Name: Lake Forest Sports Park Grading Plan 2 - Phase 3

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2014 TOTALS (tons/year unmitigated)	1.14	9.08	6.49	0.01	0.03	0.40	0.42	0.01	0.36	0.37	1,530.23
2015 TOTALS (tons/year unmitigated)	0.28	1.50	2.52	0.00	0.01	0.10	0.11	0.00	0.09	0.10	430.26

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

2014	1.14	9.08	6.49	0.01	0.03	0.40	0.42	0.01	0.36	0.37	1,530.23
Mass Grading 01/01/2014-06/30/2014	0.85	7.59	3.63	0.00	0.01	0.30	0.31	0.00	0.28	0.28	1,062.46
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	0.71	5.99	2.88	0.00	0.00	0.24	0.24	0.00	0.22	0.22	691.11
Mass Grading On Road Diesel	0.14	1.59	0.62	0.00	0.01	0.06	0.07	0.00	0.06	0.06	349.67
Mass Grading Worker Trips	0.00	0.01	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.68
Building 07/01/2014-05/31/2015	0.28	1.50	2.86	0.00	0.01	0.10	0.11	0.00	0.09	0.09	467.77
Building Off Road Diesel	0.23	1.39	1.03	0.00	0.00	0.09	0.09	0.00	0.08	0.08	178.48
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.05	0.10	1.83	0.00	0.01	0.01	0.02	0.00	0.01	0.01	289.29
2015	0.28	1.50	2.52	0.00	0.01	0.10	0.11	0.00	0.09	0.10	430.26
Building 07/01/2014-05/31/2015	0.21	1.12	2.22	0.00	0.01	0.07	0.08	0.00	0.07	0.07	381.89
Building Off Road Diesel	0.17	1.04	0.83	0.00	0.00	0.07	0.07	0.00	0.06	0.06	145.72
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.04	0.08	1.39	0.00	0.01	0.01	0.02	0.00	0.01	0.01	236.17
Asphalt 06/01/2015-07/31/2015	0.07	0.38	0.31	0.00	0.00	0.03	0.03	0.00	0.03	0.03	48.36
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.06	0.36	0.26	0.00	0.00	0.03	0.03	0.00	0.03	0.03	37.59
Paving On Road Diesel	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.36
Paving Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.41

Phase Assumptions

Phase: Mass Grading 1/1/2014 - 6/30/2014 - Phase 3

Total Acres Disturbed: 16.1

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Maximum Daily Acreage Disturbed: 4.02

Fugitive Dust Level of Detail: Default

0 lbs per acre-day

On Road Truck Travel (VMT): 1064.52

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Off Highway Tractors (267 hp) operating at a 0.65 load factor for 8 hours per day

2 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

3 Scrapers (313 hp) operating at a 0.72 load factor for 7 hours per day

2 Water Trucks (189 hp) operating at a 0.5 load factor for 4 hours per day

Phase: Paving 6/1/2015 - 7/31/2015 - Phase 3

Acres to be Paved: 4.42

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 7/1/2014 - 5/31/2015 - Phase 3

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: G:\Los Angeles\3_Projects_Air Quality\City of Lake Forest Sports Park\Impact Analysis\URBEMIS\LakeForestAlt7.urb924

Project Name: LakeForestAlt7

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2011 TOTALS (lbs/day unmitigated)	32.04	278.69	278.53	0.39	62.64	12.14	74.77	13.30	11.12	24.42	53,576.58
2012 TOTALS (lbs/day unmitigated)	19.29	150.85	211.19	0.39	1.53	7.50	9.03	0.53	6.85	7.38	42,379.91
2013 TOTALS (lbs/day unmitigated)	14.95	121.06	186.20	0.38	1.51	5.54	7.06	0.53	5.05	5.58	40,727.49

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

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Time Slice 1/3/2011-7/29/2011 Active Days: 150	14.13	127.85	62.74	0.01	61.12	5.14	66.26	12.77	4.73	17.50	12,845.48
Mass Grading 01/01/2011-09/30/2011	14.13	127.85	62.74	0.01	61.12	5.14	66.26	12.77	4.73	17.50	12,845.48
Mass Grading Dust	0.00	0.00	0.00	0.00	61.10	0.00	61.10	12.76	0.00	12.76	0.00
Mass Grading Off Road Diesel	14.01	127.63	58.83	0.00	0.00	5.13	5.13	0.00	4.72	4.72	12,348.01
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.12	0.23	3.90	0.01	0.02	0.01	0.04	0.01	0.01	0.02	497.47
Time Slice 8/1/2011-9/30/2011 Active Days: 45	**32.04**	**278.69**	**278.53**	**0.39**	**62.64**	**12.14**	**74.77**	**13.30**	**11.12**	**24.42**	**53,576.58**
Building 08/01/2011-07/31/2012	17.90	150.84	215.79	0.38	1.51	7.00	8.51	0.53	6.39	6.92	40,731.09
Building Off Road Diesel	3.77	21.85	13.95	0.00	0.00	1.57	1.57	0.00	1.45	1.45	2,259.28
Building Vendor Trips	10.64	122.42	88.51	0.23	0.83	5.03	5.86	0.28	4.61	4.89	24,023.46
Building Worker Trips	3.49	6.57	113.34	0.15	0.68	0.39	1.08	0.25	0.33	0.58	14,448.35
Mass Grading 01/01/2011-09/30/2011	14.13	127.85	62.74	0.01	61.12	5.14	66.26	12.77	4.73	17.50	12,845.48
Mass Grading Dust	0.00	0.00	0.00	0.00	61.10	0.00	61.10	12.76	0.00	12.76	0.00
Mass Grading Off Road Diesel	14.01	127.63	58.83	0.00	0.00	5.13	5.13	0.00	4.72	4.72	12,348.01
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.12	0.23	3.90	0.01	0.02	0.01	0.04	0.01	0.01	0.02	497.47
Time Slice 10/3/2011-12/30/2011 Active Days: 65	17.90	150.84	215.79	0.38	1.51	7.00	8.51	0.53	6.39	6.92	40,731.09
Building 08/01/2011-07/31/2012	17.90	150.84	215.79	0.38	1.51	7.00	8.51	0.53	6.39	6.92	40,731.09
Building Off Road Diesel	3.77	21.85	13.95	0.00	0.00	1.57	1.57	0.00	1.45	1.45	2,259.28
Building Vendor Trips	10.64	122.42	88.51	0.23	0.83	5.03	5.86	0.28	4.61	4.89	24,023.46
Building Worker Trips	3.49	6.57	113.34	0.15	0.68	0.39	1.08	0.25	0.33	0.58	14,448.35

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Time Slice 1/2/2012-4/30/2012 Active Days: 86	16.41	135.67	200.66	0.38	1.51	6.26	7.77	0.53	5.71	6.24	40,728.67
Building 08/01/2011-07/31/2012	16.41	135.67	200.66	0.38	1.51	6.26	7.77	0.53	5.71	6.24	40,728.67
Building Off Road Diesel	3.48	20.42	13.62	0.00	0.00	1.42	1.42	0.00	1.31	1.31	2,259.28
Building Vendor Trips	9.75	109.23	81.60	0.23	0.83	4.44	5.27	0.28	4.07	4.35	24,023.54
Building Worker Trips	3.18	6.02	105.44	0.15	0.68	0.39	1.08	0.25	0.33	0.58	14,445.85
Time Slice 5/1/2012-7/31/2012 Active Days: 66	19.29	150.85	211.19	0.39	1.53	7.50	9.03	0.53	6.85	7.38	42,379.91
Asphalt 05/01/2012-07/31/2012	2.88	15.18	10.53	0.01	0.02	1.24	1.26	0.01	1.14	1.14	1,651.24
Paving Off-Gas	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.23	13.48	8.10	0.00	0.00	1.17	1.17	0.00	1.07	1.07	1,131.92
Paving On Road Diesel	0.13	1.59	0.62	0.00	0.01	0.06	0.07	0.00	0.06	0.06	270.63
Paving Worker Trips	0.05	0.10	1.82	0.00	0.01	0.01	0.02	0.00	0.01	0.01	248.69
Building 08/01/2011-07/31/2012	16.41	135.67	200.66	0.38	1.51	6.26	7.77	0.53	5.71	6.24	40,728.67
Building Off Road Diesel	3.48	20.42	13.62	0.00	0.00	1.42	1.42	0.00	1.31	1.31	2,259.28
Building Vendor Trips	9.75	109.23	81.60	0.23	0.83	4.44	5.27	0.28	4.07	4.35	24,023.54
Building Worker Trips	3.18	6.02	105.44	0.15	0.68	0.39	1.08	0.25	0.33	0.58	14,445.85
Time Slice 8/1/2012-12/31/2012 Active Days: 109	16.41	135.67	200.66	0.38	1.51	6.26	7.77	0.53	5.71	6.24	40,728.67
Building 08/01/2012-04/30/2013	16.41	135.67	200.66	0.38	1.51	6.26	7.77	0.53	5.71	6.24	40,728.67
Building Off Road Diesel	3.48	20.42	13.62	0.00	0.00	1.42	1.42	0.00	1.31	1.31	2,259.28
Building Vendor Trips	9.75	109.23	81.60	0.23	0.83	4.44	5.27	0.28	4.07	4.35	24,023.54
Building Worker Trips	3.18	6.02	105.44	0.15	0.68	0.39	1.08	0.25	0.33	0.58	14,445.85

Time Slice 1/1/2013-4/30/2013 Active Days: 86	14.95	121.06	186.20	0.38	1.51	5.54	7.06	0.53	5.05	5.58	40,727.49
Building 08/01/2012-04/30/2013	14.95	121.06	186.20	0.38	1.51	5.54	7.06	0.53	5.05	5.58	40,727.49
Building Off Road Diesel	3.19	19.04	13.34	0.00	0.00	1.26	1.26	0.00	1.16	1.16	2,259.28
Building Vendor Trips	8.86	96.53	74.87	0.23	0.83	3.88	4.71	0.28	3.56	3.84	24,024.08
Building Worker Trips	2.90	5.49	97.99	0.15	0.68	0.40	1.08	0.25	0.33	0.58	14,444.13

Phase Assumptions

Phase: Mass Grading 1/1/2011 - 9/30/2011 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 63.5

Maximum Daily Acreage Disturbed: 5

Fugitive Dust Level of Detail: Default

12.22 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Off Highway Tractors (267 hp) operating at a 0.65 load factor for 8 hours per day

3 Plate Compactors (8 hp) operating at a 0.43 load factor for 8 hours per day

2 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

5 Scrapers (313 hp) operating at a 0.72 load factor for 7 hours per day

4 Water Trucks (189 hp) operating at a 0.5 load factor for 4 hours per day

Phase: Paving 5/1/2012 - 7/31/2012 - Default Paving Description

Acres to be Paved: 11.74

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 8/1/2011 - 7/31/2012 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Building Construction 8/1/2012 - 4/30/2013 - Type Your Description Here

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: G:\Los Angeles\3_Projects_Air Quality\City of Lake Forest Sports Park\Impact Analysis\URBEMIS\LakeForestAlt7.urb924

Project Name: LakeForestAlt7

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2011 TOTALS (tons/year unmitigated)	2.36	20.76	17.99	0.02	6.04	0.89	6.93	1.27	0.81	2.09	3,492.64
2012 TOTALS (tons/year unmitigated)	2.24	18.21	26.53	0.05	0.20	0.86	1.06	0.07	0.78	0.85	5,369.58
2013 TOTALS (tons/year unmitigated)	0.64	5.21	8.01	0.02	0.07	0.24	0.30	0.02	0.22	0.24	1,751.28

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

2011	2.36	20.76	17.99	0.02	6.04	0.89	6.93	1.27	0.81	2.09	3,492.64
Mass Grading 01/01/2011-09/30/2011	1.38	12.47	6.12	0.00	5.96	0.50	6.46	1.24	0.46	1.71	1,252.43
Mass Grading Dust	0.00	0.00	0.00	0.00	5.96	0.00	5.96	1.24	0.00	1.24	0.00
Mass Grading Off Road Diesel	1.37	12.44	5.74	0.00	0.00	0.50	0.50	0.00	0.46	0.46	1,203.93
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.01	0.02	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.50
Building 08/01/2011-07/31/2012	0.98	8.30	11.87	0.02	0.08	0.38	0.47	0.03	0.35	0.38	2,240.21
Building Off Road Diesel	0.21	1.20	0.77	0.00	0.00	0.09	0.09	0.00	0.08	0.08	124.26
Building Vendor Trips	0.59	6.73	4.87	0.01	0.05	0.28	0.32	0.02	0.25	0.27	1,321.29
Building Worker Trips	0.19	0.36	6.23	0.01	0.04	0.02	0.06	0.01	0.02	0.03	794.66

2012	2.24	18.21	26.53	0.05	0.20	0.86	1.06	0.07	0.78	0.85	5,369.58
Building 08/01/2011-07/31/2012	1.25	10.31	15.25	0.03	0.12	0.48	0.59	0.04	0.43	0.47	3,095.38
Building Off Road Diesel	0.26	1.55	1.04	0.00	0.00	0.11	0.11	0.00	0.10	0.10	171.71
Building Vendor Trips	0.74	8.30	6.20	0.02	0.06	0.34	0.40	0.02	0.31	0.33	1,825.79
Building Worker Trips	0.24	0.46	8.01	0.01	0.05	0.03	0.08	0.02	0.03	0.04	1,097.88
Asphalt 05/01/2012-07/31/2012	0.09	0.50	0.35	0.00	0.00	0.04	0.04	0.00	0.04	0.04	54.49
Paving Off-Gas	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.07	0.44	0.27	0.00	0.00	0.04	0.04	0.00	0.04	0.04	37.35
Paving On Road Diesel	0.00	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.93
Paving Worker Trips	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.21
Building 08/01/2012-04/30/2013	0.89	7.39	10.94	0.02	0.08	0.34	0.42	0.03	0.31	0.34	2,219.71
Building Off Road Diesel	0.19	1.11	0.74	0.00	0.00	0.08	0.08	0.00	0.07	0.07	123.13
Building Vendor Trips	0.53	5.95	4.45	0.01	0.05	0.24	0.29	0.02	0.22	0.24	1,309.28
Building Worker Trips	0.17	0.33	5.75	0.01	0.04	0.02	0.06	0.01	0.02	0.03	787.30
2013	0.64	5.21	8.01	0.02	0.07	0.24	0.30	0.02	0.22	0.24	1,751.28
Building 08/01/2012-04/30/2013	0.64	5.21	8.01	0.02	0.07	0.24	0.30	0.02	0.22	0.24	1,751.28
Building Off Road Diesel	0.14	0.82	0.57	0.00	0.00	0.05	0.05	0.00	0.05	0.05	97.15
Building Vendor Trips	0.38	4.15	3.22	0.01	0.04	0.17	0.20	0.01	0.15	0.16	1,033.04
Building Worker Trips	0.12	0.24	4.21	0.01	0.03	0.02	0.05	0.01	0.01	0.02	621.10

Phase Assumptions

Phase: Mass Grading 1/1/2011 - 9/30/2011 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 63.5

Maximum Daily Acreage Disturbed: 5

Fugitive Dust Level of Detail: Default

12.22 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Off Highway Tractors (267 hp) operating at a 0.65 load factor for 8 hours per day

3 Plate Compactors (8 hp) operating at a 0.43 load factor for 8 hours per day

2 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

5 Scrapers (313 hp) operating at a 0.72 load factor for 7 hours per day

4 Water Trucks (189 hp) operating at a 0.5 load factor for 4 hours per day

Phase: Paving 5/1/2012 - 7/31/2012 - Default Paving Description

Acres to be Paved: 11.74

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 8/1/2011 - 7/31/2012 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Building Construction 8/1/2012 - 4/30/2013 - Type Your Description Here

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

3 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

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1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: G:\Los Angeles\3_Projects_Air Quality\City of Lake Forest Sports Park\Impact Analysis\URBEMIS\Lake Forest Ops.urb924

Project Name: Lake Forest Sports Park Operations

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	11.43	0.04	3.09	0.00	0.01	0.01	5.62

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	17.12	25.18	224.08	0.34	57.14	11.12	34,095.44

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	28.55	25.22	227.17	0.34	57.15	11.13	34,101.06

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth - No Summer Emissions							
Landscape	0.25	0.04	3.09	0.00	0.01	0.01	5.62
Consumer Products	0.00						
Architectural Coatings	11.18						
TOTALS (lbs/day, unmitigated)	11.43	0.04	3.09	0.00	0.01	0.01	5.62

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Blank (Edit this description)	0.27	0.23	2.01	0.00	0.51	0.10	306.57
Blank (Edit this description)	16.85	24.95	222.07	0.34	56.63	11.02	33,788.87
TOTALS (lbs/day, unmitigated)	17.12	25.18	224.08	0.34	57.14	11.12	34,095.44

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2015 Temperature (F): 80 Season: Summer

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Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Blank (Edit this description)		1.59	acres	20.60	32.75	297.49
Blank (Edit this description)		53.80	acres	67.10	3,609.98	32,787.64
					3,642.73	33,085.13

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.9	0.2	99.6	0.2
Light Truck < 3750 lbs	7.3	1.4	95.9	2.7
Light Truck 3751-5750 lbs	23.2	0.0	100.0	0.0
Med Truck 5751-8500 lbs	10.8	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	82.4	17.6
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.6	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.9	48.3	51.7	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Blank (Edit this description)				5.0	2.5	92.5
Blank (Edit this description)				5.0	2.5	92.5

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: G:\Los Angeles\3_Projects_Air Quality\City of Lake Forest Sports Park\Impact Analysis\URBEMIS\Lake Forest Ops.urb924

Project Name: Lake Forest Sports Park Operations

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	2.08	0.01	0.56	0.00	0.00	0.00	1.03

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	3.25	4.90	40.21	0.06	10.43	2.03	6,024.66

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	5.33	4.91	40.77	0.06	10.43	2.03	6,025.69

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscape	0.04	0.01	0.56	0.00	0.00	0.00	1.03
Consumer Products	0.00						
Architectural Coatings	2.04						
TOTALS (tons/year, unmitigated)	2.08	0.01	0.56	0.00	0.00	0.00	1.03

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Blank (Edit this description)	0.05	0.04	0.36	0.00	0.09	0.02	54.17
Blank (Edit this description)	3.20	4.86	39.85	0.06	10.34	2.01	5,970.49
TOTALS (tons/year, unmitigated)	3.25	4.90	40.21	0.06	10.43	2.03	6,024.66

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2015 Season: Annual

4/1/2010 3:33:29 PM

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Blank (Edit this description)		1.59	acres	20.60	32.75	297.49
Blank (Edit this description)		53.80	acres	67.10	3,609.98	32,787.64
					3,642.73	33,085.13

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.9	0.2	99.6	0.2
Light Truck < 3750 lbs	7.3	1.4	95.9	2.7
Light Truck 3751-5750 lbs	23.2	0.0	100.0	0.0
Med Truck 5751-8500 lbs	10.8	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	82.4	17.6
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.6	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	2.9	48.3	51.7	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

4/1/2010 3:33:29 PM

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Blank (Edit this description)				5.0	2.5	92.5
Blank (Edit this description)				5.0	2.5	92.5

Road Construction Emissions Model, Version 6.3

Emission Estimates for -> Rancho Parkway Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	4.7	19.4	36.0	11.6	1.6	10.0	3.6	1.5	2.1	3,328.5
Grading/Excavation	7.3	44.6	54.5	12.6	2.6	10.0	4.5	2.4	2.1	5,935.4
Drainage/Utilities/Sub-Grade	4.7	17.9	33.1	11.8	1.8	10.0	3.8	1.7	2.1	3,099.2
Paving	3.3	10.2	15.8	1.4	1.4	-	1.3	1.3	-	1,366.9
Maximum (pounds/day)	7.3	44.6	54.5	12.6	2.6	10.0	4.5	2.4	2.1	5,935.4
Total (tons/construction project)	0.7	3.3	5.8	1.4	0.3	1.1	6.2	0.2	0.2	425.0

Notes:

Project Start Year ->	2011
Project Length (months) ->	12
Total Project Area (acres) ->	4
Maximum Area Disturbed/Day (acres) ->	1
Total Soil Imported/Exported (yd^3/day)->	350

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Rancho Parkway Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	2.1	8.8	16.4	5.3	0.7	4.5	1.6	0.7	0.9	1,513.0
Grading/Excavation	3.3	20.3	24.8	5.7	1.2	4.5	2.0	1.1	0.9	2,697.9
Drainage/Utilities/Sub-Grade	2.1	8.1	15.1	5.4	0.8	4.5	1.7	0.8	0.9	1,408.7
Paving	1.5	4.6	7.2	0.6	0.6	-	0.6	0.6	-	621.3
Maximum (kilograms/day)	3.3	20.3	24.8	5.7	1.2	4.5	2.0	1.1	0.9	2,697.9
Total (megagrams/construction project)	0.7	3.0	5.3	1.3	0.3	1.0	5.7	0.2	0.2	385.5

Notes:

Project Start Year ->	2011
Project Length (months) ->	12
Total Project Area (hectares) ->	2
Maximum Area Disturbed/Day (hectares) ->	0
Total Soil Imported/Exported ($meters^3$/day)->	268

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model, Version 6.3

Emission Estimates for -> Portola Parkway Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	3.8	17.2	33.9	3.8	1.4	2.4	1.8	1.3	0.5	3,119.6
Grading/Excavation	4.4	19.0	36.4	4.2	1.8	2.4	2.2	1.7	0.5	3,534.8
Drainage/Utilities/Sub-Grade	3.9	15.6	31.0	4.0	1.6	2.4	2.0	1.5	0.5	2,890.3
Paving	2.4	8.0	13.6	1.2	1.2	-	1.1	1.1	-	1,157.9
Maximum (pounds/day)	4.4	19.0	36.4	4.2	1.8	2.4	2.2	1.7	0.5	3,534.8
Total (tons/construction project)	0.5	2.1	4.1	0.5	0.2	0.3	1.5	0.1	0.1	396.1

Notes:

Project Start Year ->	2011
Project Length (months) ->	12
Total Project Area (acres) ->	1
Maximum Area Disturbed/Day (acres) ->	0
Total Soil Imported/Exported (yd^3/day)->	0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Portola Parkway Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	1.7	7.8	15.4	1.7	0.6	1.1	0.8	0.6	0.2	1,418.0
Grading/Excavation	2.0	8.6	16.6	1.9	0.8	1.1	1.0	0.8	0.2	1,606.7
Drainage/Utilities/Sub-Grade	1.8	7.1	14.1	1.8	0.7	1.1	0.9	0.7	0.2	1,313.8
Paving	1.1	3.6	6.2	0.5	0.5	-	0.5	0.5	-	526.3
Maximum (kilograms/day)	2.0	8.6	16.6	1.9	0.8	1.1	1.0	0.8	0.2	1,606.7
Total (megagrams/construction project)	0.5	1.9	3.8	0.4	0.2	0.2	1.4	0.1	0.1	359.3

Notes:

Project Start Year ->	2011
Project Length (months) ->	12
Total Project Area (hectares) ->	0
Maximum Area Disturbed/Day (hectares) ->	0
Total Soil Imported/Exported ($meters^3$/day)->	0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Table 6. Total estimated GHG emissions from construction Grading Plan 1

	Input Emissions					
	Off Road Emissions			On road Emissions		
Year of Construction	**CO2 (metric tons/yr)**	**CH4 (metric tons/yr)**	**N2O (metric tons/yr)**	**CO2 (metric tons/yr)**	**Other (metric tons/yr)**	**CO2e (metric tons/yr)**
2010	1,463.5	0.1	0.0	44.7	2.4	1,523.9
2011	439.7	0.0	0.0	616.1	32.4	1,092.2
2012	732.4	0.0	0.0	880.8	46.4	1,666.3
2013	244.2	0.0	0.0	287.6	15.1	549.1
2014	588.8	0.0	0.0	448.8	23.6	1,066.6
2015	166.3	0.0	0.0	224.0	11.8	403.6
2016	-	-	-	-	-	-
2017	-	-	-	-	-	-
2018	-	-	-	-	-	-
2019	-	-	-	-	-	-
2020	-	-	-	-	-	-
2021	-	-	-	-	-	-
2022	-	-	-	-	-	-
2023	-	-	-	-	-	-
2024	-	-	-	-	-	-
2025	-	-	-	-	-	-
2026	-	-	-	-	-	-
2027	-	-	-	-	-	-
2028	-	-	-	-	-	-
2029	-	-	-	-	-	-
2030	-	-	-	-	-	-
Total Construction Emissions	**3,634.9**	**0.2**	**0.1**	**2,502.0**	**131.7**	**6,301.8**

Sources: URBEMIS 2007; CCAR 2008.

210.1

Diesel Fuel	**CO2**	**CH4**	**N2O**
kg CO2/gal diesel	10.15	0.00058	0.00026
g/gal diesel construction equip		0.58	0.26
ratio	1	5.71429E-05	2.56158E-05

Source: CH4 and N2O from Construction

tons/metric ton	Percent other G	GAS	CH4	N2O
0.90718474	5.00%	GWP	21	310

Table 6. Total estimated GHG emissions from construction - Grading Plan 2

	Input Emissions					
	Off Road Emissions			On road Emissions		
Year of Construction	**CO2 (metric tons/yr)**	**CH4 (metric tons/yr)**	**N2O (metric tons/yr)**	**CO2 (metric tons/yr)**	**Other (metric tons/yr)**	**CO2e (metric tons/yr)**
2010	1,788.5	0.1	0.0	1,082.6	57.0	2,944.5
2011	504.3	0.0	0.0	822.0	43.3	1,374.2
2012	1,025.7	0.1	0.0	1,183.2	62.3	2,280.5
2013	244.2	0.0	0.0	287.6	15.1	549.1
2014	788.9	0.0	0.0	599.3	31.5	1,427.0
2015	166.3	0.0	0.0	224.0	11.8	403.6
2016	-	-	-	-	-	-
2017	-	-	-	-	-	-
2018	-	-	-	-	-	-
2019	-	-	-	-	-	-
2020	-	-	-	-	-	-
2021	-	-	-	-	-	-
2022	-	-	-	-	-	-
2023	-	-	-	-	-	-
2024	-	-	-	-	-	-
2025	-	-	-	-	-	-
2026	-	-	-	-	-	-
2027	-	-	-	-	-	-
2028	-	-	-	-	-	-
2029	-	-	-	-	-	-
2030	-	-	-	-	-	-
Total Construction Emissions	**4,517.8**	**0.3**	**0.1**	**4,198.8**	**221.0**	**8,978.9**

Sources: URBEMIS 2007; CCAR 2008.

299.3

Diesel Fuel	**CO2**	**CH4**	**N2O**
kg CO2/gal diesel	10.15	0.00058	0.00026
g/gal diesel construction equip		0.58	0.26
ratio	1	5.71429E-05	2.56158E-05

Source: CH4 and N2O from Construction

tons/metric ton	Percent other G	GAS	CH4	N2O
0.90718474	5.00%	GWP	21	310

Table 6. Total estimated GHG emissions from construction Alternative 7

	Input Emissions					
	Off Road Emissions			On road Emissions		
Year of Construction	**CO2 (metric tons/yr)**	**CH4 (metric tons/yr)**	**N2O (metric tons/yr)**	**CO2 (metric tons/yr)**	**Other (metric tons/yr)**	**CO2e (metric tons/yr)**
2010	-	-	-	-	-	-
2011	1,934.7	0.1	0.0	1,978.7	104.1	4,035.2
2012	301.4	0.0	0.0	4,569.8	240.5	5,114.5
2013	88.1	0.0	0.0	563.5	29.7	682.0
2014	-	-	-	-	-	-
2015	-	-	-	-	-	-
2016	-	-	-	-	-	-
2017	-	-	-	-	-	-
2018	-	-	-	-	-	-
2019	-	-	-	-	-	-
2020	-	-	-	-	-	-
2021	-	-	-	-	-	-
2022	-	-	-	-	-	-
2023	-	-	-	-	-	-
2024	-	-	-	-	-	-
2025	-	-	-	-	-	-
2026	-	-	-	-	-	-
2027	-	-	-	-	-	-
2028	-	-	-	-	-	-
2029	-	-	-	-	-	-
2030	-	-	-	-	-	-
Total Construction Emissions	**2,324.2**	**0.1**	**0.1**	**7,112.0**	**374.3**	**9,831.7**

Sources: URBEMIS 2007; CCAR 2008.

327.7

Diesel Fuel	**CO2**	**CH4**	**N2O**
kg CO2/gal diesel	10.15	0.00058	0.00026
g/gal diesel construction equip		0.58	0.26
ratio	1	5.71429E-05	2.56158E-05

Source: CH4 and N2O from Construction

tons/metric ton	Percent other G	GAS	CH4	N2O
0.90718474	5.00%	GWP	21	310

CH4 and N2O from Construction

Author: Brian Schuster
Date: August 11, 2008

Methodology:
Calculated ratio of CO2 emissions per gallon diesel fuel to CH4 and N2O to determine CH4 and N2O emissions from construction equipment
Used CCAR May 2008 Efs

Sources:
CCAR General Reporting Protocol May 2008 (pg. 93, 96)
CCAR General Reporting Protocol May 2008 (pg. 93, 96)
Assumptions:

Diesel Fuel	**CO2**	**CH4**	**N2O**		
kg CO2/gal diesel	10.15	0.00058	0.00026		
g/gal diesel construction equip		0.58	0.26		
ratio	1	5.71E-05	2.56158E-05	0.00006	0.00003

Gasoline	**CO2**	**CH4**	**N2O**
kg CO2/gal gasoline	8.81		
g/mi passenger (2005)		0.0147	0.0079
g/mi light truck (2005)		0.0157	0.0101
ratio	1	0	0

Title : Orange County Subarea Annual CYr 2015 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2010/04/02 14:19:59
Scen Year: 2015 -- All model years in the range 1971 to 2015 selected
Season : Annual
Area : Orange
****

Year: 2015 -- Model Years 1971 to 2015 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average Orange County Average

Table 1: Running Exhaust Emissions (grams/mile)

Pollutant Name: Carbon Monoxide Temperature: 60F Relative Humidity: 50%

Speed MPH	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH	ALL
3	2.405	3.465	3.67	4.882	6.691	4.325	7.833	16.809	12.837	30.524	27.805	29.176	18.82	3.7
4	2.344	3.355	3.578	4.729	6.691	4.325	7.833	16.809	12.837	30.524	27.805	29.176	18.82	3.621
5	2.285	3.252	3.489	4.585	6.691	4.325	7.833	16.809	12.837	30.524	27.805	29.176	18.82	3.546
6	2.228	3.152	3.405	4.45	6.144	3.978	7.223	15.54	11.805	27.925	26.763	26.847	17.274	3.42
7	2.175	3.059	3.324	4.322	5.655	3.667	6.674	14.366	10.879	25.606	25.805	24.756	15.889	3.302
8	2.123	2.97	3.246	4.202	5.215	3.388	6.179	13.279	10.047	23.533	24.924	22.875	14.648	3.192
9	2.074	2.887	3.172	4.088	4.821	3.136	5.732	12.275	9.298	21.677	24.115	21.181	13.533	3.089
10	2.027	2.808	3.1	3.98	4.465	2.909	5.328	11.348	8.623	20.012	23.372	19.653	12.53	2.992
11	1.982	2.734	3.032	3.878	4.145	2.704	4.962	10.494	8.014	18.518	22.69	18.273	11.628	2.901
12	1.938	2.663	2.965	3.78	3.857	2.519	4.63	9.711	7.463	17.174	22.064	17.026	10.814	2.816
13	1.896	2.596	2.902	3.688	3.596	2.352	4.329	8.993	6.965	15.964	21.491	15.896	10.079	2.736
14	1.856	2.532	2.841	3.6	3.36	2.2	4.056	8.339	6.514	14.873	20.967	14.873	9.414	2.661
15	1.818	2.472	2.782	3.516	3.146	2.062	3.807	7.746	6.105	13.888	20.488	13.944	8.813	2.59
16	1.781	2.414	2.725	3.436	2.953	1.937	3.581	7.211	5.734	12.998	20.053	13.1	8.268	2.523
17	1.745	2.359	2.67	3.36	2.777	1.823	3.375	6.733	5.396	12.192	19.659	12.332	7.774	2.46
18	1.71	2.307	2.617	3.287	2.617	1.72	3.186	6.31	5.089	11.462	19.303	11.634	7.325	2.4
19	1.677	2.257	2.566	3.217	2.472	1.626	3.015	5.926	4.81	10.8	18.984	10.998	6.918	2.344
20	1.645	2.209	2.516	3.151	2.34	1.54	2.858	5.702	4.555	10.2	18.7	10.418	6.547	2.292
21	1.614	2.163	2.469	3.087	2.22	1.461	2.714	5.492	4.323	9.655	18.449	9.889	6.21	2.243
22	1.584	2.119	2.423	3.026	2.111	1.39	2.583	5.296	4.112	9.159	18.231	9.406	5.904	2.196
23	1.555	2.077	2.378	2.967	2.011	1.325	2.463	5.113	3.918	8.709	18.044	8.966	5.624	2.151
24	1.526	2.037	2.335	2.911	1.92	1.265	2.353	4.94	3.742	8.299	17.889	8.563	5.37	2.108
25	1.499	1.998	2.293	2.856	1.838	1.211	2.253	4.779	3.582	7.927	17.763	8.196	5.138	2.068
26	1.473	1.962	2.253	2.805	1.762	1.161	2.161	4.628	3.435	7.588	17.667	7.861	4.928	2.029
27	1.448	1.926	2.214	2.755	1.694	1.116	2.076	4.487	3.301	7.281	17.6	7.554	4.736	1.992
28	1.423	1.892	2.176	2.707	1.631	1.075	1.999	4.354	3.179	7.001	17.563	7.275	4.561	1.957
29	1.399	1.86	2.139	2.661	1.575	1.037	1.929	4.231	3.068	6.748	17.555	7.021	4.403	1.923
30	1.376	1.829	2.104	2.617	1.523	1.003	1.865	4.115	2.967	6.518	17.577	6.789	4.26	1.891
31	1.354	1.799	2.069	2.575	1.477	0.972	1.806	4.007	2.876	6.31	17.629	6.579	4.13	1.861
32	1.333	1.77	2.036	2.534	1.435	0.944	1.753	3.907	2.793	6.123	17.712	6.388	4.013	1.832
33	1.312	1.743	2.004	2.495	1.397	0.919	1.705	3.814	2.718	5.955	17.827	6.216	3.908	1.805
34	1.292	1.717	1.973	2.457	1.363	0.896	1.661	3.727	2.651	5.804	17.975	6.061	3.814	1.778
35	1.272	1.691	1.942	2.422	1.333	0.875	1.621	3.648	2.591	5.67	18.157	5.922	3.73	1.754
36	1.253	1.667	1.913	2.387	1.306	0.857	1.586	3.575	2.537	5.552	18.374	5.798	3.656	1.73
37	1.235	1.644	1.885	2.354	1.283	0.841	1.554	3.508	2.49	5.448	18.629	5.688	3.592	1.708
38	1.217	1.623	1.858	2.323	1.262	0.827	1.526	3.448	2.449	5.358	18.923	5.592	3.536	1.687
39	1.2	1.602	1.831	2.293	1.245	0.815	1.502	3.393	2.413	5.282	19.259	5.509	3.489	1.667
40	1.184	1.582	1.805	2.264	1.231	0.805	1.48	3.345	2.383	5.218	19.638	5.439	3.45	1.649

```
          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

               JOB:   EL TORO AND JERONIMO   AMNP
               RUN: Hour 1           (WORST CASE ANGLE)
         POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
       BRG= WORST CASE            VD=   .0 CM/S
      CLAS=     7 (G)             VS=   .0 CM/S
      MIXH= 1000. M              AMB=   .0 PPM
     SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*--------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG   1760   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG   1670   3.3     .0   9.9
C. ND           *     2     0     2   150 *  AG   1640   2.2     .0   9.9
D. NE           *     2   150     2   450 *  AG   1640   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG   2180   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG   1880   3.3     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG   2000   2.2     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG   2000   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG   1050   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG    760   3.7     .0   9.9
K. WD           *     0     2  -150     2 *  AG    980   3.7     .0   9.9
L. WE           *  -150     2  -450     2 *  AG    980   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG    470   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG    350   3.7     .0   9.9
O. ED           *     0    -2   150    -2 *  AG    840   3.7     .0   9.9
P. EE           *   150    -2   450    -2 *  AG    840   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG     90   2.5     .0   9.9
R. SL           *     0     0    -2   150 *  AG    300   2.5     .0   9.9
S. WL           *     0     0   150     2 *  AG    290   3.4     .0   9.9
T. EL           *     0     0  -150    -2 *  AG    120   3.3     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*---------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
  RECEPTOR  * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  185. *   2.1 *   .0  1.0   .0   .0   .0   .0   .3   .1
2. SE3      *  355. *   2.0 *   .0   .1   .6   .0   .1   .5   .0   .0
3. SW3      *    5. *   2.1 *   .0   .0   .3   .0   .0  1.1   .1   .0
4. NW3      *  175. *   1.9 *   .1   .5   .0   .0   .0   .2   .7   .0

            *                          CONC/LINK
            *                            (PPM)
  RECEPTOR  *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-------------------------------------------------------------
1. NE3      *   .0   .2   .0   .0   .0   .0   .2   .0   .0   .0   .0   .0
2. SE3      *   .0   .2   .0   .0   .0   .0   .2   .0   .0   .1   .0   .0
3. SW3      *   .0   .0   .2   .0   .0   .0   .0   .0   .0   .1   .0   .0
4. NW3      *   .0   .0   .3   .0   .0   .0   .0   .0   .0   .0   .0   .0
```

```
          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

               JOB:   EL TORO AND JERONIMO   AMWP
               RUN: Hour 1           (WORST CASE ANGLE)
         POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
       BRG= WORST CASE            VD=   .0 CM/S
      CLAS=     7 (G)             VS=   .0 CM/S
      MIXH= 1000. M              AMB=   .0 PPM
     SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*-------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG   1750   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG   1670   3.3     .0   9.9
C. ND           *     2     0     2   150 *  AG   1620   2.2     .0   9.9
D. NE           *     2   150     2   450 *  AG   1620   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG   2210   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG   1860   3.3     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG   2020   2.2     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG   2020   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG   1040   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG    760   3.7     .0   9.9
K. WD           *     0     2  -150     2 *  AG    920   3.7     .0   9.9
L. WE           *  -150     2  -450     2 *  AG    920   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG    460   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG    340   3.6     .0   9.9
O. ED           *     0    -2   150    -2 *  AG    900   3.7     .0   9.9
P. EE           *   150    -2   450    -2 *  AG    900   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG     80   2.5     .0   9.9
R. SL           *     0     0    -2   150 *  AG    350   2.5     .0   9.9
S. WL           *     0     0   150     2 *  AG    280   3.6     .0   9.9
T. EL           *     0     0  -150    -2 *  AG    120   3.3     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*--------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
  RECEPTOR  * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  185. *   2.1 *   .0  1.0   .0   .0   .0   .0   .3   .1
2. SE3      *  354. *   2.0 *   .0   .2   .6   .0   .0   .5   .0   .0
3. SW3      *    5. *   2.1 *   .0   .0   .3   .0   .0  1.1   .1   .0
4. NW3      *  175. *   1.9 *   .1   .5   .0   .0   .0   .2   .8   .0

            *                          CONC/LINK
            *                            (PPM)
  RECEPTOR  *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-------------------------------------------------------------
1. NE3      *   .0   .2   .0   .0   .0   .0   .2   .0   .0   .0   .0   .0
2. SE3      *   .0   .2   .0   .0   .0   .0   .2   .0   .0   .1   .0   .0
3. SW3      *   .0   .0   .2   .0   .0   .0   .0   .0   .0   .1   .0   .0
4. NW3      *   .0   .0   .2   .0   .0   .0   .0   .0   .0   .0   .0   .0
```

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

               JOB:   EL TORO AND JERONIMO   PMNP
               RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
       BRG= WORST CASE            VD=   .0 CM/S
      CLAS=     7 (G)             VS=   .0 CM/S
      MIXH= 1000. M              AMB=   .0 PPM
     SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*-------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG   1920   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG   1850   3.6     .0   9.9
C. ND           *     2     0     2   150 *  AG   2310   2.5     .0   9.9
D. NE           *     2   150     2   450 *  AG   2310   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG   1500   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG   1320   3.6     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG   1340   2.5     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG   1340   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG   1100   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG    860   3.7     .0   9.9
K. WD           *     0     2  -150     2 *  AG    920   3.7     .0   9.9
L. WE           *  -150     2  -450     2 *  AG    920   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG    830   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG    590   3.7     .0   9.9
O. ED           *     0    -2   150    -2 *  AG    780   3.6     .0   9.9
P. EE           *   150    -2   450    -2 *  AG    780   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG     70   2.6     .0   9.9
R. SL           *     0     0    -2   150 *  AG    180   2.6     .0   9.9
S. WL           *     0     0   150     2 *  AG    240   3.2     .0   9.9
T. EL           *     0     0  -150    -2 *  AG    240   3.2     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*---------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
  RECEPTOR  * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  185. *   2.2 *   .0  1.2   .2   .0   .0   .0   .3   .0
2. SE3      *  355. *   2.2 *   .0   .2  1.0   .0   .0   .4   .0   .0
3. SW3      *    5. *   2.0 *   .0   .0   .4   .1   .0   .9   .0   .0
4. NW3      *  175. *   1.9 *   .1   .5   .0   .0   .0   .1   .6   .0

            *                          CONC/LINK
            *                            (PPM)
  RECEPTOR  *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-----------------------------------------------------------
1. NE3      *   .0   .2   .0   .0   .0   .0   .2   .0   .0   .0   .0   .0
2. SE3      *   .0   .2   .0   .0   .0   .0   .2   .0   .0   .0   .0   .0
3. SW3      *   .0   .0   .2   .0   .0   .2   .0   .0   .0   .0   .0   .0
4. NW3      *   .0   .0   .2   .0   .0   .1   .0   .0   .0   .0   .0   .0
```

```
          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

               JOB:   EL TORO AND JERONIMO   PMWP
               RUN: Hour 1           (WORST CASE ANGLE)
         POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
       BRG= WORST CASE             VD=   .0 CM/S
      CLAS=     7 (G)              VS=   .0 CM/S
      MIXH= 1000. M               AMB=   .0 PPM
     SIGTH=    5. DEGREES        TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*-------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG   1890   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG   1820   3.6     .0   9.9
C. ND           *     2     0     2   150 *  AG   2270   2.5     .0   9.9
D. NE           *     2   150     2   450 *  AG   2270   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG   1520   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG   1320   3.6     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG   1340   2.5     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG   1340   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG   1080   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG    850   3.7     .0   9.9
K. WD           *     0     2  -150     2 *  AG    920   3.7     .0   9.9
L. WE           *  -150     2  -450     2 *  AG    920   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG    820   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG    580   3.7     .0   9.9
O. ED           *     0    -2   150    -2 *  AG    780   3.6     .0   9.9
P. EE           *   150    -2   450    -2 *  AG    780   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG     70   2.6     .0   9.9
R. SL           *     0     0    -2   150 *  AG    200   2.6     .0   9.9
S. WL           *     0     0   150     2 *  AG    230   3.2     .0   9.9
T. EL           *     0     0  -150    -2 *  AG    240   3.2     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*---------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
  RECEPTOR  * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  185. *   2.2 *   .0  1.1   .1   .0   .0   .0   .3   .0
2. SE3      *  355. *   2.2 *   .0   .2   .9   .0   .0   .4   .0   .0
3. SW3      *    5. *   2.0 *   .0   .0   .4   .1   .0   .9   .0   .0
4. NW3      *  175. *   1.9 *   .1   .5   .0   .0   .0   .1   .6   .0

            *                          CONC/LINK
            *                            (PPM)
  RECEPTOR  *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-------------------------------------------------------------
1. NE3      *   .0   .2   .0   .0   .0   .0   .2   .0   .0   .0   .0   .0
2. SE3      *   .0   .2   .0   .0   .0   .0   .2   .0   .0   .0   .0   .0
3. SW3      *   .0   .0   .2   .0   .0   .2   .0   .0   .0   .0   .0   .0
4. NW3      *   .0   .0   .2   .0   .0   .1   .0   .0   .0   .0   .0   .0
```

```
          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

               JOB:   EL TORO AND PORTOLA   AMNP
               RUN: Hour 1           (WORST CASE ANGLE)
         POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
       BRG= WORST CASE            VD=   .0 CM/S
      CLAS=     7 (G)             VS=   .0 CM/S
      MIXH= 1000. M              AMB=   .0 PPM
     SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*-------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG    850   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG    500   3.6     .0   9.9
C. ND           *     2     0     2   150 *  AG    210   2.2     .0   9.9
D. NE           *     2   150     2   450 *  AG    210   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG    720   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG    670   3.7     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG   1520   3.7     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG   1520   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG   2090   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG   1400   3.6     .0   9.9
K. WD           *     0     2  -150     2 *  AG   1900   2.4     .0   9.9
L. WE           *  -150     2  -450     2 *  AG   1900   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG    960   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG    920   3.3     .0   9.9
O. ED           *     0    -2   150    -2 *  AG    990   2.4     .0   9.9
P. EE           *   150    -2   450    -2 *  AG    990   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG    350   3.4     .0   9.9
R. SL           *     0     0    -2   150 *  AG     50   3.2     .0   9.9
S. WL           *     0     0   150     2 *  AG    690   2.9     .0   9.9
T. EL           *     0     0  -150    -2 *  AG     40   2.5     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*---------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
  RECEPTOR  * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  185. *   1.8 *   .0   .4   .0   .0   .0   .0   .5   .0
2. SE3      *  275. *   1.7 *   .0   .1   .0   .0   .0   .0   .3   .0
3. SW3      *   84. *   2.0 *   .0   .0   .0   .0   .0   .0   .4   .0
4. NW3      *  175. *   2.1 *   .0   .2   .0   .0   .0   .0  1.0   .0

            *                          CONC/LINK
            *                            (PPM)
  RECEPTOR  *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-------------------------------------------------------------
1. NE3      *   .0   .4   .0   .0   .0   .0   .1   .0   .2   .0   .1   .0
2. SE3      *   .0   .0   .4   .1   .0   .6   .0   .0   .0   .0   .0   .0
3. SW3      *   .0   .5   .0   .0   .0   .0   .4   .0   .0   .0   .3   .0
4. NW3      *   .0   .0   .3   .0   .0   .2   .0   .0   .2   .0   .0   .0
```

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

               JOB:   EL TORO AND PORTOLA   AMWP
               RUN: Hour 1           (WORST CASE ANGLE)
         POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
       BRG= WORST CASE            VD=   .0 CM/S
      CLAS=     7 (G)             VS=   .0 CM/S
      MIXH= 1000. M              AMB=   .0 PPM
     SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*-------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG    840   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG    470   3.6     .0   9.9
C. ND           *     2     0     2   150 *  AG    230   2.2     .0   9.9
D. NE           *     2   150     2   450 *  AG    230   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG    820   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG    770   3.7     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG   1310   3.7     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG   1310   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG   2170   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG   1720   3.6     .0   9.9
K. WD           *     0     2  -150     2 *  AG   2370   2.4     .0   9.9
L. WE           *  -150     2  -450     2 *  AG   2370   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG   1060   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG   1010   3.6     .0   9.9
O. ED           *     0    -2   150    -2 *  AG    980   2.4     .0   9.9
P. EE           *   150    -2   450    -2 *  AG    980   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG    370   3.4     .0   9.9
R. SL           *     0     0    -2   150 *  AG     50   3.2     .0   9.9
S. WL           *     0     0   150     2 *  AG    450   2.7     .0   9.9
T. EL           *     0     0  -150    -2 *  AG     50   2.5     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*--------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
  RECEPTOR  * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  185. *   1.8 *   .0   .4   .0   .0   .0   .0   .4   .0
2. SE3      *  275. *   1.8 *   .0   .1   .0   .0   .0   .0   .3   .0
3. SW3      *   84. *   1.9 *   .0   .0   .0   .0   .0   .0   .3   .0
4. NW3      *  175. *   2.1 *   .0   .2   .0   .0   .0   .0   .9   .0

            *                          CONC/LINK
            *                            (PPM)
  RECEPTOR  *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-------------------------------------------------------------
1. NE3      *   .0   .4   .0   .0   .0   .0   .1   .0   .2   .0   .0   .0
2. SE3      *   .0   .0   .4   .1   .0   .7   .0   .0   .0   .0   .0   .0
3. SW3      *   .0   .6   .0   .0   .0   .1   .4   .0   .0   .0   .2   .0
4. NW3      *   .0   .0   .4   .0   .0   .2   .0   .0   .2   .0   .0   .0
```

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

               JOB:   EL TORO AND PORTOLA   PMNP
               RUN: Hour 1           (WORST CASE ANGLE)
         POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
       BRG= WORST CASE             VD=   .0 CM/S
      CLAS=     7 (G)              VS=   .0 CM/S
      MIXH= 1000. M               AMB=   .0 PPM
     SIGTH=    5. DEGREES        TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*-------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG   1440   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG   1080   3.7     .0   9.9
C. ND           *     2     0     2   150 *  AG    860   3.3     .0   9.9
D. NE           *     2   150     2   450 *  AG    860   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG   1530   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG   1200   3.7     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG   1710   3.6     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG   1710   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG   1420   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG    950   3.7     .0   9.9
K. WD           *     0     2  -150     2 *  AG   1870   3.1     .0   9.9
L. WE           *  -150     2  -450     2 *  AG   1870   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG   2110   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG   1780   3.7     .0   9.9
O. ED           *     0    -2   150    -2 *  AG   2060   3.1     .0   9.9
P. EE           *   150    -2   450    -2 *  AG   2060   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG    360   3.1     .0   9.9
R. SL           *     0     0    -2   150 *  AG    330   3.0     .0   9.9
S. WL           *     0     0   150     2 *  AG    470   3.0     .0   9.9
T. EL           *     0     0  -150    -2 *  AG    330   2.8     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*--------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
  RECEPTOR  * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  265. *   2.4 *   .0   .0   .2   .0   .0   .2   .0   .0
2. SE3      *  275. *   2.8 *   .0   .3   .0   .0   .0   .0   .3   .0
3. SW3      *   85. *   2.7 *   .0   .2   .0   .0   .0   .0   .4   .0
4. NW3      *  175. *   2.7 *   .0   .4   .0   .0   .0   .1  1.1   .0

            *                          CONC/LINK
            *                            (PPM)
  RECEPTOR  *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-------------------------------------------------------------
1. NE3      *   .0   .0  1.0   .0   .1   .5   .0   .0   .0   .0   .0   .1
2. SE3      *   .0   .0   .5   .1   .0  1.1   .2   .0   .0   .0   .0   .1
3. SW3      *   .0   .3   .0   .0   .0   .2  1.1   .0   .0   .0   .2   .0
4. NW3      *   .0   .0   .4   .0   .0   .3   .0   .0   .2   .0   .0   .0
```

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

               JOB:   EL TORO AND PORTOLA   PMWP
               RUN: Hour 1           (WORST CASE ANGLE)
         POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
       BRG= WORST CASE             VD=   .0 CM/S
      CLAS=     7 (G)              VS=   .0 CM/S
      MIXH= 1000. M               AMB=   .0 PPM
     SIGTH=    5. DEGREES        TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*-------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG   1290   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG    890   3.7     .0   9.9
C. ND           *     2     0     2   150 *  AG    890   3.6     .0   9.9
D. NE           *     2   150     2   450 *  AG    890   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG   1560   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG   1220   3.7     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG   1680   3.6     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG   1680   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG   1490   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG   1060   3.7     .0   9.9
K. WD           *     0     2  -150     2 *  AG   2080   2.8     .0   9.9
L. WE           *  -150     2  -450     2 *  AG   2080   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG   2500   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG   2070   3.7     .0   9.9
O. ED           *     0    -2   150    -2 *  AG   2190   2.8     .0   9.9
P. EE           *   150    -2   450    -2 *  AG   2190   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG    400   3.2     .0   9.9
R. SL           *     0     0    -2   150 *  AG    340   3.1     .0   9.9
S. WL           *     0     0   150     2 *  AG    430   2.8     .0   9.9
T. EL           *     0     0  -150    -2 *  AG    430   2.8     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*--------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
  RECEPTOR  * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  265. *   2.6 *   .0   .0   .2   .0   .0   .2   .0   .0
2. SE3      *  275. *   2.9 *   .0   .2   .0   .0   .0   .0   .3   .0
3. SW3      *   85. *   2.6 *   .0   .2   .0   .0   .0   .0   .4   .0
4. NW3      *  175. *   2.7 *   .0   .3   .0   .0   .0   .1  1.1   .0

            *                          CONC/LINK
            *                            (PPM)
  RECEPTOR  *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-------------------------------------------------------------
1. NE3      *   .0   .1  1.0   .0   .1   .6   .0   .0   .0   .0   .0   .2
2. SE3      *   .0   .0   .4   .1   .0  1.3   .2   .0   .0   .0   .0   .2
3. SW3      *   .0   .4   .0   .0   .0   .2  1.0   .0   .0   .0   .2   .0
4. NW3      *   .0   .0   .4   .0   .0   .4   .0   .0   .2   .0   .0   .0
```

```
          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB:   LAKE FOREST AND RANCHO   AMNP
              RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
       BRG= WORST CASE            VD=   .0 CM/S
      CLAS=     7 (G)             VS=   .0 CM/S
      MIXH= 1000. M              AMB=   .0 PPM
     SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*-------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG   1130   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG    910   3.1     .0   9.9
C. ND           *     2     0     2   150 *  AG    810   2.1     .0   9.9
D. NE           *     2   150     2   450 *  AG    810   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG   1320   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG   1070   3.3     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG    980   2.2     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG    980   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG    180   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG    120   3.7     .0   9.9
K. WD           *     0     2  -150     2 *  AG    500   3.7     .0   9.9
L. WE           *  -150     2  -450     2 *  AG    500   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG    180   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG    130   3.7     .0   9.9
O. ED           *     0    -2   150    -2 *  AG    520   3.7     .0   9.9
P. EE           *   150    -2   450    -2 *  AG    520   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG    220   2.5     .0   9.9
R. SL           *     0     0    -2   150 *  AG    250   2.5     .0   9.9
S. WL           *     0     0   150     2 *  AG     60   3.7     .0   9.9
T. EL           *     0     0  -150    -2 *  AG     50   3.7     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*--------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
  RECEPTOR  * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  184. *   1.2 *   .0   .5   .0   .0   .0   .0   .2   .0
2. SE3      *  355. *   1.1 *   .0   .0   .3   .0   .0   .3   .0   .0
3. SW3      *    4. *   1.3 *   .0   .0   .1   .0   .0   .7   .0   .0
4. NW3      *  175. *   1.2 *   .0   .3   .0   .0   .0   .0   .4   .0

            *                          CONC/LINK
            *                            (PPM)
  RECEPTOR  *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-------------------------------------------------------------
1. NE3      *   .0   .0   .0   .0   .0   .0   .1   .0   .0   .0   .0   .0
2. SE3      *   .0   .0   .0   .0   .0   .0   .1   .0   .0   .0   .0   .0
3. SW3      *   .0   .0   .1   .0   .0   .0   .0   .0   .0   .0   .0   .0
4. NW3      *   .0   .0   .1   .0   .0   .0   .0   .0   .0   .0   .0   .0
```

```
          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB:   LAKE FOREST AND RANCHO   AMWP
              RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
       BRG= WORST CASE            VD=   .0 CM/S
      CLAS=     7 (G)             VS=   .0 CM/S
      MIXH= 1000. M              AMB=   .0 PPM
     SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*-------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG   1130   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG   1010   3.6     .0   9.9
C. ND           *     2     0     2   150 *  AG    760   2.2     .0   9.9
D. NE           *     2   150     2   450 *  AG    760   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG   1060   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG    870   3.4     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG   1130   2.5     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG   1130   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG    980   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG    720   3.7     .0   9.9
K. WD           *     0     2  -150     2 *  AG    840   3.6     .0   9.9
L. WE           *  -150     2  -450     2 *  AG    840   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG    250   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG    230   3.2     .0   9.9
O. ED           *     0    -2   150    -2 *  AG    690   3.3     .0   9.9
P. EE           *   150    -2   450    -2 *  AG    690   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG    120   2.6     .0   9.9
R. SL           *     0     0    -2   150 *  AG    190   2.6     .0   9.9
S. WL           *     0     0   150     2 *  AG    260   3.2     .0   9.9
T. EL           *     0     0  -150    -2 *  AG     20   3.2     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*--------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
  RECEPTOR  * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*-----------------------------------------
1. NE3      *  184. *   1.5 *   .0   .7   .0   .0   .0   .0   .2   .1
2. SE3      *  355. *   1.3 *   .0   .0   .3   .0   .0   .3   .0   .0
3. SW3      *   85. *   1.4 *   .0   .2   .0   .0   .0   .0   .2   .0
4. NW3      *  175. *   1.4 *   .0   .3   .0   .0   .0   .0   .5   .0

            *                          CONC/LINK
            *                            (PPM)
  RECEPTOR  *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-----------------------------------------------------------
1. NE3      *   .0   .2   .0   .0   .0   .0   .1   .0   .0   .0   .0   .0
2. SE3      *   .0   .1   .0   .0   .0   .0   .2   .0   .0   .0   .0   .0
3. SW3      *   .0   .3   .0   .0   .0   .0   .5   .0   .0   .0   .1   .0
4. NW3      *   .0   .0   .2   .0   .0   .0   .0   .0   .0   .0   .0   .0
```

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB:   LAKE FOREST AND RANCHO   PMNP
              RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
       BRG= WORST CASE            VD=   .0 CM/S
      CLAS=     7 (G)             VS=   .0 CM/S
      MIXH= 1000. M              AMB=   .0 PPM
     SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*-------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG   1550   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG   1290   3.3     .0   9.9
C. ND           *     2     0     2   150 *  AG   1610   2.2     .0   9.9
D. NE           *     2   150     2   450 *  AG   1610   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG   1100   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG    980   3.3     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG   1230   2.2     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG   1230   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG    580   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG    360   3.7     .0   9.9
K. WD           *     0     2  -150     2 *  AG    490   3.3     .0   9.9
L. WE           *  -150     2  -450     2 *  AG    490   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG    420   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG    250   3.6     .0   9.9
O. ED           *     0    -2   150    -2 *  AG    320   2.5     .0   9.9
P. EE           *   150    -2   450    -2 *  AG    320   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG    260   2.5     .0   9.9
R. SL           *     0     0    -2   150 *  AG    120   2.5     .0   9.9
S. WL           *     0     0   150     2 *  AG    220   3.3     .0   9.9
T. EL           *     0     0  -150    -2 *  AG    170   3.3     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*--------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
  RECEPTOR  * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  184. *   1.6 *   .0   .8   .0   .0   .0   .0   .2   .1
2. SE3      *  355. *   1.4 *   .0   .1   .6   .0   .0   .3   .0   .0
3. SW3      *    4. *   1.4 *   .0   .0   .3   .1   .0   .6   .0   .0
4. NW3      *  175. *   1.4 *   .0   .4   .0   .0   .0   .0   .5   .0

            *                          CONC/LINK
            *                            (PPM)
  RECEPTOR  *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-------------------------------------------------------------
1. NE3      *   .0   .0   .0   .0   .0   .0   .0   .0   .1   .0   .0   .0
2. SE3      *   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
3. SW3      *   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
4. NW3      *   .0   .0   .1   .0   .0   .0   .0   .0   .0   .0   .0   .0
```

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB:   LAKE FOREST AND RANCHO   PMWP
              RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
       BRG= WORST CASE            VD=   .0 CM/S
      CLAS=     7 (G)             VS=   .0 CM/S
      MIXH= 1000. M              AMB=   .0 PPM
     SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*-------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG   1790   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG   1550   3.6     .0   9.9
C. ND           *     2     0     2   150 *  AG   1330   2.6     .0   9.9
D. NE           *     2   150     2   450 *  AG   1330   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG    620   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG    590   2.9     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG    920   2.3     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG    920   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG    870   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG    540   3.6     .0   9.9
K. WD           *     0     2  -150     2 *  AG    670   3.2     .0   9.9
L. WE           *  -150     2  -450     2 *  AG    670   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG    620   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG    590   3.7     .0   9.9
O. ED           *     0    -2   150    -2 *  AG    980   3.7     .0   9.9
P. EE           *   150    -2   450    -2 *  AG    980   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG    240   2.7     .0   9.9
R. SL           *     0     0    -2   150 *  AG     30   2.7     .0   9.9
S. WL           *     0     0   150     2 *  AG    330   3.2     .0   9.9
T. EL           *     0     0  -150    -2 *  AG     30   3.1     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*--------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
  RECEPTOR  * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  184. *   1.9 *   .0  1.0   .0   .0   .0   .0   .2   .0
2. SE3      *  355. *   1.5 *   .0   .1   .6   .0   .0   .2   .0   .0
3. SW3      *   85. *   1.7 *   .0   .3   .0   .0   .0   .0   .1   .0
4. NW3      *  175. *   1.4 *   .1   .5   .0   .0   .0   .0   .4   .0

            *                          CONC/LINK
            *                            (PPM)
  RECEPTOR  *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-------------------------------------------------------------
1. NE3      *   .0   .1   .0   .0   .0   .0   .2   .0   .1   .0   .0   .0
2. SE3      *   .0   .1   .0   .0   .0   .0   .3   .0   .0   .0   .0   .0
3. SW3      *   .0   .2   .0   .0   .0   .0   .7   .0   .0   .0   .2   .0
4. NW3      *   .0   .0   .2   .0   .0   .1   .0   .0   .1   .0   .0   .0
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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB:   LAKE FOREST  AND ROCKFIELD   AMNP
              RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
       BRG= WORST CASE            VD=   .0 CM/S
      CLAS=     7 (G)             VS=   .0 CM/S
      MIXH= 1000. M              AMB=   .0 PPM
     SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*--------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG   1840   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG   1260   3.3     .0   9.9
C. ND           *     2     0     2   150 *  AG   1290   2.2     .0   9.9
D. NE           *     2   150     2   450 *  AG   1290   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG   2020   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG   1890   3.3     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG   2480   2.2     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG   2480   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG   1100   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG    650   3.7     .0   9.9
K. WD           *     0     2  -150     2 *  AG   1190   3.7     .0   9.9
L. WE           *  -150     2  -450     2 *  AG   1190   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG    430   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG    360   3.7     .0   9.9
O. ED           *     0    -2   150    -2 *  AG    430   2.7     .0   9.9
P. EE           *   150    -2   450    -2 *  AG    430   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG    580   2.7     .0   9.9
R. SL           *     0     0    -2   150 *  AG    130   2.5     .0   9.9
S. WL           *     0     0   150     2 *  AG    450   3.7     .0   9.9
T. EL           *     0     0  -150    -2 *  AG     70   3.3     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*--------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
 RECEPTOR   * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  185. *   2.0 *   .0   .8   .0   .0   .0   .0   .4   .1
2. SE3      *  355. *   1.7 *   .0   .1   .5   .0   .1   .5   .0   .0
3. SW3      *    5. *   2.0 *   .0   .0   .3   .0   .0  1.1   .1   .0
4. NW3      *  175. *   2.2 *   .1   .4   .0   .0   .0   .2   .9   .0

            *                          CONC/LINK
            *                            (PPM)
 RECEPTOR   *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-------------------------------------------------------------
1. NE3      *   .0   .2   .0   .0   .0   .0   .0   .0   .2   .0   .1   .0
2. SE3      *   .0   .1   .0   .0   .0   .0   .0   .0   .0   .0   .1   .0
3. SW3      *   .0   .0   .2   .0   .0   .0   .0   .0   .0   .0   .0   .0
4. NW3      *   .0   .0   .3   .0   .0   .0   .0   .0   .2   .0   .0   .0
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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

               JOB:   LAKE FOREST  AND ROCKFIELD   AMWP
               RUN: Hour 1           (WORST CASE ANGLE)
         POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
       BRG= WORST CASE            VD=   .0 CM/S
      CLAS=     7 (G)             VS=   .0 CM/S
      MIXH= 1000. M              AMB=   .0 PPM
     SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*-------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG   1870   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG   1290   3.3     .0   9.9
C. ND           *     2     0     2   150 *  AG   1300   2.2     .0   9.9
D. NE           *     2   150     2   450 *  AG   1300   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG   2020   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG   1890   3.3     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG   2450   2.2     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG   2450   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG   1080   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG    640   3.7     .0   9.9
K. WD           *     0     2  -150     2 *  AG   1190   3.7     .0   9.9
L. WE           *  -150     2  -450     2 *  AG   1190   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG    410   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG    340   3.4     .0   9.9
O. ED           *     0    -2   150    -2 *  AG    440   2.7     .0   9.9
P. EE           *   150    -2   450    -2 *  AG    440   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG    580   2.7     .0   9.9
R. SL           *     0     0    -2   150 *  AG    130   2.5     .0   9.9
S. WL           *     0     0   150     2 *  AG    440   3.7     .0   9.9
T. EL           *     0     0  -150    -2 *  AG     70   3.3     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*---------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
  RECEPTOR  * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  185. *   2.0 *   .0   .8   .0   .0   .0   .0   .4   .1
2. SE3      *  355. *   1.7 *   .0   .1   .5   .0   .1   .5   .0   .0
3. SW3      *    5. *   2.0 *   .0   .0   .3   .0   .0  1.1   .1   .0
4. NW3      *  175. *   2.2 *   .1   .4   .0   .0   .0   .2   .9   .0

            *                          CONC/LINK
            *                            (PPM)
  RECEPTOR  *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-------------------------------------------------------------
1. NE3      *   .0   .2   .0   .0   .0   .0   .0   .0   .2   .0   .1   .0
2. SE3      *   .0   .1   .0   .0   .0   .0   .0   .0   .0   .0   .0   .0
3. SW3      *   .0   .0   .2   .0   .0   .0   .0   .0   .0   .0   .0   .0
4. NW3      *   .0   .0   .3   .0   .0   .0   .0   .0   .2   .0   .0   .0
```

```
          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

               JOB:   LAKE FOREST  AND ROCKFIELD   PMNP
               RUN: Hour 1           (WORST CASE ANGLE)
         POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
       BRG= WORST CASE            VD=   .0 CM/S
      CLAS=     7 (G)             VS=   .0 CM/S
      MIXH= 1000. M              AMB=   .0 PPM
     SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*-------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG   2770   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG   2170   3.4     .0   9.9
C. ND           *     2     0     2   150 *  AG   2050   2.3     .0   9.9
D. NE           *     2   150     2   450 *  AG   2050   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG   1470   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG   1320   3.4     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG   1910   2.3     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG   1910   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG    790   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG    370   3.6     .0   9.9
K. WD           *     0     2  -150     2 *  AG    940   3.7     .0   9.9
L. WE           *  -150     2  -450     2 *  AG    940   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG   1160   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG    970   3.7     .0   9.9
O. ED           *     0    -2   150    -2 *  AG   1290   3.7     .0   9.9
P. EE           *   150    -2   450    -2 *  AG   1290   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG    600   2.7     .0   9.9
R. SL           *     0     0    -2   150 *  AG    150   2.5     .0   9.9
S. WL           *     0     0   150     2 *  AG    420   3.6     .0   9.9
T. EL           *     0     0  -150    -2 *  AG    190   3.2     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*--------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
  RECEPTOR  * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  185. *   2.6 *   .0  1.2   .1   .0   .0   .0   .3   .1
2. SE3      *  275. *   2.2 *   .0   .5   .0   .0   .0   .0   .2   .0
3. SW3      *   85. *   2.2 *   .0   .4   .0   .0   .0   .0   .3   .0
4. NW3      *  174. *   2.3 *   .0   .6   .0   .0   .0   .1   .7   .0

            *                          CONC/LINK
            *                            (PPM)
  RECEPTOR  *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-------------------------------------------------------------
1. NE3      *   .0   .0   .0   .0   .0   .0   .3   .0   .2   .0   .0   .0
2. SE3      *   .0   .0   .3   .0   .0   .7   .1   .0   .0   .0   .0   .1
3. SW3      *   .0   .1   .0   .0   .0   .0   .9   .0   .0   .0   .2   .0
4. NW3      *   .0   .0   .2   .0   .0   .2   .0   .0   .2   .0   .0   .0
```

```
          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

               JOB:   LAKE FOREST  AND ROCKFIELD   PMWP
               RUN: Hour 1           (WORST CASE ANGLE)
         POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
       BRG= WORST CASE            VD=   .0 CM/S
      CLAS=     7 (G)             VS=   .0 CM/S
      MIXH= 1000. M              AMB=   .0 PPM
     SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*-------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG   2810   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG   2220   3.4     .0   9.9
C. ND           *     2     0     2   150 *  AG   2090   2.3     .0   9.9
D. NE           *     2   150     2   450 *  AG   2090   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG   1480   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG   1330   3.4     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG   1920   2.3     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG   1920   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG    800   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG    370   3.6     .0   9.9
K. WD           *     0     2  -150     2 *  AG    940   3.7     .0   9.9
L. WE           *  -150     2  -450     2 *  AG    940   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG   1160   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG    980   3.7     .0   9.9
O. ED           *     0    -2   150    -2 *  AG   1300   3.7     .0   9.9
P. EE           *   150    -2   450    -2 *  AG   1300   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG    590   2.7     .0   9.9
R. SL           *     0     0    -2   150 *  AG    150   2.5     .0   9.9
S. WL           *     0     0   150     2 *  AG    430   3.6     .0   9.9
T. EL           *     0     0  -150    -2 *  AG    180   3.2     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*---------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
  RECEPTOR  * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  185. *   2.6 *   .0  1.3   .1   .0   .0   .0   .3   .1
2. SE3      *  275. *   2.2 *   .0   .5   .0   .0   .0   .0   .2   .0
3. SW3      *   85. *   2.3 *   .0   .4   .0   .0   .0   .0   .3   .0
4. NW3      *  174. *   2.3 *   .0   .6   .0   .0   .0   .1   .7   .0

            *                          CONC/LINK
            *                            (PPM)
  RECEPTOR  *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-------------------------------------------------------------
1. NE3      *   .0   .0   .0   .0   .0   .0   .3   .0   .2   .0   .0   .0
2. SE3      *   .0   .0   .3   .0   .0   .7   .1   .0   .0   .0   .0   .0
3. SW3      *   .0   .1   .0   .0   .0   .0   .9   .0   .0   .0   .2   .0
4. NW3      *   .0   .0   .2   .0   .0   .2   .0   .0   .2   .0   .0   .0
```

```
          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB:   LAKE FOREST AND TRABUCO   AMNP
              RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

        U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
      BRG= WORST CASE            VD=   .0 CM/S
     CLAS=     7 (G)             VS=   .0 CM/S
     MIXH= 1000. M              AMB=   .0 PPM
    SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*-------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG   1220   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG    960   3.7     .0   9.9
C. ND           *     2     0     2   150 *  AG   1570   3.6     .0   9.9
D. NE           *     2   150     2   450 *  AG   1570   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG   1630   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG   1300   3.7     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG   2260   3.6     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG   2260   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG   2320   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG   1630   3.7     .0   9.9
K. WD           *     0     2  -150     2 *  AG   1510   3.0     .0   9.9
L. WE           *  -150     2  -450     2 *  AG   1510   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG   1220   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG   1070   3.7     .0   9.9
O. ED           *     0    -2   150    -2 *  AG   1050   3.0     .0   9.9
P. EE           *   150    -2   450    -2 *  AG   1050   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG    260   3.0     .0   9.9
R. SL           *     0     0    -2   150 *  AG    330   3.0     .0   9.9
S. WL           *     0     0   150     2 *  AG    690   3.3     .0   9.9
T. EL           *     0     0  -150    -2 *  AG    150   2.8     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*---------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

 IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
 RECEPTOR   * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  186. *   2.5 *   .0   .7   .2   .0   .0   .0   .7   .0
2. SE3      *  355. *   2.5 *   .0   .0  1.0   .0   .0   .4   .0   .0
3. SW3      *   84. *   2.5 *   .0   .2   .0   .0   .0   .0   .6   .0
4. NW3      *   95. *   2.6 *   .0   .0   .3   .0   .0   .3   .0   .0

            *                          CONC/LINK
            *                            (PPM)
 RECEPTOR   *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-------------------------------------------------------------
1. NE3      *   .0   .4   .0   .0   .0   .0   .2   .0   .1   .0   .1   .0
2. SE3      *   .0   .3   .0   .0   .0   .0   .2   .0   .0   .1   .1   .0
3. SW3      *   .0   .5   .0   .0   .0   .1   .6   .0   .0   .0   .3   .0
4. NW3      *   .0  1.1   .1   .0   .0   .0   .3   .0   .0   .0   .3   .0
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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB:   LAKE FOREST AND TRABUCO   AMWP
              RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

        U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
      BRG= WORST CASE            VD=   .0 CM/S
     CLAS=     7 (G)             VS=   .0 CM/S
     MIXH= 1000. M              AMB=   .0 PPM
    SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*-------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG   1220   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG    960   3.7     .0   9.9
C. ND           *     2     0     2   150 *  AG   1440   3.6     .0   9.9
D. NE           *     2   150     2   450 *  AG   1440   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG   1640   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG   1370   3.7     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG   2330   3.6     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG   2330   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG   2150   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG   1430   3.7     .0   9.9
K. WD           *     0     2  -150     2 *  AG   1500   3.1     .0   9.9
L. WE           *  -150     2  -450     2 *  AG   1500   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG   1220   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG   1050   3.7     .0   9.9
O. ED           *     0    -2   150    -2 *  AG    960   3.1     .0   9.9
P. EE           *   150    -2   450    -2 *  AG    960   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG    260   3.0     .0   9.9
R. SL           *     0     0    -2   150 *  AG    270   3.0     .0   9.9
S. WL           *     0     0   150     2 *  AG    720   3.3     .0   9.9
T. EL           *     0     0  -150    -2 *  AG    170   2.8     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*--------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
  RECEPTOR  * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  186. *   2.4 *   .0   .7   .2   .0   .0   .0   .7   .0
2. SE3      *  355. *   2.4 *   .0   .0   .9   .0   .0   .4   .0   .0
3. SW3      *   84. *   2.4 *   .0   .2   .0   .0   .0   .0   .6   .0
4. NW3      *  175. *   2.7 *   .0   .3   .0   .0   .0   .1  1.4   .0

            *                          CONC/LINK
            *                            (PPM)
  RECEPTOR  *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-------------------------------------------------------------
1. NE3      *   .0   .4   .0   .0   .0   .0   .2   .0   .1   .0   .1   .0
2. SE3      *   .0   .3   .0   .0   .0   .0   .2   .0   .0   .1   .1   .0
3. SW3      *   .0   .5   .0   .0   .0   .1   .6   .0   .0   .0   .3   .0
4. NW3      *   .0   .0   .3   .0   .0   .2   .0   .0   .1   .0   .0   .0
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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB:   LAKE FOREST AND TRABUCO   PMNP
              RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

        U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
      BRG= WORST CASE            VD=   .0 CM/S
     CLAS=     7 (G)             VS=   .0 CM/S
     MIXH= 1000. M              AMB=   .0 PPM
    SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*--------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG   1980   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG   1710   3.7     .0   9.9
C. ND           *     2     0     2   150 *  AG   1760   3.0     .0   9.9
D. NE           *     2   150     2   450 *  AG   1760   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG   1650   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG   1150   3.7     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG   1530   3.0     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG   1530   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG   1430   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG   1110   3.7     .0   9.9
K. WD           *     0     2  -150     2 *  AG   1000   3.6     .0   9.9
L. WE           *  -150     2  -450     2 *  AG   1000   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG   1590   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG   1370   3.7     .0   9.9
O. ED           *     0    -2   150    -2 *  AG   2360   3.6     .0   9.9
P. EE           *   150    -2   450    -2 *  AG   2360   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG    270   2.8     .0   9.9
R. SL           *     0     0    -2   150 *  AG    500   3.0     .0   9.9
S. WL           *     0     0   150     2 *  AG    320   3.0     .0   9.9
T. EL           *     0     0  -150    -2 *  AG    220   3.0     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*--------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
  RECEPTOR  * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  185. *   2.7 *   .0  1.1   .1   .0   .0   .0   .4   .0
2. SE3      *  355. *   2.7 *   .0   .2   .9   .0   .0   .4   .0   .0
3. SW3      *   85. *   2.9 *   .0   .3   .0   .0   .0   .0   .3   .0
4. NW3      *   95. *   2.5 *   .0   .0   .3   .0   .0   .3   .0   .0

            *                          CONC/LINK
            *                            (PPM)
  RECEPTOR  *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-------------------------------------------------------------
1. NE3      *   .0   .3   .0   .0   .0   .0   .4   .0   .1   .0   .0   .0
2. SE3      *   .0   .2   .0   .0   .0   .0   .6   .0   .0   .2   .0   .0
3. SW3      *   .0   .4   .0   .0   .0   .1  1.4   .0   .0   .0   .1   .0
4. NW3      *   .0   .8   .0   .0   .0   .0   .6   .1   .0   .0   .2   .0
```

```
          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB:   LAKE FOREST AND TRABUCO   PMWP
              RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

        U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
      BRG= WORST CASE            VD=   .0 CM/S
     CLAS=     7 (G)             VS=   .0 CM/S
     MIXH= 1000. M              AMB=   .0 PPM
    SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*-------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG   2080   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG   1810   3.7     .0   9.9
C. ND           *     2     0     2   150 *  AG   1730   2.9     .0   9.9
D. NE           *     2   150     2   450 *  AG   1730   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG   1590   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG   1250   3.7     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG   1580   2.9     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG   1580   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG   1300   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG   1020   3.7     .0   9.9
K. WD           *     0     2  -150     2 *  AG   1010   3.6     .0   9.9
L. WE           *  -150     2  -450     2 *  AG   1010   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG   1590   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG   1370   3.7     .0   9.9
O. ED           *     0    -2   150    -2 *  AG   2240   3.6     .0   9.9
P. EE           *   150    -2   450    -2 *  AG   2240   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG    270   2.8     .0   9.9
R. SL           *     0     0    -2   150 *  AG    340   2.8     .0   9.9
S. WL           *     0     0   150     2 *  AG    280   3.1     .0   9.9
T. EL           *     0     0  -150    -2 *  AG    220   3.0     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*--------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
  RECEPTOR  * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  185. *   2.7 *   .0  1.2   .1   .0   .0   .0   .4   .0
2. SE3      *  355. *   2.6 *   .0   .2   .9   .0   .0   .4   .0   .0
3. SW3      *   85. *   2.8 *   .0   .3   .0   .0   .0   .0   .3   .0
4. NW3      *   95. *   2.4 *   .0   .0   .3   .0   .0   .3   .0   .0

            *                          CONC/LINK
            *                            (PPM)
  RECEPTOR  *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-------------------------------------------------------------
1. NE3      *   .0   .3   .0   .0   .0   .0   .4   .0   .1   .0   .0   .0
2. SE3      *   .0   .2   .0   .0   .0   .0   .6   .0   .0   .1   .0   .0
3. SW3      *   .0   .4   .0   .0   .0   .1  1.3   .0   .0   .0   .1   .0
4. NW3      *   .0   .7   .0   .0   .0   .0   .6   .1   .0   .0   .1   .0
```

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

               JOB:   LOS ALISOS AND JERONIMO   AMNP
               RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
       BRG= WORST CASE            VD=   .0 CM/S
      CLAS=     7 (G)             VS=   .0 CM/S
      MIXH= 1000. M              AMB=   .0 PPM
     SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*-------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG   1070   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG    910   3.6     .0   9.9
C. ND           *     2     0     2   150 *  AG   1040   2.9     .0   9.9
D. NE           *     2   150     2   450 *  AG   1040   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG   2050   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG   1730   3.7     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG   1790   2.9     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG   1790   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG   1410   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG   1070   3.7     .0   9.9
K. WD           *     0     2  -150     2 *  AG   1470   3.6     .0   9.9
L. WE           *  -150     2  -450     2 *  AG   1470   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG    930   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG    760   3.7     .0   9.9
O. ED           *     0    -2   150    -2 *  AG   1160   3.6     .0   9.9
P. EE           *   150    -2   450    -2 *  AG   1160   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG    160   2.7     .0   9.9
R. SL           *     0     0    -2   150 *  AG    320   2.8     .0   9.9
S. WL           *     0     0   150     2 *  AG    340   3.1     .0   9.9
T. EL           *     0     0  -150    -2 *  AG    170   3.0     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*--------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
 RECEPTOR   * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  265. *   2.1 *   .0   .0   .2   .0   .0   .3   .0   .0
2. SE3      *  354. *   2.0 *   .0   .0   .6   .0   .0   .6   .0   .0
3. SW3      *    5. *   2.3 *   .0   .0   .3   .0   .0  1.1   .1   .0
4. NW3      *   95. *   2.2 *   .0   .0   .2   .0   .0   .5   .0   .0

            *                          CONC/LINK
            *                            (PPM)
 RECEPTOR   *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-------------------------------------------------------------
1. NE3      *   .0   .1  1.0   .0   .0   .3   .0   .0   .0   .0   .0   .0
2. SE3      *   .0   .2   .0   .0   .0   .0   .3   .0   .0   .1   .0   .0
3. SW3      *   .0   .0   .3   .0   .0   .2   .0   .0   .0   .1   .0   .0
4. NW3      *   .0   .8   .1   .0   .0   .0   .4   .0   .0   .0   .2   .0
```

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

               JOB:   LOS ALISOS AND JERONIMO   AMWP
               RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
       BRG= WORST CASE            VD=   .0 CM/S
      CLAS=     7 (G)             VS=   .0 CM/S
      MIXH= 1000. M              AMB=   .0 PPM
     SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*--------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG   1090   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG    930   3.6     .0   9.9
C. ND           *     2     0     2   150 *  AG   1090   2.9     .0   9.9
D. NE           *     2   150     2   450 *  AG   1090   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG   2020   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG   1730   3.7     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG   1790   2.9     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG   1790   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG   1420   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG   1090   3.7     .0   9.9
K. WD           *     0     2  -150     2 *  AG   1470   3.6     .0   9.9
L. WE           *  -150     2  -450     2 *  AG   1470   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG    990   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG    820   3.7     .0   9.9
O. ED           *     0    -2   150    -2 *  AG   1170   3.6     .0   9.9
P. EE           *   150    -2   450    -2 *  AG   1170   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG    160   2.7     .0   9.9
R. SL           *     0     0    -2   150 *  AG    290   2.8     .0   9.9
S. WL           *     0     0   150     2 *  AG    330   3.1     .0   9.9
T. EL           *     0     0  -150    -2 *  AG    170   3.0     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*--------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
 RECEPTOR   * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  265. *   2.2 *   .0   .0   .2   .0   .0   .3   .0   .0
2. SE3      *  354. *   2.1 *   .0   .0   .6   .0   .0   .6   .0   .0
3. SW3      *    5. *   2.3 *   .0   .0   .3   .0   .0  1.1   .1   .0
4. NW3      *   95. *   2.3 *   .0   .0   .2   .0   .0   .5   .0   .0

            *                          CONC/LINK
            *                            (PPM)
 RECEPTOR   *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-------------------------------------------------------------
1. NE3      *   .0   .1  1.0   .0   .0   .3   .0   .0   .0   .0   .0   .0
2. SE3      *   .0   .2   .0   .0   .0   .0   .3   .0   .0   .1   .0   .0
3. SW3      *   .0   .0   .3   .0   .0   .2   .0   .0   .0   .1   .0   .0
4. NW3      *   .0   .8   .1   .0   .0   .0   .4   .0   .0   .0   .2   .0
```

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB:   LOS ALISOS AND JERONIMO   PMNP
              RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

        U=    .5 M/S            Z0= 100. CM           ALT=     0. (M)
      BRG= WORST CASE           VD=   .0 CM/S
     CLAS=     7 (G)            VS=   .0 CM/S
     MIXH= 1000. M             AMB=   .0 PPM
    SIGTH=    5. DEGREES      TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*-------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG   2010   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG   1800   3.7     .0   9.9
C. ND           *     2     0     2   150 *  AG   2120   2.7     .0   9.9
D. NE           *     2   150     2   450 *  AG   2120   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG   1360   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG   1100   3.7     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG   1430   2.7     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG   1430   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG    900   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG    640   3.6     .0   9.9
K. WD           *     0     2  -150     2 *  AG    730   3.0     .0   9.9
L. WE           *  -150     2  -450     2 *  AG    730   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG   1400   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG   1020   3.7     .0   9.9
O. ED           *     0    -2   150    -2 *  AG   1390   3.7     .0   9.9
P. EE           *   150    -2   450    -2 *  AG   1390   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG    210   2.7     .0   9.9
R. SL           *     0     0    -2   150 *  AG    260   2.7     .0   9.9
S. WL           *     0     0   150     2 *  AG    260   3.1     .0   9.9
T. EL           *     0     0  -150    -2 *  AG    380   3.2     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*---------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
  RECEPTOR  * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  185. *   2.4 *   .0  1.2   .1   .0   .0   .0   .3   .0
2. SE3      *  355. *   2.3 *   .0   .2  1.0   .0   .0   .4   .0   .0
3. SW3      *   85. *   2.2 *   .0   .3   .0   .0   .0   .0   .3   .0
4. NW3      *  175. *   2.0 *   .1   .5   .0   .0   .0   .1   .7   .0

            *                          CONC/LINK
            *                            (PPM)
  RECEPTOR  *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-------------------------------------------------------------
1. NE3      *   .0   .2   .0   .0   .0   .0   .3   .0   .0   .0   .0   .0
2. SE3      *   .0   .1   .0   .0   .0   .0   .4   .0   .0   .1   .0   .0
3. SW3      *   .0   .2   .0   .0   .0   .0   .9   .0   .0   .0   .1   .0
4. NW3      *   .0   .0   .2   .0   .0   .2   .0   .0   .0   .0   .0   .0
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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

               JOB:   LOS ALISOS AND JERONIMO   PMWP
               RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=    .5 M/S             Z0= 100. CM            ALT=     0. (M)
       BRG= WORST CASE            VD=   .0 CM/S
      CLAS=     7 (G)             VS=   .0 CM/S
      MIXH= 1000. M              AMB=   .0 PPM
     SIGTH=    5. DEGREES       TEMP= 15.6 DEGREE (C)

 II.  LINK VARIABLES

      LINK      *  LINK COORDINATES (M)   *              EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)
----------------*-------------------------*------------------------------
A. NF           *     2  -450     2  -150 *  AG   1990   1.9     .0  10.5
B. NA           *     2  -150     2     0 *  AG   1790   3.7     .0   9.9
C. ND           *     2     0     2   150 *  AG   2090   2.7     .0   9.9
D. NE           *     2   150     2   450 *  AG   2090   1.9     .0  10.5
E. SF           *    -2   450    -2   150 *  AG   1370   1.9     .0  10.5
F. SA           *    -2   150    -2     0 *  AG   1110   3.7     .0   9.9
G. SD           *    -2     0    -2  -150 *  AG   1470   2.7     .0   9.9
H. SE           *    -2  -150    -2  -450 *  AG   1470   1.9     .0  10.5
I. WF           *   450     2   150     2 *  AG    930   1.9     .0  10.5
J. WA           *   150     2     0     2 *  AG    640   3.6     .0   9.9
K. WD           *     0     2  -150     2 *  AG    730   3.0     .0   9.9
L. WE           *  -150     2  -450     2 *  AG    730   1.9     .0  10.5
M. EF           *  -450    -2  -150    -2 *  AG   1390   1.9     .0  10.5
N. EA           *  -150    -2     0    -2 *  AG   1010   3.7     .0   9.9
O. ED           *     0    -2   150    -2 *  AG   1390   3.7     .0   9.9
P. EE           *   150    -2   450    -2 *  AG   1390   1.9     .0  10.5
Q. NL           *     0     0     2  -150 *  AG    200   2.7     .0   9.9
R. SL           *     0     0    -2   150 *  AG    260   2.7     .0   9.9
S. WL           *     0     0   150     2 *  AG    290   3.1     .0   9.9
T. EL           *     0     0  -150    -2 *  AG    380   3.2     .0   9.9

 III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*---------------------
1. NE3      *      8      8   1.8
2. SE3      *      8     -8   1.8
3. SW3      *     -8     -8   1.8
4. NW3      *     -8      8   1.8

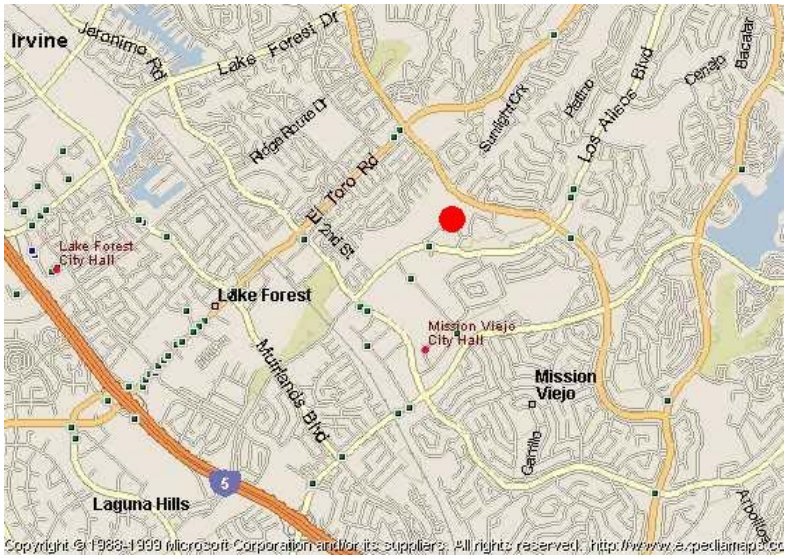
  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
  RECEPTOR  * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*---------------------------------------
1. NE3      *  185. *   2.4 *   .0  1.2   .1   .0   .0   .0   .3   .0
2. SE3      *  355. *   2.3 *   .0   .2  1.0   .0   .0   .4   .0   .0
3. SW3      *   85. *   2.2 *   .0   .3   .0   .0   .0   .0   .3   .0
4. NW3      *  175. *   2.0 *   .1   .5   .0   .0   .0   .1   .7   .0

            *                          CONC/LINK
            *                            (PPM)
  RECEPTOR  *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*-------------------------------------------------------------
1. NE3      *   .0   .2   .0   .0   .0   .0   .3   .0   .0   .0   .0   .0
2. SE3      *   .0   .1   .0   .0   .0   .0   .4   .0   .0   .1   .0   .0
3. SW3      *   .0   .2   .0   .0   .0   .0   .9   .0   .0   .0   .1   .0
4. NW3      *   .0   .0   .2   .0   .0   .2   .0   .0   .0   .0   .0   .0
```

Quality Assurance
Site Information for Mission Viejo

This page updated May 15, 2008



AIRS Number	ARB Number	Site Start Date	Reporting Agency and Agency Code
060592022	30002	1/1/99	South Coast AQMD (061)

Site Address	County	Air Basin	Latitude	Longitude	Elevation
26081 Via Pera, Mission Viejo CA 92691	Orange	South Coast	33º 37' 49"	117º 40' 30"	180

Pollutants Monitored (click on parameter link for real-time data)
CO, O_3, PM_{10}, $PM_{2.5}$, Outdoor Temperature, Relative Humidity, Wind Direction, Horizontal Wind Speed, Barometric Pressure, Solar Radiation

Site Photos	Photo Sequences	Site Surveys
--Select Photos--	--Select Position And Direction--	--Select Survey--

Other ARB Database Information	Real-Time Met Data	Aerial Photos and Topo Maps Of Site
--Select Database--	--Select Data Server--	--Select External Map--

Site Information Menu Top Page **Quality Assurance Programs** **Search QA Site Information Database**

For real-time air quality data visit: Air Quality and Meteorological Information System (AQMIS)

For further information contact:

Merrin Wright, *Manager*
Quality Assurance Section

Air Resources Board

iADAM

Highest 4 Daily Maximum Hourly Ozone Measurements

Mission Viejo-26081 Via Pera

FAQs

Year:	2006		2007		2008	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:	Sep 4	0.123	Aug 31	0.108	Jun 18	0.118
Second High:	Jun 25	0.118	Sep 1	0.108	Jun 20	0.114
Third High:	Jun 3	0.116	Sep 2	0.101	Jul 4	0.112
Fourth High:	Aug 22	0.113	Sep 3	0.101	Jun 19	0.105
# Days Above State Standard:		13		5		9
California Designation Value:		0.12		0.11		0.12
Expected Peak Day Conc.:		0.117		0.115		0.117
# Days Above Nat'l Standard:		*0*		*0*		*0*
National Design Value:		*0.116*		*0.116*		*0.116*
Year Coverage:		96		99		97

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All concentrations are expressed in parts per million.
The national 1-hour ozone standard was revoked in June 2005 and is no longer in effect. Statistics related to the revoked standard are shown in *italics* or *italics* .
State exceedances are shown in **yellow** . Exceedances of the revoked national 1-hour standard are shown in *orange* .
An exceedance is not necessarily a violation.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period.
* There was insufficient (or no) data available to determine the value.

Switch: 8-Hour Ozone | PM10 | PM2.5 | Carbon Monoxide | Nitrogen Dioxide | Sulfur Dioxide | Hydrogen Sulfide

Go to: Data Statistics Home Page | Top 4 Summaries Start Page

Welcome to California

Air Resources Board

iADAM

Highest 4 Daily Maximum 8-Hour Ozone Averages

Mission Viejo-26081 Via Pera

FAQs

Year:	2006		2007		2008	
	Date	8-Hr Average	Date	8-Hr Average	Date	8-Hr Average
National:						
First High:	Jun 3	0.105	Sep 1	0.090	Jun 20	0.104
Second High:	Jul 1	0.095	Sep 3	0.088	Jul 4	0.095
Third High:	Sep 3	0.093	Aug 31	0.083	Jun 19	0.093
Fourth High:	Jun 25	0.090	Sep 2	0.081	Jun 21	0.092
California:						
First High:	Jun 3	0.106	Sep 1	0.090	Jun 20	0.104
Second High:	Jul 1	0.096	Sep 3	0.089	Jul 4	0.095
Third High:	Sep 3	0.094	Aug 31	0.083	Jun 19	0.094
Fourth High:	Jun 25	0.091	Sep 2	0.082	Jun 21	0.092
National:						
# Days Above '08 Nat'l Std.:		12		5		15
'08 Nat'l Std. Design Value:		0.084		0.083		0.087
National Year Coverage:		96		99		97
California:						
# Days Above State Standard:		23		10		25
California Designation Value:		0.096		0.094		0.096
Expected Peak Day Conc.:		0.099		0.095		0.100
California Year Coverage:		96		99		97

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All averages are expressed in parts per million.
National exceedances are shown in **orange** . State exceedances are shown in **yellow** .
An exceedance is not necessarily a violation.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period.
* There was insufficient (or no) data available to determine the value.

Switch: Hourly Ozone | PM10 | PM2.5 | Carbon Monoxide | Nitrogen Dioxide | Sulfur Dioxide | Hydrogen Sulfide

Go to: Data Statistics Home Page | Top 4 Summaries Start Page

Air Resources Board

iADAM

Highest 4 Daily Maximum 8-Hour Carbon Monoxide Averages

Mission Viejo-26081 Via Pera

FAQs

Year:	2006		2007		2008	
	Date	Measurement	Date	Measurement	Date	Measurement
National:						
First High:	Dec 6	1.64	Oct 25	2.16	Jan 11	1.10
Second High:	Dec 7	1.28	Oct 24	1.99	Feb 8	1.04
Third High:	Dec 6	1.21	Oct 24	1.44	Feb 12	1.02
Fourth High:	Dec 13	1.19	Oct 25	1.43	Jan 12	0.96
California:						
First High:	Dec 6	1.64	Oct 25	2.16	Jan 11	1.10
Second High:	Dec 7	1.28	Oct 24	1.99	Feb 8	1.04
Third High:	Dec 13	1.19	Oct 26	1.35	Feb 12	1.02
Fourth High:	Oct 27	1.11	Dec 4	1.34	Jan 12	0.96
# Days Above Nat'l Standard:		0		0		0
# Days Above State Standard:		0		0		0
Year Coverage:		99		97		96

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All averages are expressed in parts per million.
State exceedances are shown in **yellow** . National exceedances are shown in **orange** .
An exceedance is not necessarily a violation.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period.
* There was insufficient (or no) data available to determine the value.

Switch: Hourly Ozone | 8-Hour Ozone | PM10 | PM2.5 | Nitrogen Dioxide | Sulfur Dioxide | Hydrogen Sulfide

Go to: Data Statistics Home Page | Top 4 Summaries Start Page

iADAM

Highest 4 Daily PM10 Measurements

Mission Viejo-26081 Via Pera

FAQs

Year:	2006		2007		2008	
	Date	Measurement	Date	Measurement	Date	Measurement
National:						
First High:	Feb 4	57.0	Oct 21	74.0	Oct 3	42.0
Second High:	Dec 7	37.0	Nov 2	55.0	Nov 20	42.0
Third High:	Sep 26	35.0	Oct 27	52.0	Feb 12	39.0
Fourth High:	Feb 10	34.0	Apr 18	37.0	Oct 27	39.0
California:						
First High:	Feb 4	56.0	Oct 21	74.0	Oct 3	41.0
Second High:	Dec 7	38.0	Nov 2	55.0	Nov 20	41.0
Third High:	May 11	35.0	Oct 27	52.0	Feb 12	39.0
Fourth High:	Jul 22	35.0	Apr 18	38.0	Oct 27	38.0
Measured:						
# Days Above Nat'l Standard:		0		0		0
# Days Above State Standard:		1		3		0
Estimated:						
3-Yr Avg # Days Above Nat'l Std:		*		*		*
# Days Above Nat'l Standard:		*		0.0		*
# Days Above State Standard:		*		*		*
State 3-Yr Maximum Average:		23		*		*
State Annual Average:		*		*		*
National 3-Year Average:		*21*		*21*		*22*
National Annual Average:		*21.1*		*23.0*		*21.2*
Year Coverage:		75		93		92

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All concentrations are expressed in micrograms per cubic meter.
The national annual average PM10 standard was revoked in December 2006 and is no longer in effect.
Statistics related to the revoked standard are shown in *italics* or *italics* .
State exceedances are shown in **yellow** . National exceedances are shown in **orange** .
An exceedance is not necessarily a violation.
Statistics may include data that are related to an exceptional event.
State and national statistics may differ for the following reasons:
State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods.
State and national statistics may therefore be based on different samplers.
State statistics for 1998 and later are based on *local* conditions (except for sites in the South Coast Air Basin, where State statistics for 2002 and later are based on *local* conditions).
National statistics are based on *standard* conditions.
State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.
Measurements are usually collected every six days. Measured days counts the days that a measurement was greater than the level of the standard; Estimated days mathematically estimates how many days concentrations would have been greater than the level of the standard had each day been monitored.
3-Year statistics represent the listed year and the 2 years before the listed year.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* There was insufficient (or no) data available to determine the value.

Switch: Hourly Ozone | 8-Hour Ozone | PM2.5 | Carbon Monoxide | Nitrogen Dioxide | Sulfur Dioxide | Hydrogen Sulfide

Go to: Data Statistics Home Page | Top 4 Summaries Start Page

Air Resources Board

iADAM

Highest 4 Daily PM2.5 Measurements

Mission Viejo-26081 Via Pera

FAQs

Year:	2006		2007		2008	
	Date	Measurement	Date	Measurement	Date	Measurement
National:						
First High:	Feb 4	46.9	Nov 2	46.8	Jan 10	31.9
Second High:	Feb 25	29.2	Nov 5	35.7	Feb 12	21.2
Third High:	Nov 1	25.7	Mar 16	34.3	Feb 18	20.7
Fourth High:	Nov 4	25.5	Feb 8	30.3	Jul 5	19.5
California:						
First High:	Feb 4	46.9	Nov 2	46.8	Jan 10	31.9
Second High:	Feb 25	29.2	Nov 5	35.7	Feb 12	21.2
Third High:	Nov 1	25.7	Mar 16	34.3	Feb 18	20.7
Fourth High:	Nov 4	25.5	Feb 8	30.3	Jul 5	19.5
Estimated Days > '06 Nat'l 24-Hr Std:		*		*		*
Measured Days > '06 Nat'l 24-Hr Std:		1		2		0
'06 Nat'l 24-Hr Std Design Value:		*		*		*
'06 Nat'l 24-Hr Std 98th Percentile:		25.7		35.7		*
National Annual Std Design Value:		*		*		*
National Annual Average:		*		*		*
State Ann'l Std Designation Value:		11		11		*
State Annual Average:		*		*		*
Year Coverage:		84		79		63

Go Backward One Year | New Top 4 Summary | Go Forward One Year

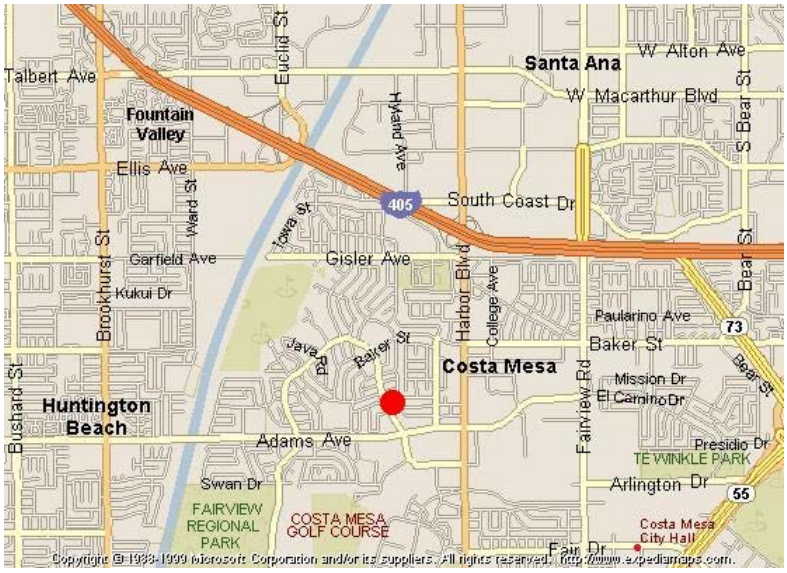
Notes: All concentrations are expressed in micrograms per cubic meter.
State exceedances are shown in **yellow** . National exceedances are shown in **orange** .
An exceedance is not necessarily a violation.
State and national statistics may differ for the following reasons:
State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods.
State and national statistics may therefore be based on different samplers.
State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* There was insufficient data available throughout the year to determine the value.

Switch: Hourly Ozone | 8-Hour Ozone | PM10 | Carbon Monoxide | Nitrogen Dioxide | Sulfur Dioxide | Hydrogen Sulfide

Go to: Data Statistics Home Page | Top 4 Summaries Start Page

Quality Assurance
Site Information for Costa Mesa-Mesa Verde Drive

This page updated May 15, 2008



AIRS Number	ARB Number	Site Start Date	Reporting Agency and Agency Code
060591003	30195	11/1/89	South Coast AQMD (061)

Site Address	County	Air Basin	Latitude	Longitude	Elevation
2850 Mesa Verde Dr East, Costa Mesa CA 92626	Orange	South Coast	33° 40' 26"	117° 55' 33"	82

Pollutants Monitored (click on parameter link for real-time data)
CO, SO_2, NO_2, O_3, Wind Direction, Horizontal Wind Speed

Site Photos	Photo Sequences	Site Surveys
--Select Photos--	--Select Position And Direction--	--Select Survey--

Other ARB Database Information	Real-Time Met Data	Aerial Photos and Topo Maps Of Site
--Select Database--	--Select Data Server--	--Select External Map--

Site Information Menu Top Page **Quality Assurance Programs** **Search QA Site Information Database**

For real-time air quality data visit: Air Quality and Meteorological Information System (AQMIS)

For further information contact:

Merrin Wright, *Manager*
Quality Assurance Section

Air Resources Board

iADAM

Highest 4 Daily Maximum Hourly Nitrogen Dioxide Measurements

Costa Mesa-Mesa Verde Drive

FAQs

Year:	2006		2007		2008	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:	Dec 7	0.101	Oct 19	0.074	Nov 21	0.081
Second High:	Feb 7	0.079	Jan 9	0.073	Oct 28	0.077
Third High:	Dec 6	0.079	Oct 24	0.069	Nov 18	0.077
Fourth High:	Nov 7	0.077	Dec 4	0.069	Nov 17	0.074
# Days Above State Standard:		0		0		0
Annual Average:		0.015		0.013		0.013
Year Coverage:		98		96		95

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All concentrations are expressed in parts per million.
State exceedances are shown in **yellow** . National exceedances are shown in **orange** .
An exceedance is not necessarily a violation.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* There was insufficient (or no) data available to determine the value.

Switch: Hourly Ozone | 8-Hour Ozone | PM10 | PM2.5 | Carbon Monoxide | Sulfur Dioxide | Hydrogen Sulfide

Go to: Data Statistics Home Page | Top 4 Summaries Start Page

Air Resources Board

iADAM

Highest 4 Daily Maximum State 24-Hour Sulfur Dioxide Averages

Costa Mesa-Mesa Verde Drive

FAQs

Year:	2006		2007		2008	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:	Oct 28	0.005	Oct 8	0.004	Sep 30	0.003
Second High:	Jan 7	0.005	May 8	0.003	May 3	0.003
Third High:	Feb 13	0.004	Jul 13	0.002	May 2	0.003
Fourth High:	Oct 19	0.004	Aug 29	0.002	Jan 11	0.003
Annual Average:		0.001		0.001		0.001
Year Coverage:		92		94		94

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All averages are expressed in parts per million.
State exceedances are shown in **yellow** . An exceedance is not necessarily a violation.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period.
* There was insufficient (or no) data available to determine the value.

Switch: Hourly Ozone | 8-Hour Ozone | PM10 | PM2.5 | Carbon Monoxide | Nitrogen Dioxide | Hydrogen Sulfide

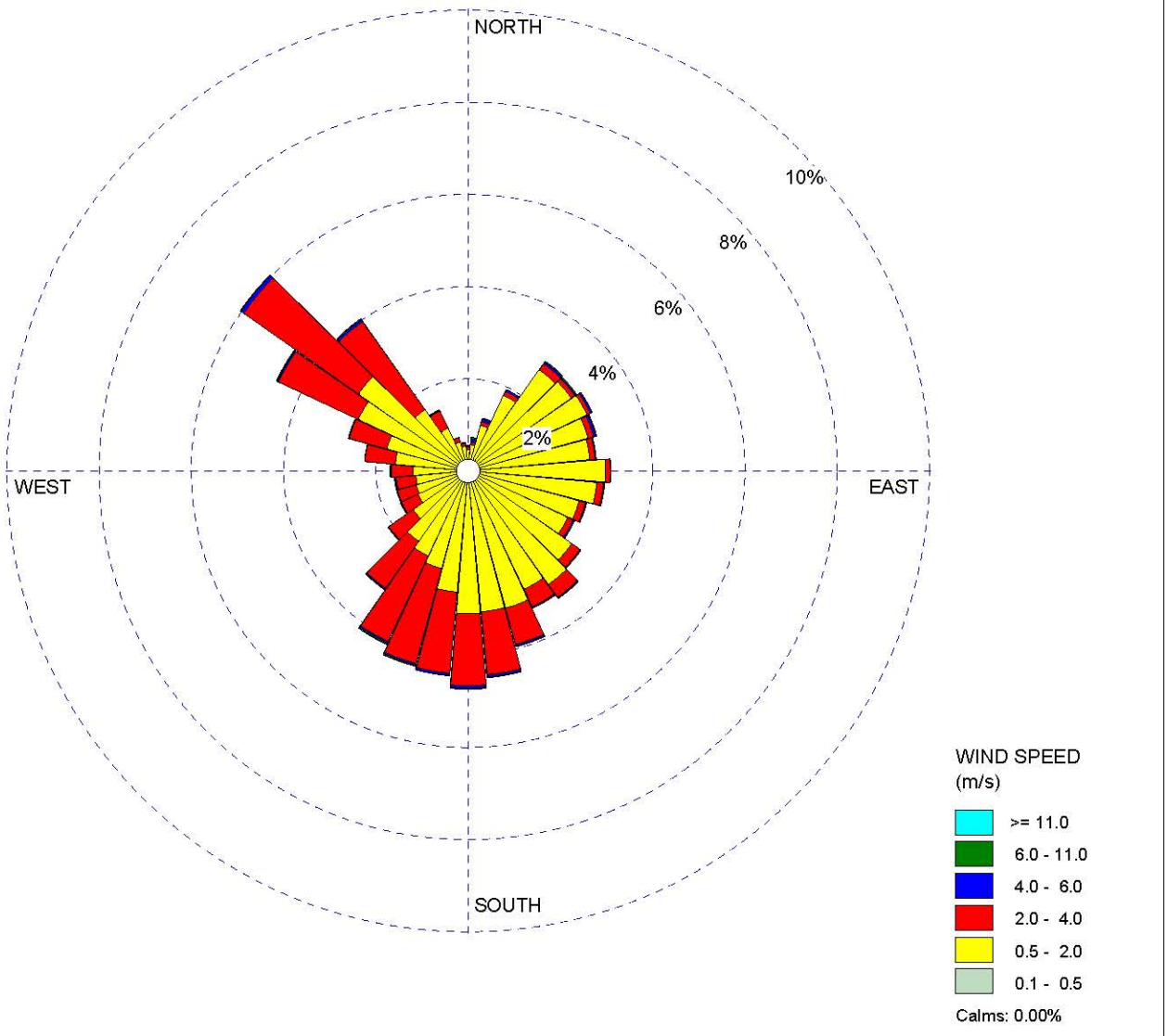
Go to: Data Statistics Home Page | Top 4 Summaries Start Page

WIND ROSE PLOT:

msvj

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
	2005-2007 **Jan 1 - Dec 31** **00:00 - 23:00**	MODELER:	
	CALM WINDS: **0.00%**	TOTAL COUNT: **26146 hrs.**	
	AVG. WIND SPEED: **1.61 m/s**	DATE: **1/28/2009**	PROJECT NO.:

TUSTIN IRVINE RANCH, CALIFORNIA (049087)

Period of Record Monthly Climate Summary

Period of Record : 1/19/1902 to 6/30/2003

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	66.8	67.8	69.4	72.5	75.1	78.9	83.8	85.2	84.3	79.3	73.9	68.1	75.4
Average Min. Temperature (F)	40.2	42.5	44.1	47.6	51.9	55.5	58.9	59.1	56.5	51.5	44.1	40.6	49.4
Average Total Precipitation (in.)	2.62	2.67	2.29	1.00	0.29	0.06	0.01	0.07	0.25	0.45	1.21	1.95	12.86
Average Total SnowFall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.
Max. Temp.: 98.2% Min. Temp.: 97.2% Precipitation: 98.6% Snowfall: 96.5% Snow Depth: 96.4%
Check Station Metadata or Metadata graphics for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu