Canoga Transportation Corridor

Draft Environmental Impact Report

SCH No. 2007071056

Appendix E

Air Quality

Los Angeles County Metropolitan Transportation Authority
One Gateway Plaza
Los Angeles, CA 90012

Contact Person:

Walter Davis

March 3, 2008

AIR QUALITY
TECHNICAL APPENDIX

Wind and Climate Information

CANOGA PARK PIERCE COLL, CALIFORNIA

Period of Record General Climate Summary - Temperature

Station:(041484) CANOGA PARK PIERCE COLL

From Year=1949 To Year=2006

	Monthly Averages			Daily Extremes				Monthly Extremes				Max. Temp.		Min. Temp.	
	Max.	Min.	Mean	High	Date	Low	Date	Highest Mean	Year	Lowest Mean	Year	>= 90 F	<= 32 F	<= 32 F	<= 0 F
	F	F	F	F	dd/yyyy or yyyymmdd	F	dd/yyyy or yyyymmdd	F	-	F	-	# Days	# Days	# Days	# Days
January	67.9	39.3	53.6	93	14/1975	19	07/1950	61.0	2003	45.6	1950	0.1	0.0	5.6	0.0
February	70.0	40.7	55.3	94	26/1986	18	06/1989	61.5	1963	48.2	1956	0.2	0.0	3.2	0.0
March	72.3	41.9	57.1	101	26/1988	26	13/1954	65.2	2004	50.1	1952	0.8	0.0	1.7	0.0
April	76.9	44.6	60.8	105	06/1989	30	09/1953	67.4	1989	51.3	1967	3.5	0.0	0.3	0.0
May	81.0	49.0	65.0	113	29/1984	33	04/1950	72.7	1984	57.6	1998	6.0	0.0	0.0	0.0
June	87.3	52.9	70.1	113	15/1961	36	07/1950	77.8	1981	63.0	1952	13.0	0.0	0.0	0.0
July	94.9	57.0	75.9	115	16/1960	42	01/1952	81.0	1985	71.7	1949	24.3	0.0	0.0	0.0
August	95.4	57.3	76.3	116	24/1985	42	06/1950	81.7	1992	70.3	1954	24.9	0.0	0.0	0.0
September	91.7	54.6	73.2	115	06/1955	38	20/1954	79.6	1984	67.8	1950	17.9	0.0	0.0	0.0
October	84.1	49.0	66.5	110	01/1980	27	30/1971	71.6	2003	61.3	1954	9.1	0.0	0.1	0.0
November	74.8	42.6	58.7	99	03/1975	23	17/1958	63.3	1976	52.0	1994	1.6	0.0	1.2	0.0
December	68.8	38.8	53.8	96	03/1958	20	29/1954	58.8	1958	49.0	1971	0.1	0.0	5.3	0.0
Annual	80.4	47.3	63.9	116	19850824	18	19890206	66.3	1984	60.5	1952	101.5	0.0	17.5	0.0
Winter	68.9	39.6	54.3	96	19581203	18	19890206	57.6	1986	49.4	1950	0.4	0.0	14.1	0.0
Spring	76.7	45.2	61.0	113	19840529	26	19540313	65.5	1993	56.1	1998	10.4	0.0	2.0	0.0
Summer	92.5	55.7	74.1	116	19850824	36	19500607	77.6	1981	69.8	1952	62.1	0.0	0.0	0.0
Fall	83.5	48.7	66.1	115	19550906	23	19581117	70.0	1991	62.4	1994	28.6	0.0	1.4	0.0

Table updated on Jul 28, 2006

For monthly and annual means, thresholds, and sums:
Months with 5 or more missing days are not considered
Years with 1 or more missing months are not considered
Seasons are climatological not calendar seasons

Winter = Dec., Jan., and Feb. Spring = Mar., Apr., and May

Summer = Jun., Jul., and Aug. Fall = Sep., Oct., and Nov.

Western Regional Climate Center, wrcc@dri.edu

CANOGA PARK PIERCE COLL, CALIFORNIA

Period of Record General Climate Summary - Precipitation

Station:(041484) CANOGA PARK PIERCE COLL

From Year=1949 To Year=2006

	Precipitation											Total Snowfall		
	Mean	High	Year	Low	Year	1 Day Max.		>= 0.01 in.	>= 0.10 in.	>= 0.50 in.	>= 1.00 in.	Mean	High	Year
	in.	in.	-	in.	-	in.	dd/yyyy or yyyymmdd	# Days	# Days	# Days	# Days	in.	in.	-
January	3.78	16.80	1995	0.00	1972	4.62	11/2001	6	5	2	1	0.0	0.0	1950
February	3.95	18.02	1998	0.00	1961	5.78	12/2003	6	4	2	1	0.0	0.5	1989
March	2.78	12.39	1983	0.00	1956	6.06	01/1983	6	4	2	1	0.0	0.0	1950
April	1.10	6.76	1965	0.00	1962	2.49	14/1988	3	2	1	0	0.0	0.0	1950
May	0.28	4.06	1998	0.00	1950	2.00	08/1977	1	1	0	0	0.0	0.0	1950
June	0.04	0.67	1999	0.00	1950	0.52	05/1993	0	0	0	0	0.0	0.0	1950
July	0.01	0.17	1995	0.00	1949	0.17	16/1995	0	0	0	0	0.0	0.0	1949
August	0.10	2.49	1977	0.00	1949	2.35	17/1977	1	0	0	0	0.0	0.0	1949
September	0.16	2.26	1976	0.00	1949	1.12	10/1976	1	0	0	0	0.0	0.0	1949
October	0.53	5.93	1987	0.00	1949	3.20	31/1987	2	1	0	0	0.0	0.0	1949
November	1.79	12.60	1965	0.00	1956	6.57	29/1970	4	2	1	1	0.0	0.0	1949
December	2.31	8.44	2004	0.00	1958	4.98	29/1965	5	3	2	1	0.0	0.0	1949
Annual	16.83	38.48	1983	3.92	1953	6.57	19701129	34	22	10	5	0.0	0.5	1989
Winter	10.05	33.16	2005	1.94	1964	5.78	20030212	17	12	6	3	0.0	0.5	1989
Spring	4.16	15.67	1983	0.00	1997	6.06	19830301	10	6	3	1	0.0	0.0	1950
Summer	0.15	2.49	1977	0.00	1950	2.35	19770817	1	0	0	0	0.0	0.0	1950
Fall	2.47	12.78	1965	0.00	1980	6.57	19701129	6	4	2	1	0.0	0.0	1949

Table updated on Jul 28, 2006

For monthly and annual means, thresholds, and sums:
Months with 5 or more missing days are not considered
Years with 1 or more missing months are not considered
Seasons are climatological not calendar seasons

Winter = Dec., Jan., and Feb. Spring = Mar., Apr., and May

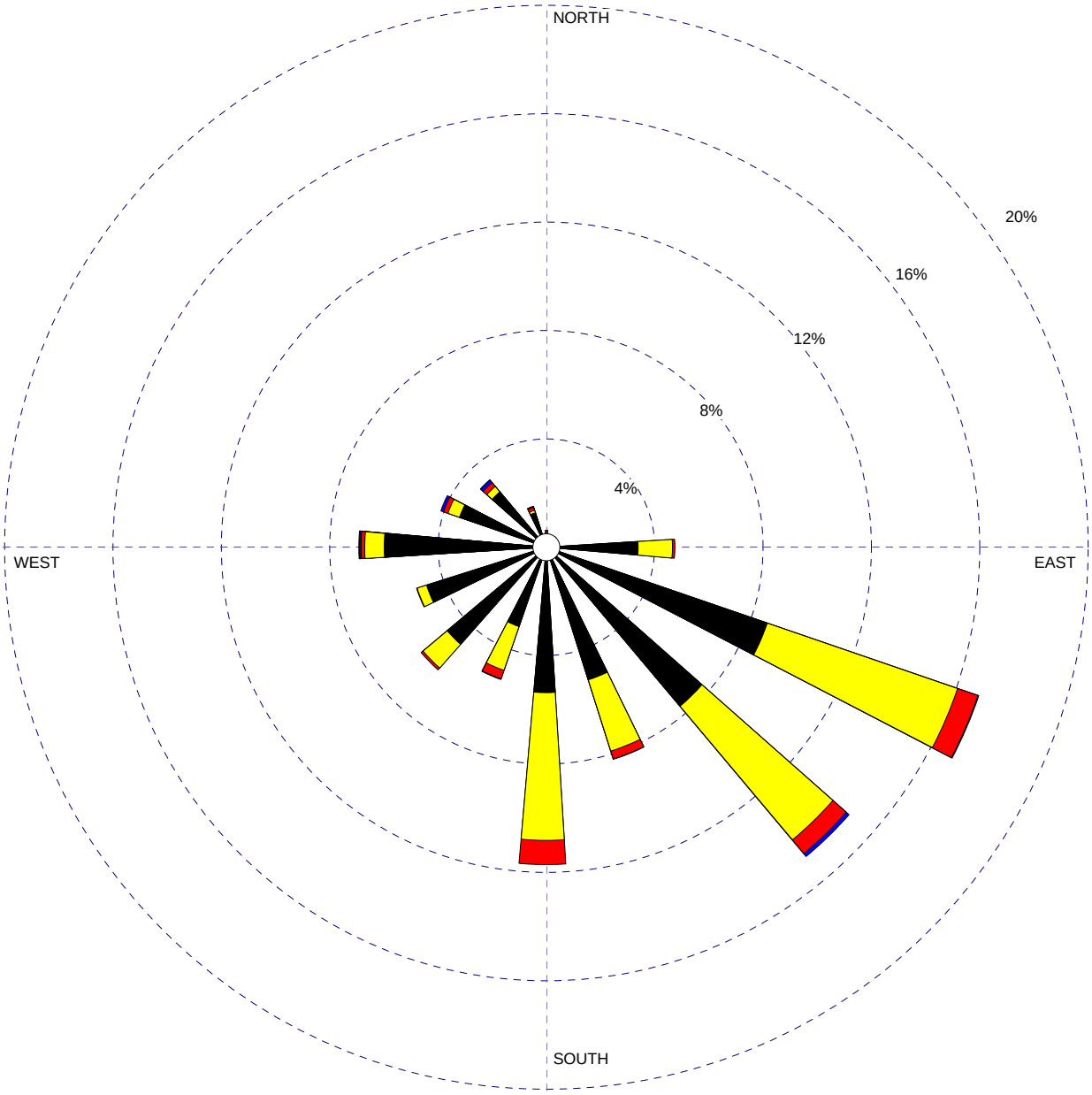
Summer = Jun., Jul., and Aug. Fall = Sep., Oct., and Nov.

WIND ROSE PLOT:

Canoga Orange Line Extension 2006-115

DISPLAY:

Wind Speed
Direction (blowing from)



WIND SPEED
(Knots)

- >= 22
- 17 - 21
- 11 - 17
- 7 - 11
- 4 - 7
- 1 - 4

DATA PERIOD:

1981
Jan 1 - Dec 31
00:00 - 23:00

COMPANY NAME:

COMMENTS:

TOTAL COUNT:

8760 hours

MODELER:

CALM WINDS:

10.13%

DATE:

10/8/2007

AVG. WIND SPEED:

3.67 Knots

PROJECT NO.:

2007-083

SCAQMD Data

2004 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2004

Source/Receptor Area No.	Location	Station No.	Carbon Monoxide: No. Days of Data	Carbon Monoxide: Max. Conc. in ppm 1-hour	Carbon Monoxide: Max Conc. in ppm 8-hour	Carbon Monoxide: No. Days Standard Exceeded a): Federal ≥ 9.5 ppm 8-hour	Carbon Monoxide: No. Days Standard Exceeded a): State > 9.0 ppm 8-hour	Ozone: No. Days of Data	Ozone: Max. Conc. in ppm 1-hour	Ozone: Max. Conc. in ppm 8-hour	Ozone: Fourth High Conc. ppm 8-hour	Ozone: No. Days Standard Exceeded: Health Advisory ≥ 0.15 ppm 1-hour	Ozone: No. Days Standard Exceeded: Federal > 0.12 ppm 1-hour	Ozone: No. Days Standard Exceeded: Federal > 0.08 ppm 8-hour	Ozone: No. Days Standard Exceeded: State b) > 0.09 ppm 1-hour	Ozone: No. Days Standard Exceeded: State b) > 0.07 ppm 8-hour	Nitrogen Dioxide: No. Days of Data	Nitrogen Dioxide: Max Conc. in ppm 1-hour c)	Nitrogen Dioxide: Annual Average c) AAM Conc. ppm	Sulfur Dioxide: No. Days of Data	Sulfur Dioxide: Max. Conc. in ppm 1-hour d)	Sulfur Dioxide: Max. Conc. in ppm 24-hour d)
LOS ANGELES COUNTY																							
1	Central LA	087	361	4	3.2	0	0	366	0.110	0.092	0.079	0	0	1	7	7	359	0.16	0.0328	364	0.08	0.015
2	Northwest Coastal LA County	091	360	4	2.3	0	0	366	0.107	0.089	0.078	0	0	1	5	6	355	0.09	0.0198	--	--	--
3	Southwest Coastal LA County 1	094	90*	6*	4.4*	0*	0*	90*	0.069*	0.060*	0.056*	0*	0*	0*	0*	0*	89*	0.08*	0.0310*	89*	0.03*	0.004*
3	Southwest Coastal LA County 2	820	260*	4*	3.0*	0*	0*	262*	0.120*	0.100*	0.086*	0*	0*	4*	4*	13*	230*	0.09*	0.0136*	261*	0.02*	0.007*
4	South Coastal LA County 1	072	366	4	3.4	0	0	366	0.090	0.075	0.071	0	0	0	0	0	356	0.12	0.0280	361	0.04	0.012
4	South Coastal LA County 2	077	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6	West San Fernando Valley	074	366	5	3.5	0	0	366	0.131	0.116	0.102	0	2	29	54	65	365	0.08	0.0214	--	--	--
7	East San Fernando Valley	069	366	5	3.7	0	0	366	0.137	0.109	0.089	0	2	7	27	37	356	0.12	0.0332	348	0.02	0.010
8	West San Gabriel Valley	088	361	7	3.4	0	0	365	0.130	0.103	0.093	0	1	9	27	31	355	0.12	0.0270	--	--	--
9	East San Gabriel Valley 1	060	366	3	2.0	0	0	366	0.134	0.104	0.094	0	2	10	28	26	351	0.10	0.0204	--	--	--
9	East San Gabriel Valley 2	591	361	2	2.0	0	0	366	0.134	0.108	0.095	0	4	16	42	35	353	0.12	0.0240	--	--	--
10	Pomona/Walnut Valley	075	366	4	3.1	0	0	366	0.131	0.102	0.097	0	4	13	31	25	364	0.11	0.0314	--	--	--
11	South San Gabriel Valley	085	366	5	3.6	0	0	366	0.104	0.084	0.080	0	0	0	7	7	353	0.12	0.0305	--	--	--
12	South Central LA County	084	366	10	6.7	0	0	366	0.084	0.072	0.065	0	0	0	0	0	362	0.10	0.0301	--	--	--
13	Santa Clarita Valley	090	363	5	3.7	0	0	360	0.158	0.133	0.108	1	13	52	69	81	358	0.09	0.0204	--	--	--
ORANGE COUNTY																							
16	North Orange County	3177	364	7	4.0	0	0	364	0.099	0.080	0.078	0	0	0	6	6	341	0.12	0.0252	--	--	--
17	Central Orange County	3176	366	5	4.1	0	0	366	0.120	0.097	0.088	0	0	6	14	35	361	0.12	0.0199	--	--	--
18	North Coastal Orange County	3195	366	5	4.1	0	0	366	0.104	0.087	0.076	0	0	1	2	5	357	0.10	0.0151	364	0.03	0.008
19	Saddleback Valley	3812	366	2	1.6	0	0	366	0.116	0.089	0.086	0	0	2	11	20	--	--	--	--	--	--
RIVERSIDE COUNTY																							
22	Norco/Corona	4155	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	364	4	3.0	0	0	366	0.141	0.117	0.112	0	8	35	59	75	363	0.09	0.0172	331	0.02	0.015
23	Metropolitan Riverside County 2	4146	366	4	2.1	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24	Perris Valley	4149	--	--	--	--	--	365	0.128	0.103	0.097	0	2	19	37	47	--	--	--	--	--	--
25	Lake Elsinore	4158	353	2	0.9	0	0	353	0.130	0.116	0.103	0	2	21	41	51	339	0.06	0.0151	--	--	--
29	Banning Airport	4164	--	--	--	--	--	349	0.156	0.116	0.112	1	7	40	49	69	334	0.08	0.0165	--	--	--
30	Coachella Valley 1**	4137	366	2	1.0	0	0	366	0.125	0.108	0.099	0	1	31	36	55	353	0.07	0.0130	--	--	--
30	Coachella Valley 2**	4157	--	--	--	--	--	366	0.111	0.102	0.098	0	0	18	23	51	--	--	--	--	--	--
SAN BERNARDINO COUNTY																							
32	Northwest San Bernardino Valley	5175	366	3	2.1	0	0	366	0.138	0.105	0.103	0	2	18	31	31	365	0.11	0.0305	--	--	--
33	Southwest San Bernardino Valley	5817	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	5197	313*	3*	2.1*	0*	0*	366	0.149	0.123	0.112	0	7	28	48	54	346	0.06	0.0273	360	0.01	0.006
34	Central San Bernardino Valley 2	5203	366	4	3.3	0	0	366	0.157	0.130	0.113	1	9	38	55	58	363	0.12	0.0261	--	--	--
35	East San Bernardino Valley	5204	--	--	--	--	--	366	0.160	0.137	0.122	1	12	53	75	76	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	--	--	--	--	--	364	0.163	0.145	0.124	1	9	66	75	96	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DISTRICT MAXIMUM				10	6.7	0	0		0.163	0.145	0.124	1	13	66	75	96		0.16	0.0332		0.08	0.015
SOUTH COAST AIR BASIN				10	6.7	0	0		0.163	0.148	0.124	4	28	90	111	148		0.16	0.0332		0.08	0.015

ppm - Parts Per Million parts of air, by volume. AAM = Annual Arithmetic Mean -- - Pollutant not monitored.

* Less than 12 full months of data. May not be representative. ** Salton Sea Air Basin.

a) - The federal 1-hour standard (1-hour average CO > 35 ppm) and state 1-hour standard (1-hour average CO > 20 ppm) were not exceeded.

b) - On April 28, 2005, Air Resources Board has approved revising the California Ozone standard to establish a new 8-hour average standard of 0.07 ppm. The new 8-hour standard is expected to take effect by December 2005.

c) - The state standard is 1-hour average NO_2 > 0.25 ppm. The federal standard is annual arithmetic mean NO_2 > 0.0534 ppm. No location exceeded the standards.

d) - The state standards are 1-hour average SO_2 > 0.25 ppm and 24-hour average SO_2 > 0.04 ppm. The federal standards are annual arithmetic mean SO_2 > 0.03 ppm, 24-hour average > 0.14 ppm, and 3-hour average > 0.50 ppm. No location exceeded SO_2 standards.

South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4182
www.aqmd.gov

The map showing the locations of source/receptor areas can be accessed via the Internet at http://www.aqmd.gov/telemweb/areamap.aspx. Locations of source/receptor areas are shown on the "South Coast Air Quality Management District Air Monitoring Areas" map available free of charge from SCAQMD Public Information.

2004 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2004

Source/Receptor Area No.	Location	Station No.	Suspended Particulates PM10 e) No. Days of Data	Max. Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Standard Federal > 150 µg/m³ 24-hour	State > 50 µg/m³ 24-hour	Annual Average h) AAM Conc. µg/m³	Suspended Particulates PM2.5 f) No. Days of Data	Max. Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Standard Federal > 65 µg/m³ 24-hour	Annual Averages i) AAM Conc. µg/m³	Particulates TSP g) No. Days of Data	Max. Conc. in µg/m³ 24-hour	Annual Average AAM Conc. µg/m³	Lead g) Max. Monthly Average Conc. j) µg/m³	Max. Quarterly Average Conc. j) µg/m³	Sulfate g) Max. Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Standard State ≥ 25 µg/m³ 24-hour
LOS ANGELES COUNTY																		
1	Central LA	087	61	72	0	5(8.2)	32.7	318	75.0	2(0.6)	19.6	62	115	66.4	0.03	0.03	12.7	0
2	Northwest Coastal LA County	091	--	--	--	--	--	--	--	--	--	59	79	46.8	--	--	11.4	0
3	Southwest Coastal LA County 1	094	15*	52*	0*	2(13.3)*	30.9*	--	--	--	--	15*	71*	50.5*	0.01	0.01	13.1	0
3	Southwest Coastal LA County 2	820	37*	47*	0*	0*	25.1	--	--	--	--	45*	77*	43.8*	0.01	0.01	14.3	0
4	South Coastal LA County 1	072	60	72	0	4(6.7)	33.1	323	66.6	1(0.3)	17.6	62	103	59.1	0.02	0.01	15.9	0
4	South Coastal LA County 2	077	59	83	0	12(20.3)	38.1	327	59.7	0	16.6	59	112	64.2	0.02	0.01	16.4	0
6	West San Fernando Valley	074	--	--	--	--	--	106	56.2	0	15.6	--	--	--	--	--	--	--
7	East San Fernando Valley	069	60	74	0	7(11.7)	37.5	109	60.1	0	19.2	--	--	--	--	--	--	--
8	West San Gabriel Valley	088	--	--	--	--	--	113	59.4	0	16.6	58	95	49.5	--	--	11.2	0
9	East San Gabriel Valley 1	060	55	83	0	8(14.5)	35.4	279	75.6	1(0.4)	18.4	59	156	75.2	--	--	10.6	0
9	East San Gabriel Valley 2	591	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10	Pomona/Walnut Valley	075	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11	South San Gabriel Valley	085	--	--	--	--	--	108	60.7	0	19.9	55	140	73.0	0.03	0.02	12.4	0
12	South Central LA County	084	--	--	--	--	--	115	55.8	0	18.5	58	128	78.6	0.03	0.03	14.7	0
13	Santa Clarita Valley	090	60	54	0	2(3.3)	28.1	--	--	--	--	--	--	--	--	--	--	--
ORANGE COUNTY																		
16	North Orange County	3177	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
17	Central Orange County	3176	61	74	0	7(11.5)	34.1	319	58.9	0	16.8	--	--	--	--	--	--	--
18	North Coastal Orange County	3195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19	Saddleback Valley	3812	57	47	0	0	23.7	111	49.4	0	12.1	--	--	--	--	--	--	--
RIVERSIDE COUNTY																		
22	Norco/Corona	4155	57	76	0	11(19.3)	38.0	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	119	137	0	72(60.5)	55.5	342	91.7	5(1.5)	22.1	60	199	100.5	0.02	0.01	9.8	0
23	Metropolitan Riverside County 2	4146	--	--	--	--	--	110	93.8	2(1.8)	20.8	59	244	81.9	0.01	0.01	9.1	0
24	Perris Valley	4149	59	83	0	15(25.4)	41.4	--	--	--	--	--	--	--	--	--	--	--
25	Lake Elsinore	4158	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
29	Banning Airport	4164	61	82	0	7(11.5)	29.3	--	--	--	--	--	--	--	--	--	--	--
30	Coachella Valley 1**	4137	59	79	0	2(3.4)	26.4	112	27.1	0	9.0	--	--	--	--	--	--	--
30	Coachella Valley 2**	4157	118+	83+	0+	23(19.5)+	39.3+	110	28.5	0	10.7	--	--	--	--	--	--	--
SAN BERNARDINO COUNTY																		
32	Northwest San Bernardino Valley	5175	--	--	--	--	--	--	--	--	--	55	127	63.5	0.02	0.01	9.2	0
33	Southwest San Bernardino Valley	5817	58	93	0	17(29.3)	42.8	112	86.1	2(1.8)	20.9	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	5197	61	106	0	29(47.5)	47.7	104	71.4	1(1.0)	20.0	59	235	113.4	--	--	10.8	0
34	Central San Bernardino Valley 2	5203	58	118	0	28(48.3)	48.6	106	93.4	4(3.8)	22.0	58	179	92.7	0.02	0.01	9.6	0
35	East San Bernardino Valley	5204	60	88	0	20(33.3)	38.6	--	--	--	--	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	57	52	0	1(1.8)	26.4	--	--	--	--	--	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	52	28.6	0	9.5	--	--	--			--	--
DISTRICT MAXIMUM				137	0	72	55.5		93.8	5	22.1		244	113.4	0.03	0.03	16.4	0
SOUTH COAST AIR BASIN				137	0	81	55.5		93.8	7	22.1		244	113.4	0.03	0.03	16.4	0

µg/m³ - Micrograms per cubic meter of air. AAM - Annual Arithmetic Mean -- - Pollutant not monitored.

* Less than 12 full months of data. May not be representative. ** Salton Sea Air Basin.

e) - PM10 samples were collected every 6 days at all sites except for Station Numbers 4144 and 4157 where samples were collected every 3 days.

f) - PM2.5 samples were collected every 3 days at all sites except for the following sites: Station Numbers 060, 072, 077, 087, 3176, and 4144 where samples were taken every day, and Station Number 5818 where samples were taken every 6 days.

g) - Total suspended particulates, lead, and sulfate were determined from samples collected every 6 days by the high volume sampler method, on glass fiber filter media.

h) - Federal PM10 standard is annual average (AAM) > 50 µg/m³. State standard is annual average (AAM) > 20 µg/m³ (changed from AGM > 30 µg/m³, effective July 5, 2003).

i) - Federal PM2.5 standard is annual average (AAM) > 15 µg/m³. State standard is annual average (AAM) > 12 µg/m³ (state standard was established on July 5, 2003).

j) - Federal lead standard is quarterly average > 1.5 µg/m³; and state standard is monthly average ≥ 1.5 µg/m³. No location exceeded lead standards. Maximum monthly and quarterly lead concentrations at special monitoring sites immediately downwind of stationary lead sources were 0.59 µg/m³ and 0.30 µg/m³, respectively, both recorded at Southeast Los Angeles County.

\+ - The data for the sample collected on a high-wind day (161 µg/m³ on 10/9/04) was excluded in accordance with EPA's Natural Events Policy.

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2005 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2005

Source/Receptor Area No.	Location	Station No.	Carbon Monoxide: No. Days of Data	Carbon Monoxide: Max. Conc. in ppm 1-hour	Carbon Monoxide: Max Conc. in ppm 8-hour	Carbon Monoxide: No. Days Standard Exceeded a): Federal ≥ 9.5 ppm 8-hour	Carbon Monoxide: No. Days Standard Exceeded a): State > 9.0 ppm 8-hour	Ozone: No. Days of Data	Ozone: Max. Conc. in ppm 1-hour	Ozone: Max. Conc. in ppm 8-hour	Ozone: Fourth High Conc. ppm 8-hour	Ozone: No. Days Standard Exceeded: Health Advisory ≥ 0.15 ppm 1-hour	Ozone: Federal b) > 0.12 ppm 1-hour	Ozone: Federal b) > 0.08 ppm 8-hour	Ozone: State c) > 0.09 ppm 1-hour	Ozone: State c) > 0.07 ppm 8-hour	Nitrogen Dioxide: No. Days of Data	Nitrogen Dioxide: Max Conc. in ppm 1-hour d)	Nitrogen Dioxide: Annual Average d) AAM Conc. ppm	Sulfur Dioxide: No. Days of Data	Sulfur Dioxide: Max. Conc. in ppm 1-hour e)	Sulfur Dioxide: Max. Conc. in ppm 24-hour e)
LOS ANGELES COUNTY																							
1	Central LA	087	365	4	3.1	0	0	365	0.121	0.098	0.072	0	0	1	2	2	364	0.13	0.0278	357	0.07	0.010
2	Northwest Coastal LA County	091	365	3	2.1	0	0	361	0.114	0.090	0.077	0	0	1	7	5	365	0.08	0.0178	--	--	--
3	Southwest Coastal LA County	820	365	3	2.1	0	0	365	0.086	0.076	0.068	0	0	0	0	1	365	0.09	0.0134	365	0.04	0.012
4	South Coastal LA County 1	072	365	4	3.5	0	0	365	0.091	0.068	0.059	0	0	0	0	0	365	0.14	0.0241	365	0.04	0.010
4	South Coastal LA County 2	077	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6	West San Fernando Valley	074	350	5	3.5	0	0	365	0.138	0.113	0.098	0	2	12	30	29	365	0.09	0.0202	--	--	--
7	East San Fernando Valley	069	363	4	3.4	0	0	365	0.142	0.108	0.081	0	2	2	13	12	365	0.09	0.0294	361	0.01	0.006
8	West San Gabriel Valley	088	363	4	2.8	0	0	363	0.145	0.114	0.086	1	2	5	13	12	363	0.10	0.0241	--	--	--
9	East San Gabriel Valley 1	060	365	3	1.7	0	0	365	0.145	0.122	0.087	1	4	6	20	14	365	0.09	0.0251	--	--	--
9	East San Gabriel Valley 2	591	358	2	1.9	0	0	363	0.160	0.130	0.099	2	8	13	31	29	360	0.09	0.0224	--	--	--
10	Pomona/Walnut Valley	075	365	4	2.5	0	0	361	0.140	0.112	0.096	0	4	11	26	18	365	0.08	0.0312	--	--	--
11	South San Gabriel Valley	085	113*	3*	2.4*	0*	0*	116*	0.077*	0.065*	0.051*	0*	0*	0*	0*	0*	116*	0.09*	0.0308*	--	--	--
12	South Central LA County	084	365	7	5.9	0	0	365	0.111	0.081	0.063	0	0	0	1	1	360	0.11	0.0312	--	--	--
13	Santa Clarita Valley	090	365	2	1.3	0	0	364	0.173	0.141	0.118	5	11	47	65	69	347	0.087	0.0190	--	--	--
ORANGE COUNTY																							
16	North Orange County	3177	365	7	3.1	0	0	365	0.094	0.075	0.067	0	0	0	0	1	361	0.09	0.0249	--	--	--
17	Central Orange County	3176	365	4	3.3	0	0	365	0.095	0.077	0.075	0	0	0	1	4	365	0.09	0.0211	--	--	--
18	North Coastal Orange County	3195	364	5	3.2	0	0	338	0.085	0.073	0.068	0	0	0	0	0	355	0.09	0.0131	359	0.01	0.008
19	Saddleback Valley	3812	365	2	1.6	0	0	365	0.125	0.085	0.078	0	1	1	3	6	--	--	--	--	--	--
RIVERSIDE COUNTY																							
22	Norco/Corona	4155	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	363	3	2.5	0	0	358	0.144	0.129	0.105	0	3	33	46	62	365	0.08	0.0222	365	0.02	0.011
23	Metropolitan Riverside County 2	4146	365	4	2.4	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Mira Loma	5212	362	3	2.1	0	0	358	0.135	0.116	0.105	0	3	25	34	51	346	0.08	0.0160	--	--	--
24	Perris Valley	4149	--	--	--	--	--	365	0.126	0.103	0.082	0	1	3	11	18	--	--	--	--	--	--
25	Lake Elsinore	4158	365	2	1.0	0	0	365	0.149	0.119	0.097	1	4	15	37	46	365	0.07	0.0142	--	--	--
29	Banning Airport	4164	--	--	--	--	--	359	0.144	0.132	0.119	0	10	39	47	66	329	0.07	0.0148	--	--	--
30	Coachella Valley 1**	4137	364	2	0.8	0	0	363	0.139	0.116	0.108	0	4	35	41	63	352	0.10	0.0120	--	--	--
30	Coachella Valley 2**	4157	--	--	--	--	--	365	0.114	0.095	0.092	0	0	18	18	36	--	--	--	--	--	--
SAN BERNARDINO COUNTY																							
32	Northwest San Bernardino Valley	5175	364	3	1.8	0	0	365	0.149	0.121	0.101	1	8	15	34	34	364	0.10	0.0313	--	--	--
33	Southwest San Bernardino Valley	5817	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	5197	365	3	2.1	0	0	355	0.150	0.128	0.113	2	9	23	49	47	361	0.10	0.0310	365	0.01	0.004
34	Central San Bernardino Valley 2	5203	356	4	2.4	0	0	361	0.163	0.129	0.114	4	9	31	54	58	361	0.0.08	0.0259	--	--	--
35	East San Bernardino Valley	5204	--	--	--	--	--	364	0.146	0.123	0.113	1	6	24	36	45	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	--	--	--	--	--	354	0.182	0.145	0.130	7	18	69	80	102	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DISTRICT MAXIMUM				7	5.9	0	0		0.182	0.145	0.130	7	18	69	80	102		0.14	0.0313		0.07	0.012
SOUTH COAST AIR BASIN				7	5.9	0	0		0.182	0.145	0.130	11	30	84	102	120		0.14	0.0313		0.07	0.012

ppm - Parts Per Million parts of air, by volume. AAM = Annual Arithmetic Mean -- - Pollutant not monitored.

* Less than 12 full months of data. May not be representative. ** Salton Sea Air Basin.

a) - The federal 1-hour standard (1-hour average CO > 35 ppm) and state 1-hour standard (1-hour average CO > 20 ppm) were not exceeded. For comparison of data with the federal 8-hour CO standard (9 ppm), 8-hour averages with one decimal place should be rounded to integers.

b) – The federal 1-hour ozone standard was revoked and replaced by the 8-hour average ozone standard effective June 15, 2004.

c) - Air Resources Board has established a new 8-hour average California ozone standard of 0.07 ppm effective May 17, 2005.

d) - The state standard is 1-hour average NO_2 > 0.25 ppm. The federal standard is annual arithmetic mean NO_2 > 0.0534 ppm.

e) - The state standards are 1-hour average SO_2 > 0.25 ppm and 24-hour average SO_2 > 0.04 ppm. The federal standards are annual arithmetic mean SO_2 > 0.03 ppm, 24-hour average > 0.14 ppm, and 3-hour average > 0.50 ppm.

South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4182
www.aqmd.gov

The map showing the locations of source/receptor areas can be accessed via the Internet at http://www.aqmd.gov/telemweb/areamap.aspx. Locations of source/receptor areas are shown on the "South Coast Air Quality Management District Air Monitoring Areas" map available free of charge from SCAQMD Public Information.

2005 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2005

Source/Receptor Area No.	Location	Station No.	Suspended Particulates PM10 [f]					Suspended Particulates PM2.5 [g]					Particulates TSP [h]			Lead [h]		Sulfate [h]	
					No. (%) Samples Exceeding Standard						No. (%) Samples Exceeding Standard								No. (%) Samples Exceeding Standard
			No. Days of Data	Max. Conc. in µg/m³ 24-hour	Federal > 150 µg/m³ 24-hour	State > 50 µg/m³ 24-hour	Annual Average [i] AAM Conc. µg/m³	No. Days of Data	Max. Conc. in µg/m³ 24-hour	98th Percentile Conc. in µg/m³	Federal > 65 µg/m³ 24-hour	Annual Averages [j] AAM Conc. µg/m³	No. Days of Data	Max. Conc. in µg/m³ 24-hour	Annual Average AAM Conc. µg/m³	Max. Monthly Average Conc. [k] µg/m³	Max. Quarterly Average Conc. [k] µg/m³	Max. Conc. in µg/m³ 24-hour	State ≥ 25 µg/m³ 24-hour
LOS ANGELES COUNTY																			
1	Central LA	087	61	70	0	4(6.6)	29.6	334	73.7	53.2	2(0.6)	18.1	66	141	66.7	0.02	0.02	14.2	0
2	Northwest Coastal LA County	091	--	--	--	--	--	--	--	--	--	--	59	89	41.6	--	--	11.7	0
3	Southwest Coastal LA County 2	820	54	44	0	0	22.9	--	--	--	--	--	--	--	--	--	--	--	--
4	South Coastal LA County 1	072	59	66	0	5(8.5)	29.6	324	53.9	41.4	0	16.0	61	112	55.5	0.01	0.01	16.8	0
4	South Coastal LA County 2	077	59	131	0	18(30.5)	43.4	344	50.8	37.8	0	14.7	--	--	--	--	--	--	--
6	West San Fernando Valley	074	--	--	--	--	--	104	39.6	35.8	0	13.9	--	--	--	--	--	--	--
7	East San Fernando Valley	069	61	92	0	5(8.2)	34.3	106	63.2	50.6	0	17.9	--	--	--	--	--	--	--
8	West San Gabriel Valley	088	--	--	--	--	--	113	62.9	43.1	0	15.1	58	89	44.6	--	--	11.2	0
9	East San Gabriel Valley 1	060	55	76	0	12(21.8)	35.1	292*	132.7*	53.2*	1(0.3)*	17.0*	58	142	70.9	--	--	10.2	0
9	East San Gabriel Valley 2	591	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10	Pomona/Walnut Valley	075	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11	South San Gabriel Valley	085	--	--	--	--	--	76*	58.2*	54.0*	0*	17.0*	39*	104*	66.4*	0.03	0.03	9.9	0
12	South Central LA County	084	--	--	--	--	--	114	54.6	48.5	0	17.5	57	118	67.4	0.03	0.02	17.3	0
13	Santa Clarita Valley	090	60	55	0	1(1.7)	25.8	--	--	--	--	--	--	--	--	--	--	--	--
ORANGE COUNTY																			
16	North Orange County	3177	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
17	Central Orange County	3176	61	65	0	3(4.9)	28.2	333	54.7	41.9	0	14.7	--	--	--	--	--	--	--
18	North Coastal Orange County	3195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19	Saddleback Valley	3812	55	41	0	0	19.0	113	35.4	31.4	0	10.7	--	--	--	--	--	--	--
RIVERSIDE COUNTY																			
22	Norco/Corona	4155	58	79	0	5(8.6)	31.6	--	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	123	123	0	69(56.1)	52.0	334	98.7	58.4	4(1.2)	21.0	59	173	96.7	0.02	0.02	10.3	0
23	Metropolitan Riverside County 2	4146	--	--	--	--	--	110	95.0	41.0	1(0.9)	18.0	60	125	75.8	0.01	0.01	10.3	0
23	Mira Loma	5212	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24	Perris Valley	4149	60	80	0	19(31.7)	39.2	--	--	--	--	--	--	--	--	--	--	--	--
25	Lake Elsinore	4158	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
29	Banning Airport	4164	58	76	0	2(3.4)	26.6	--	--	--	--	--	--	--	--	--	--	--	--
30	Coachella Valley 1**	4137	59	66	0	2(3.4)	25.9	83*	26.2*	25.0*	0*	8.4*	--	--	--	--	--	--	--
30	Coachella Valley 2**	4157	115	106	0	39(34.2)	45.7	104	44.4	25.0	0	10.5	--	--	--	--	--	--	--
SAN BERNARDINO COUNTY																			
32	Northwest San Bernardino Valley	5175	--	--	--	--	--	--	--	--	--	--	57	94	53.4	0.02	0.02	8.4	0
33	Southwest San Bernardino Valley	5817	60	74	0	19(31.7)	40.8	110	87.8	49.6	1(0.9)	18.8	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	5197	60	108	0	29(48.3)	50.0	109	96.8	48.2	1(0.9)	18.9	61	295	100.2	--	--	10.4	0
34	Central San Bernardino Valley 2	5203	60	72	0	23(38.3)	42.3	109	106.3	43.4	1(0.9)	17.4	60	175	87.1	0.02	0.01	10.9	0
35	East San Bernardino Valley	5204	58	61	0	12(20.7)	33.2	--	--	--	--	--	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	56	49	0	0	25.8	--	--	--	--	--	--	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	51	38.8	38.8	0	12.1	--	--	--	--	--	--	--
DISTRICT MAXIMUM				131	0	69	52.0		132.7	58.4	4	21.0		295	100.2	0.03	0.03	17.3	0
SOUTH COAST AIR BASIN				131	0	89	52.0		132.7	58.4	6	21.0		295	100.2	0.03	0.03	17.3	0

µg/m³ - Micrograms per cubic meter of air. AAM - Annual Arithmetic Mean AGM – Annual Geometric Mean -- - Pollutant not monitored.

* Less than 12 full months of data. May not be representative. ** Salton Sea Air Basin.

f) - PM10 samples were collected every 6 days at all sites except for Station Numbers 4144 and 4157 where samples were collected every 3 days.

g) - PM2.5 samples were collected every 3 days at all sites except for the following sites: Station Numbers 060, 072, 077, 087, 3176, and 4144 where samples were taken every day, and Station Number 5818 where samples were taken every 6 days.

h) - Total suspended particulates, lead, and sulfate were determined from samples collected every 6 days by the high volume sampler method, on glass fiber filter media.

i) - Federal PM10 standard is annual average (AAM) > 50 µg/m³. State standard is annual average (AAM) > 20 µg/m³ (changed from AGM > 30 µg/m³, effective July 5, 2003).

j) - Federal PM2.5 standard is annual average (AAM) > 15 µg/m³. State standard is annual average (AAM) > 12 µg/m³ (state standard was established on July 5, 2003).

k) - Federal lead standard is quarterly average > 1.5 µg/m³; and state standard is monthly average ≥ 1.5 µg/m³. No location exceeded lead standards. Maximum monthly and quarterly lead concentrations at special monitoring sites immediately downwind of stationary lead sources were 0.44 µg/m³ and 0.34 µg/m³, respectively, both recorded at Central Los Angeles.

2006 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2006

Source/Receptor Area No.	Location	Station No.	Carbon Monoxide [a]			Ozone [b]									Nitrogen Dioxide [c]				Sulfur Dioxide [d]			
										No. Days Standard Exceeded											
										Health	Federal		State								
			No. Days of Data	Max. Conc. in ppm 1-hour	Max Conc. in ppm 8-hour	No. Days of Data	Max. Conc. in ppm 1-hour	Max. Conc. in ppm 8-hour	Fourth High Conc. ppm 8-hour	Advisory ≥ 0.15 ppm 1-hour	> 0.12 ppm 1-hour	> 0.08 ppm 8-hour	> 0.09 ppm 1-hour	> 0.07 ppm 8-hour	No. Days of Data	Max Conc. in ppm 1-hour	Max Conc. in ppm 24-hour	Annual Average AAM Conc. ppm	No. Days of Data	Max. Conc. in ppm 1-hour	Max. Conc. in ppm 24-hour	Annual Average AAM Conc. ppm
LOS ANGELES COUNTY																						
1	Central LA	087	362	3	2.6	362	0.11	0.079	0.077	0	0	0	8	4	360	0.11	0.06	0.0288	365	0.03	0.006	0.0019
2	Northwest Coastal LA County	091	365	3	2.0	365	0.10	0.074	0.069	0	0	0	3	0	365	0.08	0.05	0.0173	--	--	--	--
3	Southwest Coastal LA County	820	363	3	2.3	360	0.08	0.066	0.062	0	0	0	0	0	351	0.10	0.05	0.0155	363	0.02	0.006	0.0020
4	South Coastal LA County 1	072	360	4	3.4	364	0.08	0.058	0.058	0	0	0	0	0	357	0.10	0.05	0.0215	364	0.03	0.010	0.0012
4	South Coastal LA County 2	077	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6	West San Fernando Valley	074	365	5	3.4	361	0.16	0.108	0.105	1	6	17	32	39	363	0.07	0.04	0.0174	--	--	--	--
7	East San Fernando Valley	069	365	4	3.5	365	0.17	0.128	0.099	2	6	12	25	23	365	0.10	0.05	0.0274	360	0.01	0.004	0.0006
8	West San Gabriel Valley	088	360	4	2.8	365	0.15	0.117	0.095	1	5	7	25	24	365	0.12	0.06	0.0245	--	--	--	--
9	East San Gabriel Valley 1	060	365	2	1.7	364	0.17	0.120	0.091	2	7	10	23	19	365	0.11	0.07	0.0258	--	--	--	--
9	East San Gabriel Valley 2	591	363	2	2.0	363	0.18	0.128	0.107	2	10	15	37	31	362	0.10	0.06	0.0206	--	--	--	--
10	Pomona/Walnut Valley	075	365	3	2.1	365	0.15	0.128	0.109	2	9	16	32	30	365	0.10	0.06	0.0307	--	--	--	--
11	South San Gabriel Valley	085	232*	3*	2.7*	250*	0.13*	0.095*	0.080*	0*	1*	3*	9*	5*	204*	0.10*	0.06*	0.0283*	--	--	--	--
12	South Central LA County	084	365	8	6.4	365	0.09	0.066	0.064	0	0	0	0	0	363	0.14	0.08	0.0306	--	--	--	--
13	Santa Clarita Valley	090	363	2	1.3	359	0.16	0.120	0.112	1	20	40	62	64	359	0.08	0.04	0.0184	--	--	--	--
ORANGE COUNTY																						
16	North Orange County	3177	362	6	3.0	362	0.15	0.114	0.092	1	3	4	8	9	361	0.09	0.05	0.0224	--	--	--	--
17	Central Orange County	3176	365	5	3.0	365	0.11	0.088	0.072	0	0	1	5	3	343	0.11	0.06	0.0197	--	--	--	--
18	North Coastal Orange County	3195	365	4	3.0	365	0.07	0.064	0.062	0	0	0	0	0	361	0.10	0.05	0.0145	353	0.01	0.004	0.0013
19	Saddleback Valley	3812	365	2	1.8	356	0.12	0.105	0.092	0	0	6	13	17	--	--	--	--	--	--	--	--
RIVERSIDE COUNTY																						
22	Norco/Corona	4155	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	365	3	2.1	365	0.15	0.116	0.113	1	8	30	45	59	365	0.08	0.05	0.0199	365	0.01	0.004	0.0013
23	Metropolitan Riverside County 2	4146	365	4	2.3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Mira Loma	5214	364	4	2.7	364	0.16	0.119	0.107	1	4	25	39	48	332	0.08	0.05	0.0194	--	--	--	--
24	Perris Valley	4149	--	--	--	351	0.17	0.122	0.114	3	12	53	76	84	--	--	--	--	--	--	--	--
25	Lake Elsinore	4158	362	1	1.0	362	0.14	0.109	0.102	0	3	24	40	58	352	0.07	0.05	0.0151	--	--	--	--
29	Banning Airport	4164	--	--	--	357	0.14	0.115	0.104	0	8	44	57	78	355	0.11	0.04	0.0161	--	--	--	--
30	Coachella Valley 1**	4137	365	2	1.0	361	0.13	0.109	0.101	0	2	23	37	67	359	0.09	0.05	0.0103	--	--	--	--
30	Coachella Valley 2**	4157	--	--	--	364	0.10	0.089	0.087	0	0	7	4	29	--	--	--	--	--	--	--	--
SAN BERNARDINO COUNTY																						
32	Northwest San Bernardino Valley	5175	360	3	1.8	365	0.17	0.130	0.114	2	14	25	50	54	337	0.10	0.07	0.0310	--	--	--	--
33	Southwest San Bernardino Valley	5817	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	5197	365	3	2.0	361	0.16	0.123	0.116	1	12	29	47	49	362	0.09	0.06	0.0270	365	0.01	0.003	0.0019
34	Central San Bernardino Valley 2	5203	364	3	2.3	362	0.15	0.127	0.119	3	10	29	52	57	362	0.09	0.05	0.0252	--	--	--	--
35	East San Bernardino Valley	5204	--	--	--	365	0.16	0.135	0.125	5	11	36	60	64	--	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	--	--	--	365	0.16	0.142	0.112	2	9	59	71	96	--	--	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DISTRICT MAXIMUM				8	6.4		0.18	0.142	0.125	5	20	59	76	96		0.14	0.08	0.0310		0.03	0.010	0.0020
SOUTH COAST AIR BASIN				8	6.4		0.18	0.142	0.125	10	35	86	102	121		0.14	0.08	0.0310		0.03	0.010	0.0020

ppm - Parts Per Million parts of air, by volume. AAM = Annual Arithmetic Mean -- - Pollutant not monitored.

* Less than 12 full months of data. May not be representative. ** Salton Sea Air Basin.

a) - The federal 8-hour standard (8-hour average CO > 9 ppm) and state 8-hour standard (8-hour average CO > 9.0 ppm) were not exceeded. The federal and state 1-hour standards (35 ppm and 20 ppm) were not exceeded, either.

b) - The federal 1-hour ozone standard was revoked and replaced by the 8-hour average ozone standard effective June 15, 2005. The 8-hour average California ozone standard of 0.07 ppm was established effective May 17, 2006.

c) - The state standard is 1-hour average NO_2 > 0.25 ppm. The federal standard is annual arithmetic mean NO_2 > 0.0534 ppm. Air Resources Board has approved to lower the NO_2 1-hour standard to 0.18 ppm and establish a new annual standard of 0.030 ppm. The revisions are expected to become effective later in 2007.

d) - The state standards are 1-hour average SO_2 > 0.25 ppm and 24-hour average SO_2 > 0.04 ppm. The federal standards are annual arithmetic mean SO_2 > 0.03 ppm, 24-hour average > 0.14 ppm, and 3-hour average > 0.50 ppm. The federal and state SO_2 standards were not exceeded.

South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4182
www.aqmd.gov

The map showing the locations of source/receptor areas can be accessed via the Internet at http://www.aqmd.gov/telemweb/areamap.aspx. Locations of source/receptor areas are shown on the "South Coast Air Quality Management District Air Monitoring Areas" map available free of charge from SCAQMD Public Information.

2006 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2006

Source/Receptor Area No.	Location	Station No.	Suspended Particulates PM10 e) No. Days of Data	Max. Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Standard Federal > 150 µg/m³ 24-hour	No. (%) Samples Exceeding Standard State > 50 µg/m³ 24-hour	Annual Average AAM h) Conc. µg/m³	Fine Particulates PM2.5 f) No. Days of Data	Max. Conc. in µg/m³ 24-hour	98th Percentile Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Standard Federal i) > 35 µg/m³ 24-hour	Standard Federal i) > 65 µg/m³ 24-hour	Annual Averages AAM j) Conc. µg/m³	Particulates TSP g) No. Days of Data	Max. Conc. in µg/m³ 24-hour	Annual Average AAM Conc. µg/m³	Lead g) Max. Monthly Average Conc. k) µg/m³	Max. Quarterly Average Conc. k) µg/m³	Sulfate g) Max. Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Standard State ≥ 25 µg/m³ 24-hour
LOS ANGELES COUNTY																				
1	Central LA	087	59	59	0	3(5.1)	30.3	330	56.2	38.9	11(3.3)	0	15.6	59	109	63.3	0.02	0.01	18.2	0
2	Northwest Coastal LA County	091	--	--	--	--	--	--	--	--	--	--	--	56	76	40.2	--	--	12.2	0
3	Southwest Coastal LA County	820	51	45	0	0	26.5	--	--	--	--	--	--	56	84	43.1	0.01	0.01	13.6	0
4	South Coastal LA County 1	072	61	78	0	6(9.8)	31.1	290*	58.5*	34.9*	5(1.7)*	0*	14.2*	62	157	62.9	0.01	0.01	17.8	0
4	South Coastal LA County 2	077	58	117	0	19(32.7)	45.0	320	53.6	35.3	6(1.9)	0	14.5	59	192	71.1	0.01	0.01	18.8	0
6	West San Fernando Valley	074	--	--	--	--	--	92	44.1	32.0	1(1.1)	0	12.9	--	--	--	--	--	--	--
7	East San Fernando Valley	069	54	71	0	10(18.5)	35.6	104	50.7	43.4	6(5.8)	0	16.6	--	--	--	--	--	--	--
8	West San Gabriel Valley	088	--	--	--	--	--	113	45.9	32.1	1(0.9)	0	13.4	60	123	42.8	--	--	28.7	1(1.7)
9	East San Gabriel Valley 1	060	58	81	0	7(12.1)	31.9	278*	52.8*	38.5*	8(2.9)*	0*	15.5*	59	142	68.4	--	--	20.8	0
9	East San Gabriel Valley 2	591	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10	Pomona/Walnut Valley	075	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11	South San Gabriel Valley	085	--	--	--	--	--	116	72.2	43.1	7(6)	1(0.9)	16.7	58	768	79.3	0.03	0.02	28.6	1(1.7)
12	South Central LA County	084	--	--	--	--	--	107	55.0	44.5	4(3.7)	0	16.7	58	147	68.4	0.02	0.02	24.1	0
13	Santa Clarita Valley	090	58	53	0	1(1.7)	23.4	--	--	--	--	--	--	--	--	--	--	--	--	--
ORANGE COUNTY																				
16	North Orange County	3177	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
17	Central Orange County	3176	56	104	0	7(12.5)	33.4	330	56.2	40.5	8(2.4)	0	14.1	--	--	--	--	--	--	--
18	North Coastal Orange County	3195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19	Saddleback Valley	3812	50	57	0	1(2.0)	22.8	106	47.0	25.7	1(0.9)	0	11.0	--	--	--	--	--	--	--
RIVERSIDE COUNTY																				
22	Norco/Corona	4155	57	74	0	10(17.5)	36.5	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	118	109	0	71(60.2)	54.4	300	68.5	53.7	32(10.7)	1(0.3)	19.0	59	169	91.2	0.01	0.01	10.8	0
23	Metropolitan Riverside County 2	4146	--	--	--	--	--	105	55.3	47.7	9(8.6)	0	17.0	59	131	72.9	0.01	0.01	9.9	0
23	Mira Loma	5214	59	124	0	41(69.5)	64.0	113	63.0	52.5	14(12.4)	0	20.6	--	--	--	--	--	--	--
24	Perris Valley	4149	54	125	0	19(35.2)	45.0	--	--	--	--	--	--	--	--	--	--	--	--	--
25	Lake Elsinore	4158	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
29	Banning Airport	4164	55	75	0	8(14.6)	31.1	--	--	--	--	--	--	--	--	--	--	--	--	--
30	Coachella Valley 1**	4137	57	73+	0+	2(3.5)+	24.5+	111	24.8	15.9	0	0	7.7	--	--	--	--	--	--	--
30	Coachella Valley 2**	4157	115	122+	0+	57(49.6)+	52.7+	107	24.3	19.1	0	0	9.5	--	--	--	--	--	--	--
SAN BERNARDINO COUNTY																				
32	Northwest San Bernardino Valley	5175	--	--	--	--	--	--	--	--	--	--	--	58	105	54.6	0.01	0.01	9.1	0
33	Southwest San Bernardino Valley	5817	62	78	0	17(27.4)	42.3	107	53.7	41.5	7(6.5)	0	18.5	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	5197	60	142	0	31(51.7)	53.5	112	52.6	43.8	7(6.3)	0	17.6	59	190	101.0	--	--	10.3	0
34	Central San Bernardino Valley 2	5203	57	92	0	24(42.1)	46.0	102	55.0	48.4	8(7.8)	0	17.8	54	174	87.0	0.02	0.01	11.0	0
35	East San Bernardino Valley	5204	60	103	0	12(20.0)	36.2	--	--	--	--	--	--	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	58	63	0	1(1.7)	26.2	--	--	--	--	--	--	--	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	42*	40.1*	40.1*	1(2.4)*	0*	11.2*	--	--	--	--	--	--	--
	DISTRICT MAXIMUM			142+	0+	71	64.0		72.2	53.7	32	1	20.6		768	101.0	0.03	0.02	28.7	1
	SOUTH COAST AIR BASIN			142+	0+	75	64.0		72.2	53.7	32	1	20.6		768	101.0	0.03	0.02	28.7	1

µg/m³ - Micrograms per cubic meter of air AAM - Annual Arithmetic Mean -- - Pollutant not monitored

* Less than 12 full months of data. May not be representative. ** Salton Sea Air Basin.

e) - PM10 samples were collected every 6 days at all sites except for Station Numbers 4144 and 4157 where samples were collected every 3 days.

f) - PM2.5 samples were collected every 3 days at all sites except for the following sites: Station Numbers 060, 072, 077, 087, 3176, and 4144 where samples were taken every day, and Station Number 5818 where samples were taken every 6 days.

g) - Total suspended particulates, lead, and sulfate were determined from samples collected every 6 days by the high volume sampler method, on glass fiber filter media.

h) - Federal annual PM10 standard (AAM > 50 µg/m³) was revoked effective December 17, 2006. State standard is annual average (AAM) > 20 µg/m³.

i) - U.S. EPA has revised the federal 24-hour PM2.5 standard from 65 µg/m³ to 35 µg/m³; effective December 17, 2006.

j) - Federal PM2.5 standard is annual average (AAM) > 15 µg/m³. State standard is annual average (AAM) > 12 µg/m³.

k) - Federal lead standard is quarterly average > 1.5 µg/m³; and state standard is monthly average ≥ 1.5 µg/m³. No location exceeded lead standards. Maximum monthly and quarterly lead concentrations at special monitoring sites immediately downwind of stationary lead sources were 0.24 µg/m³ and 0.22 µg/m³, respectively, both recorded at Central Los Angeles.

\+ - The data for the samples collected on a high-wind day (July 16, 2006) at Palm Springs and Indio (226 µg/m³ and 313 µg/m³, respectively) were excluded in accordance with EPA's Natural Events Policy.

EMFAC 2007 & CAL3QHC Output Files

Title   : Canoga
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2007/11/21 16:23:05
Scen Year: 2007 -- All model years in the range 1965 to 2007 selected
Season   : Winter
Area   : South Coast AQMD
****

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

District Average District Average South Coast AQMD

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

Pollutant Name: Reactive Org Gases Temperature: 58F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	3.531	11.149	0.000	0.000	1.006
20	0.196	0.223	0.322	1.496	1.515	3.168	0.302

Pollutant Name: Carbon Monoxide Temperature: 58F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	21.698	56.158	0.000	0.000	5.620
20	4.166	4.946	5.576	11.249	11.425	28.142	5.098

Pollutant Name: Oxides of Nitrogen Temperature: 58F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	3.785	76.498	0.000	0.000	4.019
20	0.389	0.617	1.047	14.784	18.103	1.265	1.247

Pollutant Name: Carbon Dioxide Temperature: 58F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	873.069	4866.379	0.000	0.000	344.901
20	465.084	570.522	783.740	1774.795	2288.538	148.508	604.680

Pollutant Name: Sulfur Dioxide Temperature: 58F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.009	0.047	0.000	0.000	0.003
20	0.005	0.006	0.008	0.017	0.022	0.002	0.006

Pollutant Name: PM10 Temperature: 58F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.042	1.861	0.000	0.000	0.091
20	0.017	0.031	0.031	0.724	0.332	0.037	0.056

Pollutant Name: PM10 - Tire Wear Temperature: 58F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.008	0.008	0.009	0.025	0.009	0.004	0.009

Pollutant Name: PM10 - Break Wear Temperature: 58F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.013	0.013	0.013	0.021	0.013	0.006	0.013

Pollutant Name: Gasoline - mi/gal Temperature: 58F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	18.799	15.255	10.988	9.581	9.593	43.749	16.605

Pollutant Name: Diesel - mi/gal Temperature: 58F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	27.714	28.979	19.710	5.379	3.597	0.000	9.334

Title : Canoga
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2007/11/21 16:27:36
Scen Year: 2007 -- All model years in the range 1965 to 2007 selected
Season : Winter
Area : South Coast AQMD Average
I/M Stat : Enhanced Interim (2005) -- Using I/M schedule for area 59 Los Angeles (SC)
Emissions: Tons Per Day

	Light Duty Passenger Cars				Light Duty Trucks				Medium Duty Trucks				Heavy Duty Trucks						
	Non-cat	Cat	Diesel	Total	Non-cat	Cat	Diesel	Total	Non-cat	Cat	Diesel	Total	Gasoline Non-cat	Gasoline Cat	Gasoline Total	Diesel Trucks	Total HD Trucks	Urban Buses	Motor-cycles	All Vehicles
Vehicles	105495.	5342230.	19309.	5467040.	54081.	2929870.	33237.	3017180.	16005.	1174260.	49900.	1240170.	11106.	97039.	108145.	135116.	243261.	5817.	274004.	10247500.
VMT/1000	1684.	189952.	436.	192072.	1214.	114427.	1180.	116822.	366.	47827.	2554.	50747.	108.	2360.	2468.	13912.	16380.	639.	2223.	378883.
Trips	430507.	33856100.	108478.	34395100.	224827.	18636600.	206751.	19068100.	144515.	11498700.	601903.	12245200.	178759.	1160670.	1339430.	2261000.	3600430.	23268.	547954.	69880100.
Reactive Organic Gas Emissions																				
Run Exh	11.69	15.65	0.10	27.43	8.65	11.73	0.11	20.49	2.82	8.62	0.42	11.86	0.76	2.31	3.07	15.83	18.90	0.86	9.22	88.76
Idle Exh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.01	0.22	0.01	0.06	0.07	1.45	1.53	0.00	0.00	1.75
Start Ex	2.45	21.32	0.00	23.78	1.28	12.31	0.00	13.60	0.98	10.34	0.00	11.31	2.18	2.16	4.34	0.00	4.34	0.03	1.49	54.55
Total Ex	14.15	36.97	0.10	51.21	9.93	24.04	0.11	34.09	3.80	19.17	0.43	23.39	2.95	4.54	7.48	17.28	24.77	0.89	10.71	145.05
Diurnal	0.94	6.19	0.00	7.12	0.48	2.93	0.00	3.41	0.04	1.05	0.00	1.10	0.01	0.03	0.04	0.00	0.04	0.00	0.80	12.48
Hot Soak	2.00	8.15	0.00	10.15	1.06	3.82	0.00	4.88	0.20	1.64	0.00	1.84	0.13	0.05	0.18	0.00	0.18	0.01	0.45	17.50
Running	9.45	23.56	0.00	33.01	3.26	18.34	0.00	21.60	0.57	10.39	0.00	10.96	0.96	0.68	1.64	0.00	1.64	0.03	2.03	69.27
Resting	0.44	2.54	0.00	2.98	0.23	1.26	0.00	1.48	0.02	0.46	0.00	0.49	0.00	0.01	0.01	0.00	0.01	0.00	0.30	5.25
Total	26.97	77.40	0.10	104.46	14.95	50.40	0.11	65.46	4.63	32.72	0.43	37.77	4.05	5.31	9.36	17.28	26.64	0.93	14.28	249.55
Carbon Monoxide Emissions																				
Run Exh	140.61	525.22	0.42	666.25	101.47	416.64	0.83	518.94	50.64	204.16	2.25	257.05	22.77	45.74	68.51	66.29	134.80	6.78	125.40	1709.23
Idle Exh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	1.29	0.05	1.36	0.06	0.39	0.44	6.63	7.07	0.00	0.00	8.43
Start Ex	14.35	236.19	0.00	250.54	7.59	152.99	0.00	160.58	7.56	122.59	0.00	130.15	20.68	34.93	55.61	0.00	55.61	0.47	5.63	602.97
Total Ex	154.96	761.41	0.42	916.79	109.06	569.63	0.83	679.52	58.22	328.04	2.30	388.56	43.50	81.05	124.56	72.92	197.48	7.24	131.03	2320.62
Oxides of Nitrogen Emissions																				
Run Exh	8.98	58.92	0.75	68.65	6.44	62.94	2.07	71.45	2.68	40.56	19.07	62.31	0.73	11.96	12.70	265.78	278.48	12.90	3.56	497.35
Idle Exh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.13	0.15	0.00	0.00	0.00	9.81	9.82	0.00	0.00	9.96
Start Ex	0.67	15.73	0.00	16.41	0.35	13.39	0.00	13.74	0.21	16.48	0.00	16.69	0.33	4.44	4.77	0.00	4.77	0.05	0.19	51.85
Total Ex	9.65	74.65	0.75	85.05	6.78	76.33	2.07	85.19	2.89	57.05	19.21	79.15	1.06	16.41	17.47	275.60	293.07	12.95	3.75	559.16
Carbon Dioxide Emissions (000)																				
Run Exh	0.98	80.98	0.17	82.14	0.70	60.15	0.45	61.31	0.27	34.59	1.45	36.31	0.08	1.72	1.80	26.35	28.16	1.59	0.30	209.80
Idle Exh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.01	0.05	0.00	0.01	0.01	0.59	0.61	0.00	0.00	0.66
Start Ex	0.09	2.74	0.00	2.83	0.05	1.85	0.00	1.90	0.04	1.10	0.00	1.13	0.04	0.05	0.09	0.00	0.09	0.00	0.03	5.99
Total Ex	1.08	83.72	0.17	84.97	0.75	62.00	0.45	63.21	0.30	35.74	1.46	37.50	0.12	1.78	1.90	26.95	28.85	1.59	0.33	216.45
PM10 Emissions																				
Run Exh	0.06	2.28	0.07	2.41	0.05	2.66	0.08	2.79	0.01	1.08	0.12	1.22	0.00	0.02	0.02	10.67	10.69	0.19	0.11	17.41
Idle Exh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.27	0.00	0.00	0.27
Start Ex	0.01	0.22	0.00	0.22	0.00	0.22	0.00	0.23	0.00	0.10	0.00	0.10	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.57
Total Ex	0.07	2.49	0.07	2.64	0.05	2.89	0.08	3.01	0.01	1.18	0.12	1.32	0.00	0.03	0.03	10.94	10.97	0.19	0.13	18.25
TireWear	0.01	1.68	0.00	1.69	0.01	1.01	0.01	1.03	0.00	0.45	0.03	0.49	0.00	0.03	0.03	0.42	0.45	0.01	0.01	3.68
BrakeWr	0.02	2.63	0.01	2.66	0.02	1.58	0.02	1.62	0.01	0.66	0.04	0.70	0.00	0.04	0.04	0.34	0.39	0.01	0.02	5.38
Total	0.11	6.80	0.08	6.99	0.08	5.48	0.10	5.66	0.02	2.30	0.19	2.51	0.01	0.10	0.10	11.70	11.80	0.21	0.15	27.32
Lead	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SOx	0.01	0.82	0.00	0.83	0.01	0.60	0.00	0.62	0.00	0.35	0.01	0.37	0.00	0.02	0.02	0.26	0.28	0.02	0.01	2.11
Fuel Consumption (000 gallons)																				
Gasoline	139.78	8707.15	0.00	8846.93	97.99	6447.97	0.00	6545.95	41.51	3717.97	0.00	3759.48	20.28	197.02	217.30	0.00	217.30	15.34	58.69	19443.70
Diesel	0.00	0.00	15.74	15.74	0.00	0.00	40.73	40.73	0.00	0.00	131.53	131.53	0.00	0.00	0.00	2425.46	2425.46	130.31	0.00	2743.77

Title   : Canoga
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2007/11/21 16:23:05
Scen Year: 2030 -- All model years in the range 1986 to 2030 selected
Season   : Winter
Area   : South Coast AQMD
****

Year: 2030 -- Model Years 1986 to 2030 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

District Average | District Average | South Coast AQMD

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

Pollutant Name: Reactive Org Gases Temperature: 58F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	3.427	7.133	0.000	0.000	0.927
20	0.015	0.027	0.042	0.298	0.618	2.402	0.055

Pollutant Name: Carbon Monoxide Temperature: 58F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	21.724	49.272	0.000	0.000	6.123
20	0.742	1.260	1.463	1.627	5.522	16.595	1.169

Pollutant Name: Oxides of Nitrogen Temperature: 58F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	4.029	91.927	0.000	0.000	6.131
20	0.058	0.114	0.202	2.680	8.050	1.171	0.276

Pollutant Name: Carbon Dioxide Temperature: 58F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	967.363	5080.569	0.000	0.000	446.810
20	455.379	574.078	782.555	1851.704	1810.147	168.674	625.699

Pollutant Name: Sulfur Dioxide Temperature: 58F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.010	0.049	0.000	0.000	0.004
20	0.004	0.006	0.008	0.018	0.017	0.002	0.006

Pollutant Name: PM10 Temperature: 58F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.041	0.331	0.000	0.000	0.026
20	0.018	0.041	0.042	0.100	0.170	0.017	0.034

Pollutant Name: PM10 - Tire Wear Temperature: 58F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.008	0.008	0.009	0.027	0.010	0.004	0.009

Pollutant Name: PM10 - Break Wear Temperature: 58F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.013	0.013	0.013	0.022	0.013	0.006	0.013

Pollutant Name: Gasoline - mi/gal Temperature: 58F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	19.406	15.375	11.105	10.094	9.960	43.766	16.896

Pollutant Name: Diesel - mi/gal Temperature: 58F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	29.156	29.156	19.466	5.229	4.083	0.000	7.007

Title : Canoga
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2007/11/21 16:27:36
Scen Year: 2030 -- All model years in the range 1986 to 2030 selected
Season : Winter
Area : South Coast AQMD Average
I/M Stat : Enhanced Interim (2005) -- Using I/M schedule for area 59 Los Angeles (SC)
Emissions: Tons Per Day

	Light Duty Passenger Cars				Light Duty Trucks				Medium Duty Trucks				Heavy Duty Trucks: Gasoline Trucks			Diesel Trucks	Total HD Trucks	Urban Buses	Motor-cycles	All Vehicles
	Non-cat	Cat	Diesel	Total	Non-cat	Cat	Diesel	Total	Non-cat	Cat	Diesel	Total	Non-cat	Cat	Total					
Vehicles	0.	6886110.	503.	6886610.	0.	4128180.	4287.	4132470.	0.	1726430.	76886.	1803310.	0.	166998.	166998.	219638.	386636.	7654.	353718.	13570400.
VMT/1000	0.	227413.	9.	227422.	0.	146993.	103.	147096.	0.	62488.	3362.	65850.	0.	3257.	3257.	24144.	27401.	842.	2716.	471327.
Trips	0.	42582000.	2381.	42584400.	0.	25196500.	20358.	25216800.	0.	16893900.	960779.	17854700.	0.	1467790.	1467790.	3602620.	5070410.	30617.	707366.	91464300.
Reactive Organic Gas Emissions																				
Run Exh	0.00	2.58	0.00	2.58	0.00	3.17	0.01	3.17	0.00	1.80	0.27	2.07	0.00	0.22	0.22	5.49	5.71	0.46	8.13	22.13
Idle Exh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.01	0.30	0.00	0.07	0.07	1.35	1.42	0.00	0.00	1.72
Start Ex	0.00	2.87	0.00	2.87	0.00	3.21	0.00	3.21	0.00	3.60	0.00	3.60	0.00	0.82	0.82	0.00	0.82	0.05	1.60	12.14
Total Ex	0.00	5.45	0.00	5.45	0.00	6.37	0.01	6.38	0.00	5.69	0.28	5.97	0.00	1.12	1.12	6.83	7.95	0.51	9.73	35.99
Diurnal	0.00	1.71	0.00	1.71	0.00	1.89	0.00	1.89	0.00	0.80	0.00	0.80	0.00	0.01	0.01	0.00	0.01	0.00	0.94	5.36
Hot Soak	0.00	4.34	0.00	4.34	0.00	3.92	0.00	3.92	0.00	1.86	0.00	1.86	0.00	0.04	0.04	0.00	0.04	0.00	0.34	10.50
Running	0.00	11.15	0.00	11.15	0.00	15.84	0.00	15.84	0.00	9.86	0.00	9.86	0.00	0.54	0.54	0.00	0.54	0.04	1.05	38.49
Resting	0.00	1.51	0.00	1.51	0.00	1.83	0.00	1.83	0.00	0.79	0.00	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.34	4.47
Total	0.00	24.17	0.00	24.17	0.00	29.85	0.01	29.86	0.00	19.00	0.28	19.28	0.00	1.71	1.71	6.83	8.54	0.56	12.41	94.81
Carbon Monoxide Emissions																				
Run Exh	0.00	141.26	0.01	141.27	0.00	162.90	0.07	162.97	0.00	82.86	2.62	85.48	0.00	8.65	8.65	35.26	43.91	4.40	70.04	508.06
Idle Exh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81	0.08	1.88	0.00	0.45	0.45	9.29	9.74	0.00	0.00	11.63
Start Ex	0.00	47.78	0.00	47.78	0.00	51.58	0.00	51.58	0.00	50.27	0.00	50.27	0.00	14.20	14.20	0.00	14.20	0.57	8.08	172.48
Total Ex	0.00	189.04	0.01	189.04	0.00	214.48	0.07	214.55	0.00	134.94	2.69	137.63	0.00	23.30	23.30	44.56	67.86	4.97	78.13	692.17
Oxides of Nitrogen Emissions																				
Run Exh	0.00	11.81	0.02	11.83	0.00	15.80	0.18	15.98	0.00	9.76	6.02	15.78	0.00	2.01	2.01	67.13	69.14	7.59	3.71	124.04
Idle Exh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.22	0.24	0.00	0.00	0.00	19.34	19.34	0.00	0.00	19.58
Start Ex	0.00	2.44	0.00	2.44	0.00	3.35	0.00	3.35	0.00	13.22	0.00	13.22	0.00	1.94	1.94	0.00	1.94	0.09	0.24	21.27
Total Ex	0.00	14.25	0.02	14.26	0.00	19.14	0.18	19.32	0.00	23.00	6.24	29.24	0.00	3.96	3.96	86.47	90.43	7.68	3.95	164.89
Carbon Dioxide Emissions (000)																				
Run Exh	0.00	94.63	0.00	94.64	0.00	78.15	0.04	78.19	0.00	45.80	1.92	47.73	0.00	2.44	2.44	46.35	48.79	1.63	0.52	271.49
Idle Exh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.01	0.08	0.00	0.02	0.02	1.01	1.03	0.00	0.00	1.10
Start Ex	0.00	3.28	0.00	3.28	0.00	2.49	0.00	2.49	0.00	1.61	0.00	1.61	0.00	0.06	0.06	0.00	0.06	0.00	0.03	7.47
Total Ex	0.00	97.91	0.00	97.92	0.00	80.63	0.04	80.67	0.00	47.48	1.93	49.41	0.00	2.52	2.52	47.36	49.88	1.63	0.55	280.06
PM10 Emissions																				
Run Exh	0.00	3.33	0.00	3.33	0.00	4.86	0.00	4.87	0.00	2.09	0.07	2.17	0.00	0.02	0.02	3.31	3.34	0.13	0.06	13.89
Idle Exh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.05
Start Ex	0.00	0.31	0.00	0.31	0.00	0.39	0.00	0.39	0.00	0.19	0.00	0.19	0.00	0.01	0.01	0.00	0.01	0.00	0.01	0.90
Total Ex	0.00	3.64	0.00	3.64	0.00	5.25	0.00	5.26	0.00	2.28	0.07	2.35	0.00	0.03	0.03	3.36	3.39	0.13	0.07	14.83
TireWear	0.00	2.01	0.00	2.01	0.00	1.30	0.00	1.30	0.00	0.60	0.04	0.64	0.00	0.04	0.04	0.77	0.81	0.01	0.01	4.78
BrakeWr	0.00	3.14	0.00	3.14	0.00	2.03	0.00	2.03	0.00	0.86	0.05	0.91	0.00	0.05	0.05	0.63	0.68	0.01	0.02	6.80
Total	0.00	8.79	0.00	8.79	0.00	8.58	0.01	8.59	0.00	3.74	0.17	3.91	0.00	0.12	0.12	4.76	4.88	0.15	0.10	26.40
Lead	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SOx	0.00	0.94	0.00	0.94	0.00	0.78	0.00	0.78	0.00	0.46	0.02	0.48	0.00	0.02	0.02	0.45	0.48	0.02	0.01	2.70
Fuel Consumption (000 gallons)																				
Gasoline	0.00	10056.57	0.00	10056.57	0.00	8291.95	0.00	8291.95	0.00	4884.52	0.00	4884.52	0.00	262.22	262.22	0.00	262.22	30.05	72.47	23597.78
Diesel	0.00	0.00	0.31	0.31	0.00	0.00	3.52	3.52	0.00	0.00	173.95	173.95	0.00	0.00	0.00	4262.06	4262.06	121.10	0.00	4560.96

CO Concentrations
Canoga Northern Orange Line Extension Project 2006-115

2007 Existing

Intersection	Peak Time	Value	Parts Per Million 1-hour	Parts Per Million 8-hour
Lassen St & Owensmouth Ave	PM	1.1	6	4.3
Erwin St & Canoga Ave	PM	1.1	6	4.3
Lassen St & Owensmouth Ave	AM	0.8	6	4.1
Sherman Way & Canoga Ave	AM	1.2	6	4.3
Vanowen St & Canoga Ave	AM	1.0	6	4.2

2030 Alternative 1 No Build

Intersection	Peak Time	Value	Parts Per Million 1-hour	Parts Per Million 8-hour
Lassen St & Owensmouth Ave	PM	0.4	2	1.6
Erwin St & Canoga Ave	PM	0.3	2	1.5
Lassen St & Owensmouth Ave	AM	0.3	2	1.5
Sherman Way & Canoga Ave	AM	0.5	2	1.7
Vanowen St & Canoga Ave	AM	0.4	2	1.6

2030 Project Alternative 2 TSM

Intersection	Peak Time	Value	Parts Per Million 1-hour	Parts Per Million 8-hour
Lassen St & Owensmouth Ave	PM	0.4	2	1.6
Erwin St & Canoga Ave	PM	0.3	2	1.5
Lassen St & Owensmouth Ave	AM	0.3	2	1.5
Sherman Way & Canoga Ave	AM	0.5	2	1.7
Vanowen St & Canoga Ave	AM	0.4	2	1.6

2030 Project Alternative 3 On Street Dedicated Bus Lanes

Intersection	Peak Time	Value	Parts Per Million 1-hour	Parts Per Million 8-hour
Lassen St & Owensmouth Ave	PM	0.4	2	1.6
Erwin St & Canoga Ave	PM	0.3	2	1.5
Lassen St & Owensmouth Ave	AM	0.3	2	1.5
Sherman Way & Canoga Ave	AM	0.5	2	1.7
Vanowen St & Canoga Ave	AM	0.4	2	1.6

2030 Project Alternative 4 Busway

Intersection	Peak Time	Value	Parts Per Million 1-hour	Parts Per Million 8-hour
Lassen St & Owensmouth Ave	PM	0.4	2	1.6
Erwin St & Canoga Ave	PM	0.3	2	1.5
Lassen St & Owensmouth Ave	AM	0.3	2	1.5
Sherman Way & Canoga Ave	AM	0.5	2	1.7
Vanowen St & Canoga Ave	AM	0.4	2	1.6

State Standard			20	9

TAHA CO ANALYSIS ASSUMPTIONS & INPUTS

Project: Canoga Northern Orange Line Extension
Project Number: 2006-115

Existing Year: 2007
Analysis Year: 2030

Existing VMT (from EMFAC2007): 378,883,000
Project VMT (from EMFAC2007): 471,327,000

EMFAC Model: EMFAC2007
Existing CO Emissions: 2,320.620
Project Year CO Emissions: 692.170

Persistence Factor: 0.7

Existing 1-Hr Ambient CO Concentration (ppm): 5.00
Existing 8-Hr Ambient CO Concentration (ppm): 3.50

EMFAC Assumptions	
Season/Month:	Winter
Temperature:	58
Speed:	20 mph

Source: Transportation Project-Level Carbon Monoxide Protocol, 12/1997

CAL3QHC INPUTS			
Project Scenario:	Existing	Future Pre-Project	Future Project
Project Year:	2007	2030	2030
Average Time (minutes):	60	60	60
Surface Roughness Factor:	100	100	100
Emissions Factor - Free Flow Link (g/veh-mile):	5.10	1.17	1.17
Emissions Factor - Idle (g/veh-hr):	5.62	6.12	6.12
Saturation Flow Rate (veh/hr):	1600	1600	1600
Receptor Height (Z-Coordinate) (feet):	5.4	5.4	5.4
Wind Speed (m/s):	1	1	1
Stability Class:	F	F	F
Ambient 1-Hr CO Concentration (ppm):	5.00	1.86	1.86
Ambient 8-Hr CO Concentration (ppm):	3.50	1.30	1.30

	CAL3QHC names					
Analyzed Intersections:	**Existing**	**No Project**	**Alternative 2**	**Alternative 3**	**Alternative 4**	**Scenario:**
Lassen St / Owensmouth Ave	LAOWPMEX	LAOWPMA1	LAOWPMA2	LAOWPMA3	LAOWPMA4	PM
Erwin St & Canoga Ave	ERCAEX	ERCAA1	ERCAA2	ERCAA3	ERCAA4	PM
Lassen St & Owensmouth Ave	LAOWAMEX	LAOWAMA1	LAOWAMA2	LAOWAMA3	LAOWAMA4	AM
Sherman Way & Canoga Ave	SHCAEX	SHCAA1	SHCAA2	SHCAA3	SHCAA4	AM
Vanowen St & Canoga Ave	VACAEX	VACAA1	VACAA2	VACAA3	VACAA4	AM

JOB: C:\CALRoads\ \CAL3QHC\ERCAex.clv RUN: CAL3QHC RUN

DATE : 11/21/ 7
TIME : 17:56:24

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	524.0	.0	524.0	500.0	500.	360.	AG	1750.	5.1	.0	****		
2. nbd	524.0	500.0	524.0	1000.0	500.	360.	AG	1621.	5.1	.0	****		
3. sba	476.0	1000.0	476.0	500.0	500.	180.	AG	1306.	5.1	.0	****		
4. sbd	476.0	500.0	476.0	.0	500.	180.	AG	1380.	5.1	.0	****		
5. eba	.0	482.0	500.0	482.0	500.	90.	AG	543.	5.1	.0	80.0		
6. ebd	500.0	482.0	1000.0	482.0	500.	90.	AG	380.	5.1	.0	80.0		
7. wba	1000.0	518.0	500.0	518.0	500.	270.	AG	392.	5.1	.0	80.0		
8. wbd	500.0	518.0	.0	518.0	500.	270.	AG	610.	5.1	.0	80.0		
9. nbq	524.0	464.0	524.0	432.9	31.	180.	AG	13.	100.0	.0	48.0	.39	1.6
10. sbq	476.0	536.0	476.0	559.2	23.	360.	AG	13.	100.0	.0	48.0	.29	1.2
11. ebq	452.0	482.0	407.8	482.0	44.	270.	AG	33.	100.0	.0	36.0	.62	2.2
12. wbq	548.0	518.0	579.3	518.0	31.	90.	AG	33.	100.0	.0	36.0	.44	1.6

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	13	3.0	1750	1600	5.62	3	3
10. sbq	60	13	3.0	1306	1600	5.62	3	3
11. ebq	60	44	3.0	543	1600	5.62	3	3
12. wbq	60	44	3.0	392	1600	5.62	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	442.0	546.0	6.0
2. ne 10 ft	558.0	546.0	6.0
3. sw 10 ft	442.0	454.0	6.0
4. se 10 ft	558.0	454.0	6.0

JOB: C:\CALRoads \CAL3QHC\ERCAex.clv RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.4	.5	.8	.8
10.	.6	.2	1.1	.5
20.	.7	.1	.9	.2
30.	.6	.1	.7	.3
40.	.4	.0	.7	.2
50.	.4	.0	.7	.2
60.	.4	.0	.6	.2
70.	.4	.1	.7	.2
80.	.5	.2	.7	.2
90.	.6	.2	.6	.2
100.	.7	.3	.5	.2
110.	.7	.2	.4	.1
120.	.6	.2	.4	.0
130.	.7	.2	.4	.0
140.	.5	.3	.5	.1
150.	.8	.4	.6	.1
160.	.8	.3	.7	.1
170.	1.0	.5	.7	.3
180.	.8	.8	.5	.5
190.	.5	1.0	.2	.8
200.	.4	.9	.1	.8
210.	.3	.7	.0	.6
220.	.2	.7	.0	.5
230.	.2	.6	.0	.5
240.	.2	.7	.0	.4
250.	.3	.6	.1	.4
260.	.3	.6	.1	.3
270.	.2	.5	.2	.5
280.	.1	.3	.3	.7
290.	.1	.3	.3	.5
300.	.0	.4	.3	.6
310.	.0	.4	.3	.7
320.	.0	.5	.3	.6
330.	.0	.6	.4	.7
340.	.1	.6	.4	.8
350.	.2	.7	.5	.8
360.	.4	.5	.8	.8
MAX	1.0	1.0	1.1	.8
DEGR.	170	190	10	0

THE HIGHEST CONCENTRATION OF 1.10 PPM OCCURRED AT RECEPTOR REC3 .

JOB: C:\CALRoadsl\CAL3QHC\ERCAa1.clv RUN: CAL3QHC RUN

DATE : 11/21/ 7
TIME : 18: 6:13

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	524.0	.0	524.0	500.0	500.	360.	AG	2188.	1.2	.0	****		
2. nbd	524.0	500.0	524.0	1000.0	500.	360.	AG	2027.	1.2	.0	****		
3. sba	476.0	1000.0	476.0	500.0	500.	180.	AG	1633.	1.2	.0	****		
4. sbd	476.0	500.0	476.0	.0	500.	180.	AG	1725.	1.2	.0	****		
5. eba	.0	482.0	500.0	482.0	500.	90.	AG	679.	1.2	.0	80.0		
6. ebd	500.0	482.0	1000.0	482.0	500.	90.	AG	475.	1.2	.0	80.0		
7. wba	1000.0	518.0	500.0	518.0	500.	270.	AG	490.	1.2	.0	80.0		
8. wbd	500.0	518.0	.0	518.0	500.	270.	AG	763.	1.2	.0	80.0		
9. nbq	524.0	464.0	524.0	425.1	39.	180.	AG	14.	100.0	.0	48.0	.49	2.0
10. sbq	476.0	536.0	476.0	565.0	29.	360.	AG	14.	100.0	.0	48.0	.36	1.5
11. ebq	452.0	482.0	387.0	482.0	65.	270.	AG	36.	100.0	.0	36.0	.77	3.3
12. wbq	548.0	518.0	587.2	518.0	39.	90.	AG	36.	100.0	.0	36.0	.56	2.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	13	3.0	2188	1600	6.12	3	3
10. sbq	60	13	3.0	1633	1600	6.12	3	3
11. ebq	60	44	3.0	679	1600	6.12	3	3
12. wbq	60	44	3.0	490	1600	6.12	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	442.0	546.0	6.0
2. ne 10 ft	558.0	546.0	6.0
3. sw 10 ft	442.0	454.0	6.0
4. se 10 ft	558.0	454.0	6.0

JOB: C:\CALRoadsl\CAL3QHC\ERCAa1.clv RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.1	.1	.2	.2
10.	.2	.1	.3	.1
20.	.2	.0	.3	.1
30.	.2	.0	.1	.0
40.	.2	.0	.1	.0
50.	.2	.0	.1	.0
60.	.2	.0	.1	.0
70.	.1	.0	.0	.0
80.	.0	.0	.1	.0
90.	.1	.0	.1	.0
100.	.1	.0	.1	.0
110.	.0	.0	.2	.0
120.	.1	.0	.2	.0
130.	.0	.1	.2	.0
140.	.1	.1	.2	.0
150.	.1	.1	.2	.0
160.	.2	.1	.2	.0
170.	.2	.1	.2	.1
180.	.2	.2	.1	.1
190.	.1	.3	.1	.3
200.	.1	.3	.0	.2
210.	.1	.2	.0	.2
220.	.0	.1	.0	.2
230.	.0	.1	.0	.2
240.	.0	.1	.0	.1
250.	.1	.2	.0	.1
260.	.1	.2	.0	.1
270.	.1	.1	.1	.1
280.	.0	.1	.1	.2
290.	.0	.1	.1	.1
300.	.0	.1	.1	.1
310.	.0	.1	.1	.1
320.	.0	.2	.1	.1
330.	.0	.2	.1	.2
340.	.0	.2	.1	.2
350.	.1	.3	.1	.2
360.	.1	.1	.2	.2
MAX	.2	.3	.3	.3
DEGR.	10	190	10	190

THE HIGHEST CONCENTRATION OF .30 PPM OCCURRED AT RECEPTOR REC3 .

JOB: C:\CALRoadsl\CAL3QHC\ERCAa2.clv RUN: CAL3QHC RUN

DATE : 11/21/ 7
TIME : 18:11: 8

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	524.0	.0	524.0	500.0	500.	360.	AG	2188.	1.2	.0	****		
2. nbd	524.0	500.0	524.0	1000.0	500.	360.	AG	2047.	1.2	.0	****		
3. sba	476.0	1000.0	476.0	500.0	500.	180.	AG	1653.	1.2	.0	****		
4. sbd	476.0	500.0	476.0	.0	500.	180.	AG	1745.	1.2	.0	****		
5. eba	.0	482.0	500.0	482.0	500.	90.	AG	699.	1.2	.0	80.0		
6. ebd	500.0	482.0	1000.0	482.0	500.	90.	AG	475.	1.2	.0	80.0		
7. wba	1000.0	518.0	500.0	518.0	500.	270.	AG	490.	1.2	.0	80.0		
8. wbd	500.0	518.0	.0	518.0	500.	270.	AG	763.	1.2	.0	80.0		
9. nbq	524.0	464.0	524.0	425.1	39.	180.	AG	14.	100.0	.0	48.0	.49	2.0
10. sbq	476.0	536.0	476.0	565.4	29.	360.	AG	14.	100.0	.0	48.0	.37	1.5
11. ebq	452.0	482.0	382.4	482.0	70.	270.	AG	36.	100.0	.0	36.0	.80	3.5
12. wbq	548.0	518.0	587.2	518.0	39.	90.	AG	36.	100.0	.0	36.0	.56	2.0

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	13	3.0	2188	1600	6.12	3	3
10. sbq	60	13	3.0	1653	1600	6.12	3	3
11. ebq	60	44	3.0	699	1600	6.12	3	3
12. wbq	60	44	3.0	490	1600	6.12	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	442.0	546.0	6.0
2. ne 10 ft	558.0	546.0	6.0
3. sw 10 ft	442.0	454.0	6.0
4. se 10 ft	558.0	454.0	6.0

JOB: C:\CALRoadsl\CAL3QHC\ERCAa2.clv RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.1	.1	.2	.2
10.	.2	.1	.3	.1
20.	.2	.0	.3	.1
30.	.2	.0	.1	.0
40.	.2	.0	.1	.0
50.	.2	.0	.1	.0
60.	.2	.0	.1	.0
70.	.2	.0	.0	.0
80.	.1	.0	.1	.0
90.	.1	.0	.1	.0
100.	.1	.0	.2	.0
110.	.0	.0	.2	.0
120.	.1	.0	.2	.0
130.	.0	.1	.2	.0
140.	.1	.1	.2	.0
150.	.1	.1	.2	.0
160.	.2	.1	.2	.0
170.	.2	.1	.2	.1
180.	.2	.2	.1	.1
190.	.1	.3	.1	.3
200.	.1	.3	.0	.2
210.	.1	.2	.0	.2
220.	.1	.1	.0	.2
230.	.0	.1	.0	.2
240.	.0	.2	.0	.1
250.	.1	.2	.0	.1
260.	.1	.2	.0	.1
270.	.1	.1	.1	.1
280.	.0	.1	.1	.2
290.	.0	.1	.1	.1
300.	.0	.1	.1	.1
310.	.0	.1	.1	.1
320.	.0	.2	.1	.1
330.	.0	.2	.1	.2
340.	.0	.2	.1	.2
350.	.1	.3	.1	.2
360.	.1	.1	.2	.2
MAX	.2	.3	.3	.3
DEGR.	10	190	10	190

THE HIGHEST CONCENTRATION OF .30 PPM OCCURRED AT RECEPTOR REC3 .

JOB: C:\CALRoadsl\CAL3QHC\ERCAa3.clv RUN: CAL3QHC RUN

DATE : 11/21/ 7
TIME : 18:15:56

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	524.0	.0	524.0	500.0	500.	360.	AG	2188.	1.2	.0	****		
2. nbd	524.0	500.0	524.0	1000.0	500.	360.	AG	2067.	1.2	.0	****		
3. sba	476.0	1000.0	476.0	500.0	500.	180.	AG	1673.	1.2	.0	****		
4. sbd	476.0	500.0	476.0	.0	500.	180.	AG	1765.	1.2	.0	****		
5. eba	.0	482.0	500.0	482.0	500.	90.	AG	719.	1.2	.0	80.0		
6. ebd	500.0	482.0	1000.0	482.0	500.	90.	AG	475.	1.2	.0	80.0		
7. wba	1000.0	518.0	500.0	518.0	500.	270.	AG	490.	1.2	.0	80.0		
8. wbd	500.0	518.0	.0	518.0	500.	270.	AG	763.	1.2	.0	80.0		
9. nbq	524.0	464.0	524.0	422.1	42.	180.	AG	15.	100.0	.0	48.0	.50	2.1
10. sbq	476.0	536.0	476.0	568.0	32.	360.	AG	15.	100.0	.0	48.0	.38	1.6
11. ebq	452.0	482.0	387.7	482.0	64.	270.	AG	35.	100.0	.0	36.0	.75	3.3
12. wbq	548.0	518.0	586.3	518.0	38.	90.	AG	35.	100.0	.0	36.0	.51	1.9

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	14	3.0	2188	1600	6.12	3	3
10. sbq	60	14	3.0	1673	1600	6.12	3	3
11. ebq	60	43	3.0	719	1600	6.12	3	3
12. wbq	60	43	3.0	490	1600	6.12	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	442.0	546.0	6.0
2. ne 10 ft	558.0	546.0	6.0
3. sw 10 ft	442.0	454.0	6.0
4. se 10 ft	558.0	454.0	6.0

JOB: C:\CALRoadsl\CAL3QHC\ERCAa3.clv RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.1	.1	.2	.2
10.	.2	.1	.3	.1
20.	.2	.0	.3	.1
30.	.2	.0	.1	.0
40.	.2	.0	.1	.0
50.	.2	.0	.1	.0
60.	.2	.0	.1	.0
70.	.2	.0	.1	.0
80.	.1	.0	.1	.0
90.	.1	.0	.1	.0
100.	.1	.0	.2	.0
110.	.0	.0	.2	.0
120.	.1	.0	.2	.0
130.	.0	.1	.2	.0
140.	.1	.1	.2	.0
150.	.1	.1	.2	.0
160.	.2	.1	.2	.0
170.	.2	.1	.2	.1
180.	.2	.2	.1	.1
190.	.1	.3	.1	.3
200.	.1	.3	.0	.2
210.	.1	.2	.0	.2
220.	.0	.1	.0	.2
230.	.0	.1	.0	.2
240.	.0	.1	.0	.1
250.	.1	.2	.0	.1
260.	.1	.2	.0	.1
270.	.1	.1	.1	.1
280.	.0	.1	.1	.2
290.	.0	.1	.1	.1
300.	.0	.1	.1	.1
310.	.0	.1	.1	.1
320.	.0	.2	.1	.1
330.	.0	.2	.1	.2
340.	.0	.2	.1	.2
350.	.1	.3	.1	.2
360.	.1	.1	.2	.2
MAX	.2	.3	.3	.3
DEGR.	10	190	10	190

THE HIGHEST CONCENTRATION OF .30 PPM OCCURRED AT RECEPTOR REC3 .

JOB: C:\CALRoadsl\CAL3QHC\ERCAa4.clv RUN: CAL3QHC RUN

DATE : 11/21/ 7
TIME : 18:18:30

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	524.0	.0	524.0	500.0	500.	360.	AG	2188.	1.2	.0	****		
2. nbd	524.0	500.0	524.0	1000.0	500.	360.	AG	2067.	1.2	.0	****		
3. sba	476.0	1000.0	476.0	500.0	500.	180.	AG	1673.	1.2	.0	****		
4. sbd	476.0	500.0	476.0	.0	500.	180.	AG	1765.	1.2	.0	****		
5. eba	.0	482.0	500.0	482.0	500.	90.	AG	719.	1.2	.0	80.0		
6. ebd	500.0	482.0	1000.0	482.0	500.	90.	AG	475.	1.2	.0	80.0		
7. wba	1000.0	518.0	500.0	518.0	500.	270.	AG	490.	1.2	.0	80.0		
8. wbd	500.0	518.0	.0	518.0	500.	270.	AG	763.	1.2	.0	80.0		
9. nbq	524.0	464.0	524.0	422.1	42.	180.	AG	15.	100.0	.0	48.0	.50	2.1
10. sbq	476.0	536.0	476.0	568.0	32.	360.	AG	15.	100.0	.0	48.0	.38	1.6
11. ebq	452.0	482.0	387.7	482.0	64.	270.	AG	35.	100.0	.0	36.0	.75	3.3
12. wbq	548.0	518.0	586.3	518.0	38.	90.	AG	35.	100.0	.0	36.0	.51	1.9

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	14	3.0	2188	1600	6.12	3	3
10. sbq	60	14	3.0	1673	1600	6.12	3	3
11. ebq	60	43	3.0	719	1600	6.12	3	3
12. wbq	60	43	3.0	490	1600	6.12	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	442.0	546.0	6.0
2. ne 10 ft	558.0	546.0	6.0
3. sw 10 ft	442.0	454.0	6.0
4. se 10 ft	558.0	454.0	6.0

JOB: C:\CALRoadsl\CAL3QHC\ERCAa4.clv RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.1	.1	.2	.2
10.	.2	.1	.3	.1
20.	.2	.0	.3	.1
30.	.2	.0	.1	.0
40.	.2	.0	.1	.0
50.	.2	.0	.1	.0
60.	.2	.0	.1	.0
70.	.2	.0	.1	.0
80.	.1	.0	.1	.0
90.	.1	.0	.1	.0
100.	.1	.0	.2	.0
110.	.0	.0	.2	.0
120.	.1	.0	.2	.0
130.	.0	.1	.2	.0
140.	.1	.1	.2	.0
150.	.1	.1	.2	.0
160.	.2	.1	.2	.0
170.	.2	.1	.2	.1
180.	.2	.2	.1	.1
190.	.1	.3	.1	.3
200.	.1	.3	.0	.2
210.	.1	.2	.0	.2
220.	.0	.1	.0	.2
230.	.0	.1	.0	.2
240.	.0	.1	.0	.1
250.	.1	.2	.0	.1
260.	.1	.2	.0	.1
270.	.1	.1	.1	.1
280.	.0	.1	.1	.2
290.	.0	.1	.1	.1
300.	.0	.1	.1	.1
310.	.0	.1	.1	.1
320.	.0	.2	.1	.1
330.	.0	.2	.1	.2
340.	.0	.2	.1	.2
350.	.1	.3	.1	.2
360.	.1	.1	.2	.2
MAX	.2	.3	.3	.3
DEGR.	10	190	10	190

THE HIGHEST CONCENTRATION OF .30 PPM OCCURRED AT RECEPTOR REC3 .

JOB: C:\CALRoads\CAL3QHC\LAOWexam.cl RUN: CAL3QHC RUN

DATE : 11/21/ 7
TIME : 17:20:28

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	512.0	.0	512.0	500.0	500.	360.	AG	602.	5.1	.0	68.0		
2. nbd	512.0	500.0	512.0	1000.0	500.	360.	AG	371.	5.1	.0	68.0		
3. sba	488.0	1000.0	488.0	500.0	500.	180.	AG	605.	5.1	.0	68.0		
4. sbd	488.0	500.0	488.0	.0	500.	180.	AG	996.	5.1	.0	68.0		
5. eba	.0	482.0	500.0	482.0	500.	90.	AG	670.	5.1	.0	80.0		
6. ebd	500.0	482.0	1000.0	482.0	500.	90.	AG	831.	5.1	.0	80.0		
7. wba	1000.0	518.0	500.0	518.0	500.	270.	AG	1023.	5.1	.0	80.0		
8. wbd	500.0	518.0	.0	518.0	500.	270.	AG	702.	5.1	.0	80.0		
9. nbq	512.0	464.0	512.0	409.7	54.	180.	AG	17.	100.0	.0	24.0	.51	2.8
10. sbq	488.0	536.0	488.0	590.5	54.	360.	AG	17.	100.0	.0	24.0	.52	2.8
11. ebq	476.0	482.0	446.7	482.0	29.	270.	AG	18.	100.0	.0	36.0	.27	1.5
12. wbq	524.0	518.0	568.8	518.0	45.	90.	AG	18.	100.0	.0	36.0	.41	2.3

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	33	3.0	602	1600	5.62	3	3
10. sbq	60	33	3.0	605	1600	5.62	3	3
11. ebq	60	24	3.0	670	1600	5.62	3	3
12. wbq	60	24	3.0	1023	1600	5.62	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	466.0	546.0	6.0
2. ne 10 ft	534.0	546.0	6.0
3. sw 10 ft	466.0	454.0	6.0
4. se 10 ft	534.0	454.0	6.0

JOB: C:\CALRoads\CAL3QHC\LAOWexam.cl RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.3	.3	.6	.5
10.	.4	.1	.6	.3
20.	.3	.0	.5	.2
30.	.3	.0	.5	.2
40.	.3	.0	.5	.2
50.	.3	.0	.6	.4
60.	.3	.0	.6	.4
70.	.3	.1	.7	.4
80.	.3	.2	.8	.5
90.	.8	.4	.7	.4
100.	.8	.6	.3	.1
110.	.7	.5	.2	.1
120.	.4	.5	.3	.0
130.	.4	.3	.3	.0
140.	.6	.4	.3	.0
150.	.5	.4	.3	.0
160.	.6	.4	.5	.0
170.	.8	.4	.6	.1
180.	.7	.6	.5	.3
190.	.4	.7	.2	.6
200.	.2	.5	.1	.5
210.	.2	.7	.0	.4
220.	.2	.4	.0	.4
230.	.2	.6	.0	.4
240.	.3	.5	.0	.3
250.	.3	.5	.0	.3
260.	.4	.6	.1	.4
270.	.3	.5	.2	.6
280.	.1	.4	.4	.7
290.	.0	.3	.4	.6
300.	.0	.2	.3	.5
310.	.0	.2	.2	.5
320.	.0	.2	.2	.5
330.	.0	.2	.2	.6
340.	.0	.3	.4	.5
350.	.1	.4	.5	.6
360.	.3	.3	.6	.5
MAX	.8	.7	.8	.7
DEGR.	90	190	80	280

THE HIGHEST CONCENTRATION OF .80 PPM OCCURRED AT RECEPTOR REC1 .

JOB: C:\CALRoads\CAL3QHC\LAOWa1am.cl RUN: CAL3QHC RUN

DATE : 11/21/ 7
TIME : 17:26: 4

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	512.0	.0	512.0	500.0	500.	360.	AG	746.	1.2	.0	68.0		
2. nbd	512.0	500.0	512.0	1000.0	500.	360.	AG	460.	1.2	.0	68.0		
3. sba	488.0	1000.0	488.0	500.0	500.	180.	AG	750.	1.2	.0	68.0		
4. sbd	488.0	500.0	488.0	.0	500.	180.	AG	1236.	1.2	.0	68.0		
5. eba	.0	482.0	500.0	482.0	500.	90.	AG	831.	1.2	.0	80.0		
6. ebd	500.0	482.0	1000.0	482.0	500.	90.	AG	1030.	1.2	.0	80.0		
7. wba	1000.0	518.0	500.0	518.0	500.	270.	AG	1269.	1.2	.0	80.0		
8. wbd	500.0	518.0	.0	518.0	500.	270.	AG	870.	1.2	.0	80.0		
9. nbq	512.0	464.0	512.0	396.7	67.	180.	AG	18.	100.0	.0	24.0	.64	3.4
10. sbq	488.0	536.0	488.0	603.7	68.	360.	AG	18.	100.0	.0	24.0	.64	3.4
11. ebq	476.0	482.0	439.6	482.0	36.	270.	AG	20.	100.0	.0	36.0	.34	1.8
12. wbq	524.0	518.0	579.5	518.0	56.	90.	AG	20.	100.0	.0	36.0	.51	2.8

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	33	3.0	746	1600	6.12	3	3
10. sbq	60	33	3.0	750	1600	6.12	3	3
11. ebq	60	24	3.0	831	1600	6.12	3	3
12. wbq	60	24	3.0	1269	1600	6.12	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	466.0	546.0	6.0
2. ne 10 ft	534.0	546.0	6.0
3. sw 10 ft	466.0	454.0	6.0
4. se 10 ft	534.0	454.0	6.0

JOB: C:\CALRoads\CAL3QHC\LAOWa1am.cl RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.1	.0	.2	.0
10.	.1	.0	.2	.0
20.	.2	.0	.0	.0
30.	.1	.0	.0	.0
40.	.1	.0	.0	.0
50.	.1	.0	.0	.0
60.	.1	.0	.0	.2
70.	.1	.0	.1	.2
80.	.1	.0	.2	.2
90.	.2	.1	.1	.1
100.	.3	.1	.0	.0
110.	.2	.2	.0	.0
120.	.0	.1	.0	.0
130.	.0	.2	.0	.0
140.	.0	.1	.1	.0
150.	.0	.1	.1	.0
160.	.1	.1	.1	.0
170.	.2	.1	.1	.0
180.	.1	.2	.1	.1
190.	.0	.3	.1	.2
200.	.0	.1	.0	.3
210.	.0	.0	.0	.2
220.	.0	.0	.0	.2
230.	.0	.0	.0	.1
240.	.0	.0	.0	.1
250.	.1	.0	.0	.1
260.	.1	.1	.0	.1
270.	.1	.1	.1	.2
280.	.0	.0	.1	.2
290.	.0	.0	.1	.0
300.	.0	.0	.0	.0
310.	.0	.0	.0	.0
320.	.0	.0	.0	.0
330.	.0	.0	.1	.0
340.	.0	.0	.1	.0
350.	.0	.0	.1	.1
360.	.1	.0	.2	.0
MAX	.3	.3	.2	.3
DEGR.	100	190	0	200

THE HIGHEST CONCENTRATION OF .30 PPM OCCURRED AT RECEPTOR REC1 .

JOB: C:\CALRoads\CAL3QHC\LAOWa2am.cl RUN: CAL3QHC RUN

DATE : 11/21/ 7
TIME : 17:34: 1

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	512.0	.0	512.0	500.0	500.	360.	AG	766.	1.2	.0	68.0		
2. nbd	512.0	500.0	512.0	1000.0	500.	360.	AG	460.	1.2	.0	68.0		
3. sba	488.0	1000.0	488.0	500.0	500.	180.	AG	750.	1.2	.0	68.0		
4. sbd	488.0	500.0	488.0	.0	500.	180.	AG	1256.	1.2	.0	68.0		
5. eba	.0	482.0	500.0	482.0	500.	90.	AG	831.	1.2	.0	80.0		
6. ebd	500.0	482.0	1000.0	482.0	500.	90.	AG	1050.	1.2	.0	80.0		
7. wba	1000.0	518.0	500.0	518.0	500.	270.	AG	1289.	1.2	.0	80.0		
8. wbd	500.0	518.0	.0	518.0	500.	270.	AG	870.	1.2	.0	80.0		
9. nbq	512.0	464.0	512.0	394.9	69.	180.	AG	18.	100.0	.0	24.0	.65	3.5
10. sbq	488.0	536.0	488.0	603.7	68.	360.	AG	18.	100.0	.0	24.0	.64	3.4
11. ebq	476.0	482.0	439.6	482.0	36.	270.	AG	20.	100.0	.0	36.0	.34	1.8
12. wbq	524.0	518.0	580.3	518.0	56.	90.	AG	20.	100.0	.0	36.0	.52	2.9

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	33	3.0	766	1600	6.12	3	3
10. sbq	60	33	3.0	750	1600	6.12	3	3
11. ebq	60	24	3.0	831	1600	6.12	3	3
12. wbq	60	24	3.0	1289	1600	6.12	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	466.0	546.0	6.0
2. ne 10 ft	534.0	546.0	6.0
3. sw 10 ft	466.0	454.0	6.0
4. se 10 ft	534.0	454.0	6.0

JOB: C:\CALRoads\CAL3QHC\LAOWa2am.cl RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.1	.0	.2	.0
10.	.1	.0	.2	.0
20.	.2	.0	.0	.0
30.	.1	.0	.0	.0
40.	.1	.0	.0	.0
50.	.1	.0	.0	.0
60.	.1	.0	.1	.2
70.	.1	.0	.1	.2
80.	.1	.0	.2	.2
90.	.2	.1	.1	.1
100.	.3	.1	.0	.0
110.	.2	.2	.0	.0
120.	.0	.1	.0	.0
130.	.0	.2	.0	.0
140.	.0	.1	.1	.0
150.	.0	.1	.1	.0
160.	.1	.1	.1	.0
170.	.2	.1	.2	.0
180.	.1	.2	.1	.1
190.	.0	.3	.1	.2
200.	.0	.1	.0	.3
210.	.0	.0	.0	.2
220.	.0	.0	.0	.2
230.	.0	.0	.0	.1
240.	.0	.0	.0	.1
250.	.1	.0	.0	.1
260.	.1	.1	.0	.1
270.	.1	.1	.1	.2
280.	.0	.0	.1	.2
290.	.0	.0	.1	.0
300.	.0	.0	.0	.0
310.	.0	.0	.0	.0
320.	.0	.0	.0	.0
330.	.0	.0	.1	.0
340.	.0	.0	.1	.0
350.	.0	.0	.1	.1
360.	.1	.0	.2	.0
MAX	.3	.3	.2	.3
DEGR.	100	190	0	200

THE HIGHEST CONCENTRATION OF .30 PPM OCCURRED AT RECEPTOR REC1 .

JOB: C:\CALRoads\CAL3QHC\LAOWa3am.cl RUN: CAL3QHC RUN

DATE : 11/21/ 7
TIME : 17:37:35

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	512.0	.0	512.0	500.0	500.	360.	AG	789.	1.2	.0	68.0		
2. nbd	512.0	500.0	512.0	1000.0	500.	360.	AG	460.	1.2	.0	68.0		
3. sba	488.0	1000.0	488.0	500.0	500.	180.	AG	752.	1.2	.0	68.0		
4. sbd	488.0	500.0	488.0	.0	500.	180.	AG	1276.	1.2	.0	68.0		
5. eba	.0	482.0	500.0	482.0	500.	90.	AG	877.	1.2	.0	80.0		
6. ebd	500.0	482.0	1000.0	482.0	500.	90.	AG	1121.	1.2	.0	80.0		
7. wba	1000.0	518.0	500.0	518.0	500.	270.	AG	1309.	1.2	.0	80.0		
8. wbd	500.0	518.0	.0	518.0	500.	270.	AG	870.	1.2	.0	80.0		
9. nbq	512.0	464.0	512.0	392.9	71.	180.	AG	18.	100.0	.0	24.0	.67	3.6
10. sbq	488.0	536.0	488.0	603.8	68.	360.	AG	18.	100.0	.0	24.0	.64	3.4
11. ebq	476.0	482.0	437.7	482.0	38.	270.	AG	20.	100.0	.0	36.0	.35	1.9
12. wbq	524.0	518.0	581.2	518.0	57.	90.	AG	20.	100.0	.0	36.0	.53	2.9

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	33	3.0	789	1600	6.12	3	3
10. sbq	60	33	3.0	752	1600	6.12	3	3
11. ebq	60	24	3.0	877	1600	6.12	3	3
12. wbq	60	24	3.0	1309	1600	6.12	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	466.0	546.0	6.0
2. ne 10 ft	534.0	546.0	6.0
3. sw 10 ft	466.0	454.0	6.0
4. se 10 ft	534.0	454.0	6.0

JOB: C:\CALRoads\CAL3QHC\LAOWa3am.cl RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.1	.0	.2	.0
10.	.1	.0	.2	.0
20.	.2	.0	.0	.0
30.	.1	.0	.0	.0
40.	.1	.0	.0	.0
50.	.1	.0	.0	.0
60.	.1	.0	.1	.2
70.	.1	.0	.2	.2
80.	.1	.0	.2	.2
90.	.2	.1	.1	.1
100.	.3	.2	.0	.0
110.	.2	.2	.0	.0
120.	.0	.2	.0	.0
130.	.0	.2	.0	.0
140.	.0	.1	.1	.0
150.	.0	.1	.1	.0
160.	.1	.1	.1	.0
170.	.2	.1	.2	.0
180.	.1	.2	.1	.1
190.	.0	.3	.1	.2
200.	.0	.1	.0	.3
210.	.0	.0	.0	.2
220.	.0	.0	.0	.2
230.	.0	.0	.0	.1
240.	.0	.0	.0	.1
250.	.1	.0	.0	.1
260.	.1	.1	.0	.1
270.	.1	.1	.1	.2
280.	.0	.0	.1	.2
290.	.0	.0	.1	.0
300.	.0	.0	.0	.0
310.	.0	.0	.0	.0
320.	.0	.0	.0	.0
330.	.0	.0	.1	.0
340.	.0	.0	.1	.0
350.	.0	.0	.1	.1
360.	.1	.0	.2	.0
MAX	.3	.3	.2	.3
DEGR.	100	190	0	200

THE HIGHEST CONCENTRATION OF .30 PPM OCCURRED AT RECEPTOR REC1 .

JOB: C:\CALRoads\CAL3QHC\LAOWa4am.cl RUN: CAL3QHC RUN

DATE : 11/21/ 7
TIME : 17:39:56

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	512.0	.0	512.0	500.0	500.	360.	AG	789.	1.2	.0	68.0		
2. nbd	512.0	500.0	512.0	1000.0	500.	360.	AG	460.	1.2	.0	68.0		
3. sba	488.0	1000.0	488.0	500.0	500.	180.	AG	752.	1.2	.0	68.0		
4. sbd	488.0	500.0	488.0	.0	500.	180.	AG	1276.	1.2	.0	68.0		
5. eba	.0	482.0	500.0	482.0	500.	90.	AG	877.	1.2	.0	80.0		
6. ebd	500.0	482.0	1000.0	482.0	500.	90.	AG	1121.	1.2	.0	80.0		
7. wba	1000.0	518.0	500.0	518.0	500.	270.	AG	1309.	1.2	.0	80.0		
8. wbd	500.0	518.0	.0	518.0	500.	270.	AG	870.	1.2	.0	80.0		
9. nbq	512.0	464.0	512.0	392.9	71.	180.	AG	18.	100.0	.0	24.0	.67	3.6
10. sbq	488.0	536.0	488.0	603.8	68.	360.	AG	18.	100.0	.0	24.0	.64	3.4
11. ebq	476.0	482.0	437.7	482.0	38.	270.	AG	20.	100.0	.0	36.0	.35	1.9
12. wbq	524.0	518.0	581.2	518.0	57.	90.	AG	20.	100.0	.0	36.0	.53	2.9

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	33	3.0	789	1600	6.12	3	3
10. sbq	60	33	3.0	752	1600	6.12	3	3
11. ebq	60	24	3.0	877	1600	6.12	3	3
12. wbq	60	24	3.0	1309	1600	6.12	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	466.0	546.0	6.0
2. ne 10 ft	534.0	546.0	6.0
3. sw 10 ft	466.0	454.0	6.0
4. se 10 ft	534.0	454.0	6.0

JOB: C:\CALRoads\CAL3QHC\LAOWa4am.cl RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.1	.0	.2	.0
10.	.1	.0	.2	.0
20.	.2	.0	.0	.0
30.	.1	.0	.0	.0
40.	.1	.0	.0	.0
50.	.1	.0	.0	.0
60.	.1	.0	.1	.2
70.	.1	.0	.2	.2
80.	.1	.0	.2	.2
90.	.2	.1	.1	.1
100.	.3	.2	.0	.0
110.	.2	.2	.0	.0
120.	.0	.2	.0	.0
130.	.0	.2	.0	.0
140.	.0	.1	.1	.0
150.	.0	.1	.1	.0
160.	.1	.1	.1	.0
170.	.2	.1	.2	.0
180.	.1	.2	.1	.1
190.	.0	.3	.1	.2
200.	.0	.1	.0	.3
210.	.0	.0	.0	.2
220.	.0	.0	.0	.2
230.	.0	.0	.0	.1
240.	.0	.0	.0	.1
250.	.1	.0	.0	.1
260.	.1	.1	.0	.1
270.	.1	.1	.1	.2
280.	.0	.0	.1	.2
290.	.0	.0	.1	.0
300.	.0	.0	.0	.0
310.	.0	.0	.0	.0
320.	.0	.0	.0	.0
330.	.0	.0	.1	.0
340.	.0	.0	.1	.0
350.	.0	.0	.1	.1
360.	.1	.0	.2	.0
MAX	.3	.3	.2	.3
DEGR.	100	190	0	200

THE HIGHEST CONCENTRATION OF .30 PPM OCCURRED AT RECEPTOR REC1 .

JOB: C:\CALRoads\CAL3QHC\LAOWexpm.cl RUN: CAL3QHC RUN

DATE : 11/21/ 7
TIME : 16:40:22

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	512.0	.0	512.0	500.0	500.	360.	AG	1231.	5.1	.0	68.0		
2. nbd	512.0	500.0	512.0	1000.0	500.	360.	AG	901.	5.1	.0	68.0		
3. sba	488.0	1000.0	488.0	500.0	500.	180.	AG	510.	5.1	.0	68.0		
4. sbd	488.0	500.0	488.0	.0	500.	180.	AG	727.	5.1	.0	68.0		
5. eba	.0	482.0	500.0	482.0	500.	90.	AG	754.	5.1	.0	80.0		
6. ebd	500.0	482.0	1000.0	482.0	500.	90.	AG	1131.	5.1	.0	80.0		
7. wba	1000.0	518.0	500.0	518.0	500.	270.	AG	1027.	5.1	.0	80.0		
8. wbd	500.0	518.0	.0	518.0	500.	270.	AG	763.	5.1	.0	80.0		
9. nbq	512.0	464.0	512.0	330.8	133.	180.	AG	15.	100.0	.0	24.0	.89	6.8
10. sbq	488.0	536.0	488.0	576.4	40.	360.	AG	15.	100.0	.0	24.0	.37	2.1
11. ebq	476.0	482.0	437.6	482.0	38.	270.	AG	21.	100.0	.0	36.0	.35	2.0
12. wbq	524.0	518.0	576.4	518.0	52.	90.	AG	21.	100.0	.0	36.0	.48	2.7

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	29	3.0	1231	1600	5.62	3	3
10. sbq	60	29	3.0	510	1600	5.62	3	3
11. ebq	60	28	3.0	754	1600	5.62	3	3
12. wbq	60	28	3.0	1027	1600	5.62	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	466.0	546.0	6.0
2. ne 10 ft	534.0	546.0	6.0
3. sw 10 ft	466.0	454.0	6.0
4. se 10 ft	534.0	454.0	6.0

JOB: C:\CALRoads\CAL3QHC\LAOWexpm.cl RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.3	.5	.7	.8
10.	.5	.2	.9	.5
20.	.4	.1	.6	.4
30.	.3	.0	.6	.4
40.	.3	.0	.6	.3
50.	.2	.0	.6	.4
60.	.2	.0	.8	.5
70.	.2	.1	.8	.5
80.	.4	.2	1.0	.6
90.	.7	.5	.8	.5
100.	.8	.6	.5	.2
110.	.8	.5	.3	.1
120.	.6	.5	.3	.0
130.	.7	.5	.3	.0
140.	.6	.5	.3	.0
150.	.7	.4	.5	.0
160.	.7	.5	.5	.1
170.	.9	.5	.7	.2
180.	.7	.9	.4	.6
190.	.4	1.1	.1	.8
200.	.2	.7	.1	.7
210.	.2	.7	.0	.6
220.	.2	.5	.0	.4
230.	.2	.5	.0	.4
240.	.3	.5	.0	.4
250.	.4	.7	.0	.4
260.	.4	.7	.1	.5
270.	.3	.5	.3	.6
280.	.1	.4	.5	.8
290.	.0	.3	.4	.8
300.	.0	.2	.3	.6
310.	.0	.2	.2	.6
320.	.0	.3	.3	.7
330.	.0	.3	.3	.8
340.	.0	.4	.4	.8
350.	.1	.5	.5	1.0
360.	.3	.5	.7	.8
MAX	.9	1.1	1.0	1.0
DEGR.	170	190	80	350

THE HIGHEST CONCENTRATION OF 1.10 PPM OCCURRED AT RECEPTOR REC2 .

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0

JOB: C:\CALRoads\CAL3QHC\LAOWa1pm.cl RUN: CAL3QHC RUN

DATE : 11/21/ 7
TIME : 16:53:56

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	512.0	.0	512.0	500.0	500.	360.	AG	1539.	1.2	.0	68.0		
2. nbd	512.0	500.0	512.0	1000.0	500.	360.	AG	1127.	1.2	.0	68.0		
3. sba	488.0	1000.0	488.0	500.0	500.	180.	AG	638.	1.2	.0	68.0		
4. sbd	488.0	500.0	488.0	.0	500.	180.	AG	909.	1.2	.0	68.0		
5. eba	.0	482.0	500.0	482.0	500.	90.	AG	943.	1.2	.0	80.0		
6. ebd	500.0	482.0	1000.0	482.0	500.	90.	AG	1414.	1.2	.0	80.0		
7. wba	1000.0	518.0	500.0	518.0	500.	270.	AG	1284.	1.2	.0	80.0		
8. wbd	500.0	518.0	.0	518.0	500.	270.	AG	954.	1.2	.0	80.0		
9. nbq	512.0	464.0	512.0	-548.9	1013.	180.	AG	16.	100.0	.0	24.0	1.11	51.5
10. sbq	488.0	536.0	488.0	586.6	51.	360.	AG	16.	100.0	.0	24.0	.46	2.6
11. ebq	476.0	482.0	427.9	482.0	48.	270.	AG	23.	100.0	.0	36.0	.44	2.4
12. wbq	524.0	518.0	589.5	518.0	66.	90.	AG	23.	100.0	.0	36.0	.60	3.3

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	29	3.0	1539	1600	6.12	3	3
10. sbq	60	29	3.0	638	1600	6.12	3	3
11. ebq	60	28	3.0	943	1600	6.12	3	3
12. wbq	60	28	3.0	1284	1600	6.12	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	466.0	546.0	6.0
2. ne 10 ft	534.0	546.0	6.0
3. sw 10 ft	466.0	454.0	6.0
4. se 10 ft	534.0	454.0	6.0

JOB: C:\CALRoads\CAL3QHC\LAOWa1pm.cl RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.1	.1	.1	.1
10.	.2	.0	.2	.0
20.	.1	.0	.1	.1
30.	.1	.0	.0	.0
40.	.1	.0	.0	.1
50.	.1	.0	.0	.1
60.	.1	.0	.1	.2
70.	.0	.0	.2	.2
80.	.0	.0	.2	.2
90.	.1	.1	.1	.1
100.	.3	.2	.0	.1
110.	.3	.2	.0	.0
120.	.1	.3	.1	.0
130.	.0	.3	.1	.0
140.	.0	.1	.1	.0
150.	.1	.1	.3	.0
160.	.2	.1	.3	.0
170.	.3	.1	.3	.1
180.	.1	.3	.1	.2
190.	.0	.4	.0	.4
200.	.0	.1	.0	.3
210.	.0	.0	.0	.2
220.	.0	.0	.0	.2
230.	.0	.0	.0	.2
240.	.1	.0	.0	.2
250.	.1	.0	.0	.1
260.	.1	.1	.0	.1
270.	.1	.1	.1	.1
280.	.0	.0	.1	.1
290.	.0	.0	.1	.2
300.	.0	.0	.1	.1
310.	.0	.0	.1	.1
320.	.0	.0	.1	.1
330.	.0	.1	.1	.1
340.	.0	.1	.1	.0
350.	.0	.1	.1	.1
360.	.1	.1	.1	.1
MAX	.3	.4	.3	.4
DEGR.	100	190	150	190

THE HIGHEST CONCENTRATION OF .40 PPM OCCURRED AT RECEPTOR REC2 .

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0
JOB: C:\CALRoads\CAL3QHC\LAOWa2pm.cl RUN: CAL3QHC RUN

DATE : 11/21/ 7
TIME : 16:58:11

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	512.0	.0	512.0	500.0	500.	360.	AG	1559.	1.2	.0	68.0		
2. nbd	512.0	500.0	512.0	1000.0	500.	360.	AG	1127.	1.2	.0	68.0		
3. sba	488.0	1000.0	488.0	500.0	500.	180.	AG	638.	1.2	.0	68.0		
4. sbd	488.0	500.0	488.0	.0	500.	180.	AG	929.	1.2	.0	68.0		
5. eba	.0	482.0	500.0	482.0	500.	90.	AG	943.	1.2	.0	80.0		
6. ebd	500.0	482.0	1000.0	482.0	500.	90.	AG	1434.	1.2	.0	80.0		
7. wba	1000.0	518.0	500.0	518.0	500.	270.	AG	1304.	1.2	.0	80.0		
8. wbd	500.0	518.0	.0	518.0	500.	270.	AG	954.	1.2	.0	80.0		
9. nbq	512.0	464.0	512.0	-650.8	1115.	180.	AG	16.	100.0	.0	24.0	1.12	56.6
10. sbq	488.0	536.0	488.0	586.6	51.	360.	AG	16.	100.0	.0	24.0	.46	2.6
11. ebq	476.0	482.0	427.9	482.0	48.	270.	AG	23.	100.0	.0	36.0	.44	2.4
12. wbq	524.0	518.0	590.4	518.0	66.	90.	AG	23.	100.0	.0	36.0	.60	3.4

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	29	3.0	1559	1600	6.12	3	3
10. sbq	60	29	3.0	638	1600	6.12	3	3
11. ebq	60	28	3.0	943	1600	6.12	3	3
12. wbq	60	28	3.0	1304	1600	6.12	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	466.0	546.0	6.0
2. ne 10 ft	534.0	546.0	6.0
3. sw 10 ft	466.0	454.0	6.0
4. se 10 ft	534.0	454.0	6.0

JOB: C:\CALRoads\CAL3QHC\LAOWa2pm.cl RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.1	.1	.1	.1
10.	.2	.0	.2	.0
20.	.1	.0	.1	.1
30.	.1	.0	.0	.2
40.	.1	.0	.0	.1
50.	.1	.0	.0	.1
60.	.1	.0	.1	.2
70.	.0	.0	.2	.2
80.	.0	.0	.2	.2
90.	.1	.1	.1	.1
100.	.3	.2	.0	.1
110.	.3	.2	.0	.0
120.	.1	.3	.1	.0
130.	.0	.3	.1	.0
140.	.0	.1	.1	.0
150.	.1	.1	.3	.0
160.	.2	.1	.3	.0
170.	.3	.1	.3	.1
180.	.2	.3	.1	.2
190.	.0	.4	.0	.4
200.	.0	.1	.0	.3
210.	.0	.0	.0	.2
220.	.0	.0	.0	.2
230.	.0	.0	.0	.2
240.	.1	.0	.0	.2
250.	.1	.0	.0	.1
260.	.1	.1	.0	.1
270.	.1	.1	.1	.1
280.	.0	.0	.1	.1
290.	.0	.0	.1	.2
300.	.0	.0	.1	.1
310.	.0	.0	.1	.1
320.	.0	.0	.1	.1
330.	.0	.1	.1	.1
340.	.0	.1	.1	.0
350.	.0	.1	.1	.1
360.	.1	.1	.1	.1
MAX	.3	.4	.3	.4
DEGR.	100	190	150	190

THE HIGHEST CONCENTRATION OF .40 PPM OCCURRED AT RECEPTOR REC2 .

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0
JOB: C:\CALRoads\CAL3QHC\LAOWa3pm.cl RUN: CAL3QHC RUN

DATE : 11/21/ 7
TIME : 17: 5: 9

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	512.0	.0	512.0	500.0	500.	360.	AG	1579.	1.2	.0	68.0		
2. nbd	512.0	500.0	512.0	1000.0	500.	360.	AG	1128.	1.2	.0	68.0		
3. sba	488.0	1000.0	488.0	500.0	500.	180.	AG	638.	1.2	.0	68.0		
4. sbd	488.0	500.0	488.0	.0	500.	180.	AG	952.	1.2	.0	68.0		
5. eba	.0	482.0	500.0	482.0	500.	90.	AG	943.	1.2	.0	80.0		
6. ebd	500.0	482.0	1000.0	482.0	500.	90.	AG	1454.	1.2	.0	80.0		
7. wba	1000.0	518.0	500.0	518.0	500.	270.	AG	1374.	1.2	.0	80.0		
8. wbd	500.0	518.0	.0	518.0	500.	270.	AG	1000.	1.2	.0	80.0		
9. nbq	512.0	464.0	512.0	-752.7	1217.	180.	AG	16.	100.0	.0	24.0	1.14	61.8
10. sbq	488.0	536.0	488.0	586.6	51.	360.	AG	16.	100.0	.0	24.0	.46	2.6
11. ebq	476.0	482.0	427.9	482.0	48.	270.	AG	23.	100.0	.0	36.0	.44	2.4
12. wbq	524.0	518.0	594.1	518.0	70.	90.	AG	23.	100.0	.0	36.0	.64	3.6

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	29	3.0	1579	1600	6.12	3	3
10. sbq	60	29	3.0	638	1600	6.12	3	3
11. ebq	60	28	3.0	943	1600	6.12	3	3
12. wbq	60	28	3.0	1374	1600	6.12	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	466.0	546.0	6.0
2. ne 10 ft	534.0	546.0	6.0
3. sw 10 ft	466.0	454.0	6.0
4. se 10 ft	534.0	454.0	6.0

JOB: C:\CALRoads\CAL3QHC\LAOWa3pm.cl RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.1	.1	.1	.1
10.	.2	.0	.2	.0
20.	.1	.0	.1	.1
30.	.1	.0	.0	.2
40.	.1	.0	.0	.1
50.	.1	.0	.0	.2
60.	.1	.0	.1	.2
70.	.0	.0	.3	.2
80.	.0	.0	.2	.2
90.	.1	.1	.2	.1
100.	.3	.2	.0	.1
110.	.3	.3	.0	.0
120.	.1	.3	.1	.0
130.	.0	.3	.1	.0
140.	.0	.2	.1	.0
150.	.1	.1	.3	.0
160.	.2	.1	.3	.0
170.	.3	.1	.3	.1
180.	.2	.3	.2	.3
190.	.0	.4	.0	.4
200.	.0	.1	.0	.3
210.	.0	.0	.0	.2
220.	.0	.0	.0	.2
230.	.0	.0	.0	.2
240.	.1	.0	.0	.2
250.	.1	.0	.0	.1
260.	.1	.1	.0	.1
270.	.1	.1	.1	.2
280.	.0	.0	.1	.3
290.	.0	.0	.1	.2
300.	.0	.0	.1	.1
310.	.0	.0	.1	.1
320.	.0	.0	.1	.1
330.	.0	.1	.1	.2
340.	.0	.1	.1	.0
350.	.0	.1	.1	.1
360.	.1	.1	.1	.1
MAX	.3	.4	.3	.4
DEGR.	100	190	70	190

THE HIGHEST CONCENTRATION OF .40 PPM OCCURRED AT RECEPTOR REC2 .

CAL3QHC: LINE SOURCE DISPERSION MODEL - VERSION 2.0
JOB: C:\CALRoads\CAL3QHC\LAOWa4pm.cl RUN: CAL3QHC RUN

DATE : 11/21/ 7
TIME : 17: 5: 9

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	512.0	.0	512.0	500.0	500.	360.	AG	1579.	1.2	.0	68.0		
2. nbd	512.0	500.0	512.0	1000.0	500.	360.	AG	1128.	1.2	.0	68.0		
3. sba	488.0	1000.0	488.0	500.0	500.	180.	AG	638.	1.2	.0	68.0		
4. sbd	488.0	500.0	488.0	.0	500.	180.	AG	952.	1.2	.0	68.0		
5. eba	.0	482.0	500.0	482.0	500.	90.	AG	943.	1.2	.0	80.0		
6. ebd	500.0	482.0	1000.0	482.0	500.	90.	AG	1454.	1.2	.0	80.0		
7. wba	1000.0	518.0	500.0	518.0	500.	270.	AG	1374.	1.2	.0	80.0		
8. wbd	500.0	518.0	.0	518.0	500.	270.	AG	1000.	1.2	.0	80.0		
9. nbq	512.0	464.0	512.0	-752.7	1217.	180.	AG	16.	100.0	.0	24.0	1.14	61.8
10. sbq	488.0	536.0	488.0	586.6	51.	360.	AG	16.	100.0	.0	24.0	.46	2.6
11. ebq	476.0	482.0	427.9	482.0	48.	270.	AG	23.	100.0	.0	36.0	.44	2.4
12. wbq	524.0	518.0	594.1	518.0	70.	90.	AG	23.	100.0	.0	36.0	.64	3.6

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	29	3.0	1579	1600	6.12	3	3
10. sbq	60	29	3.0	638	1600	6.12	3	3
11. ebq	60	28	3.0	943	1600	6.12	3	3
12. wbq	60	28	3.0	1374	1600	6.12	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	466.0	546.0	6.0
2. ne 10 ft	534.0	546.0	6.0
3. sw 10 ft	466.0	454.0	6.0
4. se 10 ft	534.0	454.0	6.0

JOB: C:\CALRoads\CAL3QHC\LAOWa4pm.cl RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.1	.1	.1	.1
10.	.2	.0	.2	.0
20.	.1	.0	.1	.1
30.	.1	.0	.0	.2
40.	.1	.0	.0	.1
50.	.1	.0	.0	.2
60.	.1	.0	.1	.2
70.	.0	.0	.3	.2
80.	.0	.0	.2	.2
90.	.1	.1	.2	.1
100.	.3	.2	.0	.1
110.	.3	.3	.0	.0
120.	.1	.3	.1	.0
130.	.0	.3	.1	.0
140.	.0	.2	.1	.0
150.	.1	.1	.3	.0
160.	.2	.1	.3	.0
170.	.3	.1	.3	.1
180.	.2	.3	.2	.3
190.	.0	.4	.0	.4
200.	.0	.1	.0	.3
210.	.0	.0	.0	.2
220.	.0	.0	.0	.2
230.	.0	.0	.0	.2
240.	.1	.0	.0	.2
250.	.1	.0	.0	.1
260.	.1	.1	.0	.1
270.	.1	.1	.1	.2
280.	.0	.0	.1	.3
290.	.0	.0	.1	.2
300.	.0	.0	.1	.1
310.	.0	.0	.1	.1
320.	.0	.0	.1	.1
330.	.0	.1	.1	.2
340.	.0	.1	.1	.0
350.	.0	.1	.1	.1
360.	.1	.1	.1	.1
MAX	.3	.4	.3	.4
DEGR.	100	190	70	190

THE HIGHEST CONCENTRATION OF .40 PPM OCCURRED AT RECEPTOR REC2 .

JOB: C:\CALRoads\CAL3QHC\SHCAex.clv RUN: CAL3QHC RUN

DATE : 11/26/ 7
TIME : 8:45:54

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	518.0	.0	518.0	500.0	500.	360.	AG	849.	5.1	.0	80.0		
2. nbd	518.0	500.0	518.0	1000.0	500.	360.	AG	885.	5.1	.0	80.0		
3. sba	482.0	1000.0	482.0	500.0	500.	180.	AG	1337.	5.1	.0	80.0		
4. sbd	482.0	500.0	482.0	.0	500.	180.	AG	1294.	5.1	.0	80.0		
5. eba	.0	476.0	500.0	476.0	500.	90.	AG	1089.	5.1	.0	92.0		
6. ebd	500.0	476.0	1000.0	476.0	500.	90.	AG	1190.	5.1	.0	92.0		
7. wba	1000.0	524.0	500.0	524.0	500.	270.	AG	1596.	5.1	.0	92.0		
8. wbd	500.0	524.0	.0	524.0	500.	270.	AG	1502.	5.1	.0	92.0		
9. nbq	518.0	452.0	518.0	404.0	48.	180.	AG	23.	100.0	.0	36.0	.44	2.4
10. sbq	482.0	548.0	482.0	623.4	75.	360.	AG	23.	100.0	.0	36.0	.70	3.8
11. ebq	464.0	476.0	502.7	476.0	39.	90.	AG	26.	100.0	.0	48.0	.35	2.0
12. wbq	536.0	524.0	592.7	524.0	57.	90.	AG	26.	100.0	.0	48.0	.52	2.9

DATE : 11/26/ 7
TIME : 8:45:54

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	31	3.0	849	1600	5.62	3	3
10. sbq	60	31	3.0	1337	1600	5.62	3	3
11. ebq	60	26	3.0	1089	1600	5.62	3	3
12. wbq	60	26	3.0	1596	1600	5.62	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	454.0	558.0	6.0
2. ne 10 ft	546.0	558.0	6.0
3. sw 10 ft	454.0	442.0	6.0
4. se 10 ft	546.0	442.0	6.0

MODEL RESULTS

REMARKS : In search of the angle corresponding to
the maximum concentration, only the first
angle, of the angles with same maximum
concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.5	.4	1.0	.8
10.	.7	.1	1.2	.7
20.	.7	.1	.8	.5
30.	.6	.0	.9	.4
40.	.5	.0	1.1	.4
50.	.4	.0	.9	.4
60.	.4	.1	.7	.6
70.	.5	.1	.9	.6
80.	.6	.2	1.0	.6
90.	.9	.5	.8	.4
100.	1.2	.8	.5	.2
110.	.9	.7	.4	.1
120.	.9	.7	.3	.0
130.	.8	.6	.3	.0
140.	.9	.5	.3	.0
150.	.8	.4	.5	.0
160.	.9	.5	.6	.1
170.	1.1	.6	.7	.1
180.	1.0	.8	.5	.4
190.	.5	1.0	.2	.5
200.	.4	.8	.1	.6
210.	.3	.8	.0	.4
220.	.3	.7	.0	.5
230.	.5	.7	.0	.4
240.	.5	.9	.0	.4
250.	.6	1.0	.1	.5
260.	.6	1.0	.1	.6
270.	.5	.8	.3	.9
280.	.2	.6	.6	1.0
290.	.1	.5	.6	.9
300.	.0	.4	.4	.6
310.	.0	.3	.4	.7
320.	.0	.4	.4	.8
330.	.0	.4	.4	.8
340.	.1	.6	.5	.9
350.	.2	.6	.5	1.1
360.	.5	.4	1.0	.8
MAX	1.2	1.0	1.2	1.1
DEGR.	100	190	10	350

THE HIGHEST CONCENTRATION OF 1.20 PPM OCCURRED AT RECEPTOR REC3 .

JOB: C:\CALRoads\CAL3QHC\SHCAa1.clv RUN: CAL3QHC RUN

DATE : 11/26/ 7
TIME : 8:55:39

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	518.0	.0	518.0	500.0	500.	360.	AG	1053.	1.2	.0	80.0		
2. nbd	518.0	500.0	518.0	1000.0	500.	360.	AG	1097.	1.2	.0	80.0		
3. sba	482.0	1000.0	482.0	500.0	500.	180.	AG	1657.	1.2	.0	80.0		
4. sbd	482.0	500.0	482.0	.0	500.	180.	AG	1604.	1.2	.0	80.0		
5. eba	.0	476.0	500.0	476.0	500.	90.	AG	1351.	1.2	.0	92.0		
6. ebd	500.0	476.0	1000.0	476.0	500.	90.	AG	1476.	1.2	.0	92.0		
7. wba	1000.0	524.0	500.0	524.0	500.	270.	AG	1978.	1.2	.0	92.0		
8. wbd	500.0	524.0	.0	524.0	500.	270.	AG	1862.	1.2	.0	92.0		
9. nbq	518.0	452.0	518.0	392.5	59.	180.	AG	25.	100.0	.0	36.0	.55	3.0
10. sbq	482.0	548.0	482.0	668.3	120.	360.	AG	25.	100.0	.0	36.0	.86	6.1
11. ebq	464.0	476.0	511.9	476.0	48.	90.	AG	28.	100.0	.0	48.0	.44	2.4
12. wbq	536.0	524.0	606.2	524.0	70.	90.	AG	28.	100.0	.0	48.0	.64	3.6

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	31	3.0	1053	1600	6.12	3	3
10. sbq	60	31	3.0	1657	1600	6.12	3	3
11. ebq	60	26	3.0	1351	1600	6.12	3	3
12. wbq	60	26	3.0	1978	1600	6.12	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	454.0	558.0	6.0
2. ne 10 ft	546.0	558.0	6.0
3. sw 10 ft	454.0	442.0	6.0
4. se 10 ft	546.0	442.0	6.0

JOB: C:\CALRoads\CAL3QHC\SHCAa1.clv RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.1	.1	.1	.2
10.	.2	.0	.3	.1
20.	.3	.0	.2	.2
30.	.2	.0	.2	.3
40.	.2	.0	.2	.2
50.	.2	.0	.3	.2
60.	.2	.0	.3	.2
70.	.2	.0	.3	.2
80.	.2	.1	.3	.2
90.	.3	.1	.1	.1
100.	.5	.2	.2	.0
110.	.4	.3	.2	.0
120.	.3	.3	.2	.0
130.	.2	.2	.1	.0
140.	.2	.2	.1	.0
150.	.2	.2	.1	.0
160.	.3	.2	.2	.0
170.	.3	.2	.1	.0
180.	.2	.3	.1	.1
190.	.1	.4	.1	.2
200.	.1	.2	.0	.2
210.	.1	.2	.0	.3
220.	.1	.1	.0	.2
230.	.1	.1	.0	.2
240.	.2	.1	.0	.1
250.	.2	.2	.0	.1
260.	.2	.2	.0	.1
270.	.1	.1	.1	.2
280.	.1	.1	.2	.3
290.	.0	.1	.2	.3
300.	.0	.2	.2	.2
310.	.0	.2	.2	.2
320.	.0	.2	.1	.0
330.	.0	.2	.1	.1
340.	.0	.2	.0	.2
350.	.1	.2	.0	.2
360.	.1	.1	.1	.2
MAX	.5	.4	.3	.3
DEGR.	100	190	10	30

THE HIGHEST CONCENTRATION OF .50 PPM OCCURRED AT RECEPTOR REC1 .

JOB: C:\CALRoads\CAL3QHC\SHCAa2clv RUN: CAL3QHC RUN

DATE : 11/26/ 7
TIME : 8:59:33

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	518.0	.0	518.0	500.0	500.	360.	AG	1073.	1.2	.0	80.0		
2. nbd	518.0	500.0	518.0	1000.0	500.	360.	AG	1117.	1.2	.0	80.0		
3. sba	482.0	1000.0	482.0	500.0	500.	180.	AG	1677.	1.2	.0	80.0		
4. sbd	482.0	500.0	482.0	.0	500.	180.	AG	1624.	1.2	.0	80.0		
5. eba	.0	476.0	500.0	476.0	500.	90.	AG	1351.	1.2	.0	92.0		
6. ebd	500.0	476.0	1000.0	476.0	500.	90.	AG	1476.	1.2	.0	92.0		
7. wba	1000.0	524.0	500.0	524.0	500.	270.	AG	1978.	1.2	.0	92.0		
8. wbd	500.0	524.0	.0	524.0	500.	270.	AG	1862.	1.2	.0	92.0		
9. nbq	518.0	452.0	518.0	391.5	61.	180.	AG	25.	100.0	.0	36.0	.56	3.1
10. sbq	482.0	548.0	482.0	673.4	125.	360.	AG	25.	100.0	.0	36.0	.87	6.4
11. ebq	464.0	476.0	511.9	476.0	48.	90.	AG	28.	100.0	.0	48.0	.44	2.4
12. wbq	536.0	524.0	606.2	524.0	70.	90.	AG	28.	100.0	.0	48.0	.64	3.6

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	31	3.0	1073	1600	6.12	3	3
10. sbq	60	31	3.0	1677	1600	6.12	3	3
11. ebq	60	26	3.0	1351	1600	6.12	3	3
12. wbq	60	26	3.0	1978	1600	6.12	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	454.0	558.0	6.0
2. ne 10 ft	546.0	558.0	6.0
3. sw 10 ft	454.0	442.0	6.0
4. se 10 ft	546.0	442.0	6.0

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.1	.1	.1	.2
10.	.2	.0	.3	.1
20.	.3	.0	.2	.2
30.	.2	.0	.2	.3
40.	.2	.0	.2	.2
50.	.2	.0	.3	.2
60.	.2	.0	.3	.2
70.	.2	.0	.3	.2
80.	.2	.1	.3	.2
90.	.3	.1	.2	.1
100.	.5	.2	.2	.0
110.	.4	.3	.2	.0
120.	.3	.3	.2	.0
130.	.2	.2	.1	.0
140.	.2	.2	.1	.0
150.	.2	.2	.1	.0
160.	.4	.2	.2	.0
170.	.3	.2	.1	.0
180.	.2	.3	.1	.1
190.	.1	.4	.1	.2
200.	.1	.2	.0	.2
210.	.1	.2	.0	.3
220.	.1	.1	.0	.2
230.	.1	.1	.0	.2
240.	.2	.1	.0	.1
250.	.2	.2	.0	.1
260.	.2	.2	.0	.1
270.	.1	.1	.1	.2
280.	.1	.1	.2	.3
290.	.0	.1	.2	.3
300.	.0	.2	.2	.2
310.	.0	.2	.2	.2
320.	.0	.2	.1	.0
330.	.0	.2	.1	.1
340.	.0	.2	.0	.2
350.	.1	.2	.0	.2
360.	.1	.1	.1	.2
MAX	.5	.4	.3	.3
DEGR.	100	190	10	30

THE HIGHEST CONCENTRATION OF .50 PPM OCCURRED AT RECEPTOR REC1 .

JOB: C:\CALRoads\CAL3QHC\SHCAa3clv RUN: CAL3QHC RUN

DATE : 11/26/ 7
TIME : 9: 2:52

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	518.0	.0	518.0	500.0	500.	360.	AG	1093.	1.2	.0	80.0		
2. nbd	518.0	500.0	518.0	1000.0	500.	360.	AG	1137.	1.2	.0	80.0		
3. sba	482.0	1000.0	482.0	500.0	500.	180.	AG	1731.	1.2	.0	80.0		
4. sbd	482.0	500.0	482.0	.0	500.	180.	AG	1712.	1.2	.0	80.0		
5. eba	.0	476.0	500.0	476.0	500.	90.	AG	1368.	1.2	.0	92.0		
6. ebd	500.0	476.0	1000.0	476.0	500.	90.	AG	1476.	1.2	.0	92.0		
7. wba	1000.0	524.0	500.0	524.0	500.	270.	AG	1995.	1.2	.0	92.0		
8. wbd	500.0	524.0	.0	524.0	500.	270.	AG	1862.	1.2	.0	92.0		
9. nbq	518.0	452.0	518.0	390.3	62.	180.	AG	25.	100.0	.0	36.0	.57	3.1
10. sbq	482.0	548.0	482.0	688.6	141.	360.	AG	25.	100.0	.0	36.0	.90	7.1
11. ebq	464.0	476.0	512.6	476.0	49.	90.	AG	28.	100.0	.0	48.0	.44	2.5
12. wbq	536.0	524.0	606.8	524.0	71.	90.	AG	28.	100.0	.0	48.0	.64	3.6

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	31	3.0	1093	1600	6.12	3	3
10. sbq	60	31	3.0	1731	1600	6.12	3	3
11. ebq	60	26	3.0	1368	1600	6.12	3	3
12. wbq	60	26	3.0	1995	1600	6.12	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	454.0	558.0	6.0
2. ne 10 ft	546.0	558.0	6.0
3. sw 10 ft	454.0	442.0	6.0
4. se 10 ft	546.0	442.0	6.0

JOB: C:\CALRoads\CAL3QHC\SHCAa3clv RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.1	.1	.1	.2
10.	.3	.0	.3	.1
20.	.3	.0	.3	.2
30.	.2	.0	.2	.3
40.	.2	.0	.2	.2
50.	.2	.0	.3	.2
60.	.2	.0	.3	.2
70.	.2	.0	.3	.2
80.	.2	.1	.3	.2
90.	.3	.1	.2	.1
100.	.5	.2	.2	.0
110.	.4	.3	.2	.0
120.	.3	.3	.2	.0
130.	.2	.2	.1	.0
140.	.2	.2	.1	.0
150.	.2	.2	.1	.0
160.	.5	.2	.2	.0
170.	.3	.2	.2	.0
180.	.2	.3	.1	.1
190.	.1	.4	.1	.2
200.	.1	.2	.0	.2
210.	.1	.2	.0	.3
220.	.1	.1	.0	.2
230.	.1	.1	.0	.2
240.	.2	.1	.0	.2
250.	.2	.2	.0	.1
260.	.2	.2	.0	.1
270.	.1	.1	.1	.2
280.	.1	.1	.2	.3
290.	.0	.1	.2	.3
300.	.0	.2	.2	.2
310.	.0	.2	.2	.2
320.	.0	.2	.1	.0
330.	.0	.3	.1	.1
340.	.0	.2	.0	.2
350.	.1	.2	.0	.2
360.	.1	.1	.1	.2
MAX	.5	.4	.3	.3
DEGR.	100	190	10	30

THE HIGHEST CONCENTRATION OF .50 PPM OCCURRED AT RECEPTOR REC1 .

JOB: C:\CALRoads\CAL3QHC\SHCAa3clv RUN: CAL3QHC RUN

DATE : 11/26/ 7
TIME : 9: 2:52

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	518.0	.0	518.0	500.0	500.	360.	AG	1093.	1.2	.0	80.0		
2. nbd	518.0	500.0	518.0	1000.0	500.	360.	AG	1137.	1.2	.0	80.0		
3. sba	482.0	1000.0	482.0	500.0	500.	180.	AG	1731.	1.2	.0	80.0		
4. sbd	482.0	500.0	482.0	.0	500.	180.	AG	1712.	1.2	.0	80.0		
5. eba	.0	476.0	500.0	476.0	500.	90.	AG	1368.	1.2	.0	92.0		
6. ebd	500.0	476.0	1000.0	476.0	500.	90.	AG	1476.	1.2	.0	92.0		
7. wba	1000.0	524.0	500.0	524.0	500.	270.	AG	1995.	1.2	.0	92.0		
8. wbd	500.0	524.0	.0	524.0	500.	270.	AG	1862.	1.2	.0	92.0		
9. nbq	518.0	452.0	518.0	390.3	62.	180.	AG	25.	100.0	.0	36.0	.57	3.1
10. sbq	482.0	548.0	482.0	688.6	141.	360.	AG	25.	100.0	.0	36.0	.90	7.1
11. ebq	464.0	476.0	512.6	476.0	49.	90.	AG	28.	100.0	.0	48.0	.44	2.5
12. wbq	536.0	524.0	606.8	524.0	71.	90.	AG	28.	100.0	.0	48.0	.64	3.6

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	31	3.0	1093	1600	6.12	3	3
10. sbq	60	31	3.0	1731	1600	6.12	3	3
11. ebq	60	26	3.0	1368	1600	6.12	3	3
12. wbq	60	26	3.0	1995	1600	6.12	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	454.0	558.0	6.0
2. ne 10 ft	546.0	558.0	6.0
3. sw 10 ft	454.0	442.0	6.0
4. se 10 ft	546.0	442.0	6.0

JOB: C:\CALRoads\CAL3QHC\SHCAa3clv RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.1	.1	.1	.2
10.	.3	.0	.3	.1
20.	.3	.0	.3	.2
30.	.2	.0	.2	.3
40.	.2	.0	.2	.2
50.	.2	.0	.3	.2
60.	.2	.0	.3	.2
70.	.2	.0	.3	.2
80.	.2	.1	.3	.2
90.	.3	.1	.2	.1
100.	.5	.2	.2	.0
110.	.4	.3	.2	.0
120.	.3	.3	.2	.0
130.	.2	.2	.1	.0
140.	.2	.2	.1	.0
150.	.2	.2	.1	.0
160.	.5	.2	.2	.0
170.	.3	.2	.2	.0
180.	.2	.3	.1	.1
190.	.1	.4	.1	.2
200.	.1	.2	.0	.2
210.	.1	.2	.0	.3
220.	.1	.1	.0	.2
230.	.1	.1	.0	.2
240.	.2	.1	.0	.2
250.	.2	.2	.0	.1
260.	.2	.2	.0	.1
270.	.1	.1	.1	.2
280.	.1	.1	.2	.3
290.	.0	.1	.2	.3
300.	.0	.2	.2	.2
310.	.0	.2	.2	.2
320.	.0	.2	.1	.0
330.	.0	.3	.1	.1
340.	.0	.2	.0	.2
350.	.1	.2	.0	.2
360.	.1	.1	.1	.2
MAX	.5	.4	.3	.3
DEGR.	100	190	10	30

THE HIGHEST CONCENTRATION OF .50 PPM OCCURRED AT RECEPTOR REC1 .

JOB: C:\Documents and Settings\VACAex RUN: CAL3QHC RUN

DATE : 11/26/ 7
TIME : 9:58: 8

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	524.0	.0	524.0	500.0	500.	360.	AG	795.	5.1	.0	92.0		
2. nbd	524.0	500.0	524.0	1000.0	500.	360.	AG	890.	5.1	.0	92.0		
3. sba	476.0	1000.0	476.0	500.0	500.	180.	AG	1082.	5.1	.0	92.0		
4. sbd	476.0	500.0	476.0	.0	500.	180.	AG	1210.	5.1	.0	92.0		
5. eba	.0	482.0	500.0	482.0	500.	90.	AG	877.	5.1	.0	92.0		
6. ebd	500.0	482.0	1000.0	482.0	500.	90.	AG	885.	5.1	.0	92.0		
7. wba	500.0	524.0	.0	524.0	500.	270.	AG	1178.	5.1	.0	92.0		
8. wbd	500.0	524.0	.0	524.0	500.	270.	AG	947.	5.1	.0	92.0		
9. nbq	524.0	464.0	524.0	431.5	32.	180.	AG	30.	100.0	.0	48.0	.30	1.6
10. sbq	476.0	548.0	476.0	592.3	44.	360.	AG	30.	100.0	.0	92.0	.41	2.3
11. ebq	452.0	482.0	419.7	482.0	32.	270.	AG	27.	100.0	.0	48.0	.29	1.6
12. wbq	548.0	524.0	591.4	524.0	43.	90.	AG	27.	100.0	.0	48.0	.39	2.2

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	30	3.0	795	1600	5.62	3	3
10. sbq	60	30	3.0	1082	1600	5.62	3	3
11. ebq	60	27	3.0	877	1600	5.62	3	3
12. wbq	60	27	3.0	1178	1600	5.62	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	442.0	558.0	6.0
2. ne 10 ft	558.0	558.0	6.0
3. sw 10 ft	442.0	454.0	6.0
4. se 10 ft	558.0	454.0	6.0

JOB: C:\Documents and Settings\VACAex RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.3	.3	.8	.5
10.	.5	.1	.9	.4
20.	.6	.0	.8	.1
30.	.4	.0	.6	.1
40.	.4	.0	.6	.1
50.	.4	.0	.7	.2
60.	.4	.0	.5	.2
70.	.5	.0	.5	.2
80.	.5	.0	.6	.3
90.	.5	.0	.6	.3
100.	.7	.1	.5	.2
110.	.6	.2	.4	.1
120.	.6	.2	.3	.0
130.	.7	.1	.3	.0
140.	.9	.2	.3	.0
150.	.7	.2	.4	.0
160.	.8	.2	.4	.0
170.	.9	.4	.5	.1
180.	.8	.5	.4	.2
190.	.6	.7	.2	.5
200.	.5	.5	.1	.4
210.	.4	.5	.0	.4
220.	.4	.5	.0	.3
230.	.5	.6	.0	.3
240.	.6	.5	.0	.3
250.	.8	.8	.1	.4
260.	.8	1.0	.2	.5
270.	.7	.8	.4	.8
280.	.3	.5	.7	1.0
290.	.1	.2	.6	.8
300.	.0	.2	.6	.8
310.	.0	.2	.4	.6
320.	.0	.4	.4	.6
330.	.0	.4	.4	.5
340.	.1	.5	.5	.6
350.	.1	.4	.6	.7
360.	.3	.3	.8	.5
MAX	.9	1.0	.9	1.0
DEGR.	140	260	10	280

THE HIGHEST CONCENTRATION OF 1.00 PPM OCCURRED AT RECEPTOR REC2 .

JOB: C:\Documents and Settings\VACAa1 RUN: CAL3QHC RUN

DATE : 11/26/ 7
TIME : 10: 5:44

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	524.0	.0	524.0	500.0	500.	360.	AG	1006.	1.2	.0	92.0		
2. nbd	524.0	500.0	524.0	1000.0	500.	360.	AG	1124.	1.2	.0	92.0		
3. sba	476.0	1000.0	476.0	500.0	500.	180.	AG	1361.	1.2	.0	92.0		
4. sbd	476.0	500.0	476.0	.0	500.	180.	AG	1521.	1.2	.0	92.0		
5. eba	.0	482.0	500.0	482.0	500.	90.	AG	1088.	1.2	.0	92.0		
6. ebd	500.0	482.0	1000.0	482.0	500.	90.	AG	1097.	1.2	.0	92.0		
7. wba	500.0	524.0	.0	524.0	500.	270.	AG	1461.	1.2	.0	92.0		
8. wbd	500.0	524.0	.0	524.0	500.	270.	AG	1174.	1.2	.0	92.0		
9. nbq	524.0	464.0	524.0	422.8	41.	180.	AG	33.	100.0	.0	48.0	.38	2.1
10. sbq	476.0	548.0	476.0	603.8	56.	360.	AG	33.	100.0	.0	92.0	.51	2.8
11. ebq	452.0	482.0	411.8	482.0	40.	270.	AG	30.	100.0	.0	48.0	.36	2.0
12. wbq	548.0	524.0	601.9	524.0	54.	90.	AG	30.	100.0	.0	48.0	.49	2.7

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	30	3.0	1006	1600	6.12	3	3
10. sbq	60	30	3.0	1361	1600	6.12	3	3
11. ebq	60	27	3.0	1088	1600	6.12	3	3
12. wbq	60	27	3.0	1461	1600	6.12	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	442.0	558.0	6.0
2. ne 10 ft	558.0	558.0	6.0
3. sw 10 ft	442.0	454.0	6.0
4. se 10 ft	558.0	454.0	6.0

JOB: C:\Documents and Settings\VACAa1 RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.2	.1	.2	.2
10.	.2	.0	.2	.1
20.	.2	.0	.1	.1
30.	.2	.0	.0	.0
40.	.2	.0	.0	.0
50.	.1	.0	.0	.0
60.	.1	.0	.0	.1
70.	.1	.0	.0	.1
80.	.1	.0	.1	.1
90.	.1	.0	.2	.1
100.	.1	.0	.1	.0
110.	.0	.0	.0	.0
120.	.0	.1	.1	.0
130.	.0	.1	.1	.0
140.	.1	.1	.1	.0
150.	.0	.1	.1	.0
160.	.1	.1	.1	.0
170.	.1	.1	.1	.0
180.	.2	.2	.1	.1
190.	.1	.3	.0	.1
200.	.0	.1	.0	.2
210.	.1	.1	.0	.2
220.	.1	.0	.0	.0
230.	.1	.0	.0	.1
240.	.2	.0	.0	.1
250.	.2	.1	.0	.1
260.	.2	.2	.0	.1
270.	.2	.3	.1	.2
280.	.0	.1	.2	.4
290.	.0	.1	.3	.2
300.	.0	.0	.2	.0
310.	.0	.0	.2	.0
320.	.0	.0	.1	.0
330.	.0	.2	.1	.0
340.	.0	.2	.1	.1
350.	.1	.1	.1	.2
360.	.2	.1	.2	.2
MAX	.2	.3	.3	.4
DEGR.	0	190	290	280

THE HIGHEST CONCENTRATION OF .40 PPM OCCURRED AT RECEPTOR REC4 .

JOB: C:\Documents and Settings\VACAa2 RUN: CAL3QHC RUN

DATE : 11/26/ 7
TIME : 10:12: 0

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG (DEG)	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	524.0	.0	524.0	500.0	500.	360.	AG	1006.	1.2	.0	92.0		
2. nbd	524.0	500.0	524.0	1000.0	500.	360.	AG	1124.	1.2	.0	92.0		
3. sba	476.0	1000.0	476.0	500.0	500.	180.	AG	1341.	1.2	.0	92.0		
4. sbd	476.0	500.0	476.0	.0	500.	180.	AG	1501.	1.2	.0	92.0		
5. eba	.0	482.0	500.0	482.0	500.	90.	AG	1088.	1.2	.0	92.0		
6. ebd	500.0	482.0	1000.0	482.0	500.	90.	AG	1097.	1.2	.0	92.0		
7. wba	500.0	524.0	.0	524.0	500.	270.	AG	1461.	1.2	.0	92.0		
8. wbd	500.0	524.0	.0	524.0	500.	270.	AG	1174.	1.2	.0	92.0		
9. nbq	524.0	464.0	524.0	422.8	41.	180.	AG	33.	100.0	.0	48.0	.38	2.1
10. sbq	476.0	548.0	476.0	603.0	55.	360.	AG	33.	100.0	.0	92.0	.50	2.8
11. ebq	452.0	482.0	411.8	482.0	40.	270.	AG	30.	100.0	.0	48.0	.36	2.0
12. wbq	548.0	524.0	601.9	524.0	54.	90.	AG	30.	100.0	.0	48.0	.49	2.7

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	30	3.0	1006	1600	6.12	3	3
10. sbq	60	30	3.0	1341	1600	6.12	3	3
11. ebq	60	27	3.0	1088	1600	6.12	3	3
12. wbq	60	27	3.0	1461	1600	6.12	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	442.0	558.0	6.0
2. ne 10 ft	558.0	558.0	6.0
3. sw 10 ft	442.0	454.0	6.0
4. se 10 ft	558.0	454.0	6.0

JOB: C:\Documents and Settings\VACAa2 RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.2	.1	.2	.2
10.	.2	.0	.2	.1
20.	.2	.0	.1	.1
30.	.2	.0	.0	.0
40.	.2	.0	.0	.0
50.	.1	.0	.0	.0
60.	.1	.0	.0	.1
70.	.1	.0	.0	.1
80.	.1	.0	.1	.1
90.	.1	.0	.2	.1
100.	.1	.0	.1	.0
110.	.0	.0	.0	.0
120.	.0	.1	.1	.0
130.	.0	.1	.1	.0
140.	.1	.1	.1	.0
150.	.0	.1	.1	.0
160.	.1	.1	.1	.0
170.	.1	.1	.1	.0
180.	.2	.2	.1	.1
190.	.1	.3	.0	.1
200.	.0	.1	.0	.2
210.	.1	.1	.0	.2
220.	.1	.0	.0	.0
230.	.1	.0	.0	.1
240.	.2	.0	.0	.1
250.	.2	.1	.0	.1
260.	.2	.2	.0	.1
270.	.2	.3	.1	.2
280.	.0	.1	.2	.4
290.	.0	.1	.3	.2
300.	.0	.0	.2	.0
310.	.0	.0	.2	.0
320.	.0	.0	.1	.0
330.	.0	.1	.1	.0
340.	.0	.2	.1	.1
350.	.1	.1	.1	.2
360.	.2	.1	.2	.2
MAX	.2	.3	.3	.4
DEGR.	0	190	290	280

THE HIGHEST CONCENTRATION OF .40 PPM OCCURRED AT RECEPTOR REC4 .

JOB: C:\Documents and Settings\VACAa3 RUN: CAL3QHC RUN

DATE : 11/26/ 7
TIME : 10:17:34

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	524.0	.0	524.0	500.0	500.	360. AG	1026.	1.2	.0	92.0		
2. nbd	524.0	500.0	524.0	1000.0	500.	360. AG	1144.	1.2	.0	92.0		
3. sba	476.0	1000.0	476.0	500.0	500.	180. AG	1381.	1.2	.0	92.0		
4. sbd	476.0	500.0	476.0	.0	500.	180. AG	1541.	1.2	.0	92.0		
5. eba	.0	482.0	500.0	482.0	500.	90. AG	1088.	1.2	.0	92.0		
6. ebd	500.0	482.0	1000.0	482.0	500.	90. AG	1097.	1.2	.0	92.0		
7. wba	500.0	524.0	.0	524.0	500.	270. AG	1461.	1.2	.0	92.0		
8. wbd	500.0	524.0	.0	524.0	500.	270. AG	1174.	1.2	.0	92.0		
9. nbq	524.0	464.0	524.0	423.4	41.	180. AG	32.	100.0	.0	48.0	.37	2.1
10. sbq	476.0	548.0	476.0	602.7	55.	360. AG	32.	100.0	.0	92.0	.50	2.8
11. ebq	452.0	482.0	410.4	482.0	42.	270. AG	31.	100.0	.0	48.0	.38	2.1
12. wbq	548.0	524.0	603.9	524.0	56.	90. AG	31.	100.0	.0	48.0	.51	2.8

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	29	3.0	1026	1600	6.12	3	3
10. sbq	60	29	3.0	1381	1600	6.12	3	3
11. ebq	60	28	3.0	1088	1600	6.12	3	3
12. wbq	60	28	3.0	1461	1600	6.12	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	442.0	558.0	6.0
2. ne 10 ft	558.0	558.0	6.0
3. sw 10 ft	442.0	454.0	6.0
4. se 10 ft	558.0	454.0	6.0

JOB: C:\Documents and Settings\VACAa3 RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	* CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.2	.1	.2	.2
10.	.2	.0	.2	.1
20.	.2	.0	.2	.1
30.	.2	.0	.0	.0
40.	.2	.0	.0	.0
50.	.1	.0	.0	.0
60.	.1	.0	.0	.1
70.	.1	.0	.0	.1
80.	.1	.0	.1	.1
90.	.1	.0	.2	.1
100.	.1	.0	.1	.0
110.	.0	.0	.1	.0
120.	.0	.1	.1	.0
130.	.0	.1	.1	.0
140.	.1	.1	.1	.0
150.	.0	.1	.1	.0
160.	.1	.1	.1	.0
170.	.1	.1	.1	.0
180.	.2	.2	.1	.1
190.	.1	.3	.0	.1
200.	.0	.1	.0	.2
210.	.1	.1	.0	.2
220.	.1	.0	.0	.1
230.	.1	.0	.0	.1
240.	.2	.0	.0	.1
250.	.2	.1	.0	.1
260.	.2	.2	.0	.1
270.	.2	.3	.1	.2
280.	.0	.1	.2	.4
290.	.0	.1	.3	.2
300.	.0	.0	.3	.0
310.	.0	.0	.2	.0
320.	.0	.0	.1	.0
330.	.0	.2	.1	.0
340.	.0	.2	.1	.1
350.	.0	.1	.1	.2
360.	.2	.1	.2	.2
MAX	.2	.3	.3	.4
DEGR.	0	190	290	280

THE HIGHEST CONCENTRATION OF .40 PPM OCCURRED AT RECEPTOR REC4 .

JOB: C:\Documents and Settings\VACAa4 RUN: CAL3QHC RUN

DATE : 11/26/ 7
TIME : 10:22: 0

The MODE flag has been set to C for calculating CO averages.

SITE & METEOROLOGICAL VARIABLES

VS = .0 CM/S VD = .0 CM/S Z0 = 100. CM
U = 1.0 M/S CLAS = 6 (F) ATIM = 60. MINUTES MIXH = 1000. M AMB = .0 PPM

LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	LENGTH (FT)	BRG TYPE (DEG)	VPH	EF (G/MI)	H (FT)	W (FT)	V/C	QUEUE (VEH)
1. nba	524.0	.0	524.0	500.0	500.	360. AG	926.	1.2	.0	92.0		
2. nbd	524.0	500.0	524.0	1000.0	500.	360. AG	1044.	1.2	.0	92.0		
3. sba	476.0	1000.0	476.0	500.0	500.	180. AG	1381.	1.2	.0	92.0		
4. sbd	476.0	500.0	476.0	.0	500.	180. AG	1541.	1.2	.0	92.0		
5. eba	.0	482.0	500.0	482.0	500.	90. AG	1088.	1.2	.0	92.0		
6. ebd	500.0	482.0	1000.0	482.0	500.	90. AG	1097.	1.2	.0	92.0		
7. wba	500.0	524.0	.0	524.0	500.	270. AG	1461.	1.2	.0	92.0		
8. wbd	500.0	524.0	.0	524.0	500.	270. AG	1174.	1.2	.0	92.0		
9. nbq	524.0	464.0	524.0	427.4	37.	180. AG	32.	100.0	.0	48.0	.33	1.9
10. sbq	476.0	548.0	476.0	602.7	55.	360. AG	32.	100.0	.0	92.0	.50	2.8
11. ebq	452.0	482.0	410.4	482.0	42.	270. AG	31.	100.0	.0	48.0	.38	2.1
12. wbq	548.0	524.0	603.9	524.0	56.	90. AG	31.	100.0	.0	48.0	.51	2.8

ADDITIONAL QUEUE LINK PARAMETERS

LINK DESCRIPTION	CYCLE LENGTH (SEC)	RED TIME (SEC)	CLEARANCE LOST TIME (SEC)	APPROACH VOL (VPH)	SATURATION FLOW RATE (VPH)	IDLE EM FAC (gm/hr)	SIGNAL TYPE	ARRIVAL RATE
9. nbq	60	29	3.0	926	1600	6.12	3	3
10. sbq	60	29	3.0	1381	1600	6.12	3	3
11. ebq	60	28	3.0	1088	1600	6.12	3	3
12. wbq	60	28	3.0	1461	1600	6.12	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. nw 10 ft	442.0	558.0	6.0
2. ne 10 ft	558.0	558.0	6.0
3. sw 10 ft	442.0	454.0	6.0
4. se 10 ft	558.0	454.0	6.0

JOB: C:\Documents and Settings\VACAa4 RUN: CAL3QHC RUN

MODEL RESULTS

REMARKS : In search of the angle corresponding to the maximum concentration, only the first angle, of the angles with same maximum concentrations, is indicated as maximum.

WIND ANGLE RANGE: 0.-360.

WIND ANGLE (DEGR)	CONCENTRATION (PPM) REC1	REC2	REC3	REC4
0.	.2	.1	.2	.2
10.	.2	.0	.2	.1
20.	.2	.0	.2	.1
30.	.2	.0	.0	.0
40.	.2	.0	.0	.0
50.	.1	.0	.0	.0
60.	.1	.0	.0	.1
70.	.1	.0	.0	.1
80.	.1	.0	.1	.1
90.	.1	.0	.2	.1
100.	.1	.0	.1	.0
110.	.0	.0	.1	.0
120.	.0	.1	.1	.0
130.	.0	.1	.1	.0
140.	.1	.1	.1	.0
150.	.0	.1	.1	.0
160.	.1	.1	.1	.0
170.	.1	.1	.1	.0
180.	.2	.2	.1	.1
190.	.1	.3	.0	.1
200.	.0	.1	.0	.2
210.	.1	.1	.0	.1
220.	.1	.0	.0	.1
230.	.1	.0	.0	.1
240.	.2	.0	.0	.1
250.	.2	.1	.0	.1
260.	.2	.2	.0	.1
270.	.2	.3	.1	.2
280.	.0	.1	.2	.4
290.	.0	.1	.3	.2
300.	.0	.0	.3	.0
310.	.0	.0	.2	.0
320.	.0	.0	.1	.0
330.	.0	.2	.1	.0
340.	.0	.2	.1	.1
350.	.0	.1	.1	.2
360.	.2	.1	.2	.2
MAX	.2	.3	.3	.4
DEGR.	0	190	290	280

THE HIGHEST CONCENTRATION OF .40 PPM OCCURRED AT RECEPTOR REC4 .

Construction Emission Calculations and Output Files

2010 EMFAC2007 RATES (grams per mile)					
Vehicle Type	**CO**	**ROG**	**NO_2**	**SO_2**	**PM_{10}**
Haul Truck @ 5 MPH	27.455	13.884	37.237	0.036	2.548
Haul Truck @ 30 MPH	7.363	1.364	14.882	0.018	0.567
Worker Vehicle @30 MPH	2.468	0.101	0.213	0.003	0.01
Assumptions:					
Construction Year	2010				
Season	Annual				
Temperature	63°F				

EQUIPMENT EMISSION FACTORS (pounds per hour)					
	CO	**ROG**	**NO_X**	**SO_X**	**PM_{10}**
Equipment	0.4108	0.1056	1.0117	0.0013	0.0442
Source: CARB Off-Road Emission Factors					

PAVED ROAD PM10 EMISSIONS (per VMT)		
	PM^{10} / VMT	
Road Type	**Worker Vehicle**	**Haul Truck**
Local Street	0.018000	0.213958299
Major Street/Highway	0.006400	0.149095835
Freeway	0.000650	0.062170612
Composite Factor**	**0.004110**	**0.094734426**
Source: Tables A9-9-B-1 and **A9-9-C**, SCAQMD CEQA Handbook ****Note:** Weighted average based on travel characteristics		

HAUL TRUCK ON UNPAVED SURFACE EMISSIONS
FORMULA:
E = V x F
WHERE:
E = Emissions
V = Vehicle Miles of Travel
F = Emissions Factor (2.1)(G/12)(H/30)((J/3)^0.7)((I/4)^0.5)((365-K)/365)
VARIABLES
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 inches of precipitation
EMISSIONS FACTOR = 9.87 pounds per vehicle miles traveled
Source: Table A9-9-D, SCAQMD CEQA Handbook

Canoga Orange Line Expansion

EQUIPMENT				Equipment Emissions (ppd)					
Construction Phase	Hours in Work Day	# Equipment	Total Equipments	CO	ROG	NOX	SOX	PM10	PM2.5
General Construction Activity	10	7	7	28.76	7.39	70.82	0.09	3.09	0.64

WORKER VEHICLES					Worker Vehicle Emissions (ppd)					
Construction Phase	# of Workers	Round Trip Length	# Worker Vehicle @ 1.1 AVR	Total VMT/Day	CO	ROG	NOX	SOX	PM10	PM2.5
General Construction Activity	50	13.3	45.45	604.55	3.29	0.13	0.28	0.004	0.013	0.01

HAUL TRUCKS						Haul Truck Emissions (ppd)					
Construction Phase	Debris / Pavement / Concrete per Day (cy/day)	# of Haul Loads per Day (20 cy/load)	# of Haul Loads per Hour	Haul Truck Round Trip Length	Haul Truck VMT/day	CO	ROG	NOX	SOX	PM10	PM2.5
General Construction Activity	900.00	50	5.0	20	100	6.05	3.06	8.20	0.01	0.56	0.52

Dirt Piling/Material Handling							
Construction Phase	Tons of Dirt/Day	Pounds of Dirt/day	(G/5)^1.3, G=Wind Speed	(H/2)^1.4, H=Moisture Content	PM10 Emissions	(H/2)^1.4, H=Moisture Content	PM2.5 Emissions
General Construction Activity	2,300	4,600,000	0.54	6.36	0.08	-	0.02

Truck Loading/Unloading				
Construction Phase	Daily Volume (cy Debris/day)	Daily Volume (tons debris/day)	PM10 Emissions	PM2.5 Emissions
General Construction Activity	900.00	1,125.00	9.67	2.01

Trucks on Unpaved Surfaces			
Length of Unpaved Site (miles)	VMT on Unpaved Site	PM10 Emissions	PM2.5 Emissions
0.2	10.00	38.50	8.01

TOTAL EMISSIONS						
Construction Phase	CO	ROG	NOX	SOX	PM10	PM2.5
General Construction Activity	38.09	10.58	79.30	0.10	51.92	11.21

NOTES:	
Average Wind Speed (mph)	3.10
Moisture Content	7.5%
Dirt Weight	2,000
Silt Content	10%

Title : South Coast Air Basin Avg Annual CYr 2010 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2007/11/27 16:11:18
Scen Year: 2010 -- All model years in the range 1966 to 2010 selected
Season : Annual
Area : South Coast

****

Year:
Emfac2007 Emission Factors: V2.3 Nov 1 2006

South Coast

Pollutant Name: Total Organic Gases

Speed MPH	HHD NCAT	HHD CAT	HHD DSL	HHD ALL
5	96.744	18.767	13.606	13.884
30	17.705	3.441	1.263	1.364

Pollutant Name: Carbon Monoxide

Speed MPH	HHD NCAT	HHD CAT	HHD DSL	HHD ALL
5	2348.845	175.053	19.223	27.455
30	530.691	39.551	5.552	7.363

Pollutant Name: Oxides of Nitrogen

Speed MPH	HHD NCAT	HHD CAT	HHD DSL	HHD ALL
5	16.373	8.574	38.449	37.237
30	20.523	10.747	15.049	14.882

Pollutant Name: Carbon Dioxide

Speed MPH	HHD NCAT	HHD CAT	HHD DSL	HHD ALL
5	2513.51	2513.51	3845.36	3791.043
30	567.895	567.895	1924.234	1868.918

Pollutant Name: Sulfur Dioxide

Speed MPH	HHD NCAT	HHD CAT	HHD DSL	HHD ALL
5	0.062	0.027	0.037	0.036
30	0.014	0.006	0.018	0.018

Pollutant Name: PM10

Speed MPH	HHD NCAT	HHD CAT	HHD DSL	HHD ALL
5	0.101	0.104	2.651	2.548
30	0.019	0.019	0.59	0.567

Pollutant Name: PM10 - Tire Wear

Speed MPH	HHD NCAT	HHD CAT	HHD DSL	HHD ALL
5	0.012	0.012	0.036	0.035
30	0.012	0.012	0.036	0.035

Pollutant Name: PM10 - Break Wear

Speed MPH	HHD NCAT	HHD CAT	HHD DSL	HHD ALL
5	0.028	0.028	0.028	0.028
30	0.028	0.028	0.028	0.028

Pollutant Name: Gasoline - mi/gal

Speed MPH	HHD NCAT	HHD CAT	HHD DSL	HHD ALL
5	1.364	3.115	0	3.078
30	6.091	13.839	0	13.675

Pollutant Name: Diesel - mi/gal

Speed MPH	HHD NCAT	HHD CAT	HHD DSL	HHD ALL
5	0	0	2.621	2.621
30	0	0	5.238	5.238

Operational Emission Calculations and Output Files

Operational Emissions

	Emission Factors (grams/mile)					
Vehcile	**VOC**	**CO**	**NO_X**	**SO_X**	**$PM_{2.5}$**	**PM_{10}**
Auto[1]	0.022	0.717	0.049	0.004	0.014	0.015
Bus[2]	0.82	8.20	4.92	-	0.040	0.041

			Regional Operational Emissions (pounds/day)					
Scenario	Auto VMT[3]	Bus VMT[3]	VOC	CO	NO_X	SO_X	$PM_{2.5}$	PM_{10}
Alt 1 v. Alt 2	-7,562	761	1	2	7	-0.067	-0.17	-0.18
Alt 1 v. Alt 3	-91,271	2,889	1	-92	21	-0.80	-2.57	-2.76
Alt 1 v. Alt 4	-131,242	2,889	-1	-155	17	-1.16	-3.80	-4.08

1 Auto emission factors obtained from EMFAC2007.
2 CNG emission factors obtained from CARB.
3 Vehicle miles traveled obtained from Iteris.

GHG Emissions

Emission Factors (grams/mile)		
Auto[1]		**Bus[2]**
CO_2	CH_4	CO_2 eq.
330.137	0.007	3,275

Scenario	Auto VMT[3]	Bus VMT[3]	GHG Emissions (tons/year)
Alt 1 v. Alt 2	-7,562	761	-2
Alt 1 v. Alt 3	-91,271	2,889	-8,322
Alt 1 v. Alt 4	-131,242	2,889	-13,634

1 Auto emission factors obtained from EMFAC2007.
2 CNG bus emission factors obtained from CARB.
3 Vehicle miles traveled obtained from Iteris.

SCAQMD Rule 403

(Adopted May 7, 1976) (Amended November 6, 1992)
(Amended July 9, 1993) (Amended February 14, 1997)
(Amended December 11, 1998)(Amended April 2, 2004)
(Amended June 3, 2005)

RULE 403. FUGITIVE DUST

(a) Purpose

The purpose of this Rule is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.

(b) Applicability

The provisions of this Rule shall apply to any activity or man-made condition capable of generating fugitive dust.

(c) Definitions

(1) ACTIVE OPERATIONS means any source capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface area, or heavy- and light-duty vehicular movement.

(2) AGGREGATE-RELATED PLANTS are defined as facilities that produce and / or mix sand and gravel and crushed stone.

(3) AGRICULTURAL HANDBOOK means the region-specific guidance document that has been approved by the Governing Board or hereafter approved by the Executive Officer and the U.S. EPA. For the South Coast Air Basin, the Board-approved region-specific guidance document is the Rule 403 Agricultural Handbook dated December 1998. For the Coachella Valley, the Board-approved region-specific guidance document is the Rule 403 Coachella Valley Agricultural Handbook dated April 2, 2004.

(4) ANEMOMETERS are devices used to measure wind speed and direction in accordance with the performance standards, and maintenance and calibration criteria as contained in the most recent Rule 403 Implementation Handbook.

(5) BEST AVAILABLE CONTROL MEASURES means fugitive dust control actions that are set forth in Table 1 of this Rule.

(6) BULK MATERIAL is sand, gravel, soil, aggregate material less than two inches in length or diameter, and other organic or inorganic particulate matter.

(7) CEMENT MANUFACTURING FACILITY is any facility that has a cement kiln at the facility.

(8) CHEMICAL STABILIZERS are any non-toxic chemical dust suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the U.S. Environmental Protection Agency (U.S. EPA), or any applicable law, rule or regulation. The chemical stabilizers shall meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic chemical stabilizer shall be of sufficient concentration and application frequency to maintain a stabilized surface.

(9) COMMERCIAL POULTRY RANCH means any building, structure, enclosure, or premises where more than 100 fowl are kept or maintained for the primary purpose of producing eggs or meat for sale or other distribution.

(10) CONFINED ANIMAL FACILITY means a source or group of sources of air pollution at an agricultural source for the raising of 3,360 or more fowl or 50 or more animals, including but not limited to, any structure, building, installation, farm, corral, coop, feed storage area, milking parlor, or system for the collection, storage, or distribution of solid and liquid manure; if domesticated animals, including horses, sheep, goats, swine, beef cattle, rabbits, chickens, turkeys, or ducks are corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing.

(11) CONSTRUCTION/DEMOLITION ACTIVITIES means any on-site mechanical activities conducted in preparation of, or related to, the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities: grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.

(12) CONTRACTOR means any person who has a contractual arrangement to conduct an active operation for another person.

(13) DAIRY FARM is an operation on a property, or set of properties that are contiguous or separated only by a public right-of-way, that raises cows or

produces milk from cows for the purpose of making a profit or for a livelihood. Heifer and calf farms are dairy farms.

(14) DISTURBED SURFACE AREA means a portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of fugitive dust. This definition excludes those areas which have:

(A) been restored to a natural state, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby natural conditions;

(B) been paved or otherwise covered by a permanent structure; or

(C) sustained a vegetative ground cover of at least 70 percent of the native cover for a particular area for at least 30 days.

(15) DUST SUPPRESSANTS are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive dust emissions.

(16) EARTH-MOVING ACTIVITIES means the use of any equipment for any activity where soil is being moved or uncovered, and shall include, but not be limited to the following: grading, earth cutting and filling operations, loading or unloading of dirt or bulk materials, adding to or removing from open storage piles of bulk materials, landfill operations, weed abatement through disking, and soil mulching.

(17) DUST CONTROL SUPERVISOR means a person with the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 requirements at an active operation.

(18) FUGITIVE DUST means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of any person.

(19) HIGH WIND CONDITIONS means that instantaneous wind speeds exceed 25 miles per hour.

(20) INACTIVE DISTURBED SURFACE AREA means any disturbed surface area upon which active operations have not occurred or are not expected to occur for a period of 20 consecutive days.

(21) LARGE OPERATIONS means any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 3,850 cubic

meters (5,000 cubic yards) or more three times during the most recent 365-day period.

(22) OPEN STORAGE PILE is any accumulation of bulk material, which is not fully enclosed, covered or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 or more square feet.

(23) PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

(24) PAVED ROAD means a public or private improved street, highway, alley, public way, or easement that is covered by typical roadway materials, but excluding access roadways that connect a facility with a public paved roadway and are not open to through traffic. Public paved roads are those open to public access and that are owned by any federal, state, county, municipal or any other governmental or quasi-governmental agencies. Private paved roads are any paved roads not defined as public.

(25) PM_{10} means particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable State and Federal reference test methods.

(26) PROPERTY LINE means the boundaries of an area in which either a person causing the emission or a person allowing the emission has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the property line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.

(27) RULE 403 IMPLEMENTATION HANDBOOK means a guidance document that has been approved by the Governing Board on April 2, 2004 or hereafter approved by the Executive Officer and the U.S. EPA.

(28) SERVICE ROADS are paved or unpaved roads that are used by one or more public agencies for inspection or maintenance of infrastructure and which are not typically used for construction-related activity.

(29) SIMULTANEOUS SAMPLING means the operation of two PM_{10} samplers in such a manner that one sampler is started within five minutes of the other, and each sampler is operated for a consecutive period which must be not less than 290 minutes and not more than 310 minutes.

(30) SOUTH COAST AIR BASIN means the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange

County as defined in California Code of Regulations, Title 17, Section 60104. The area is bounded on the west by the Pacific Ocean, on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains, and on the south by the San Diego county line.

(31) STABILIZED SURFACE means any previously disturbed surface area or open storage pile which, through the application of dust suppressants, shows visual or other evidence of surface crusting and is resistant to wind-driven fugitive dust and is demonstrated to be stabilized. Stabilization can be demonstrated by one or more of the applicable test methods contained in the Rule 403 Implementation Handbook.

(32) TRACK-OUT means any bulk material that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that have been released onto a paved road and can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(33) TYPICAL ROADWAY MATERIALS means concrete, asphaltic concrete, recycled asphalt, asphalt, or any other material of equivalent performance as determined by the Executive Officer, and the U.S. EPA.

(34) UNPAVED ROADS means any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by typical roadway materials. Public unpaved roads are any unpaved roadway owned by federal, state, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public.

(35) VISIBLE ROADWAY DUST means any sand, soil, dirt, or other solid particulate matter which is visible upon paved road surfaces and which can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(36) WIND-DRIVEN FUGITIVE DUST means visible emissions from any disturbed surface area which is generated by wind action alone.

(37) WIND GUST is the maximum instantaneous wind speed as measured by an anemometer.

(d) Requirements

(1) No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that:

(A) the dust remains visible in the atmosphere beyond the property line of the emission source; or

(B) the dust emission exceeds 20 percent opacity (as determined by the appropriate test method included in the Rule 403 Implementation Handbook), if the dust emission is the result of movement of a motorized vehicle.

(2) No person shall conduct active operations without utilizing the applicable best available control measures included in Table 1 of this Rule to minimize fugitive dust emissions from each fugitive dust source type within the active operation.

(3) No person shall cause or allow PM_{10} levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent method for PM_{10} monitoring. If sampling is conducted, samplers shall be:

(A) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent method(s) for PM_{10}.

(B) Reasonably placed upwind and downwind of key activity areas and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized.

(4) No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. Notwithstanding the preceding, all track-out from an active operation shall be removed at the conclusion of each workday or evening shift.

(5) No person shall conduct an active operation with a disturbed surface area of five or more acres, or with a daily import or export of 100 cubic yards or more of bulk material without utilizing at least one of the measures listed in subparagraphs (d)(5)(A) through (d)(5)(E) at each vehicle egress from the site to a paved public road.

(A) Install a pad consisting of washed gravel (minimum-size: one inch) maintained in a clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long.

(B) Pave the surface extending at least 100 feet and at least 20 feet wide.

(C) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(D) Install and utilize a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(E) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the actions specified in subparagraphs (d)(5)(A) through (d)(5)(D).

(6) Beginning January 1, 2006, any person who operates or authorizes the operation of a confined animal facility subject to this Rule shall implement the applicable conservation management practices specified in Table 4 of this Rule.

(e) Additional Requirements for Large Operations

(1) Any person who conducts or authorizes the conducting of a large operation subject to this Rule shall implement the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards can not be met through use of Table 2 actions; and shall:

(A) submit a fully executed Large Operation Notification (Form 403 N) to the Executive Officer within 7 days of qualifying as a large operation;

(B) include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site;

(C) maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than three years; and make such records available to the Executive Officer upon request;

(D) install and maintain project signage with project contact signage that meets the minimum standards of the Rule 403 Implementation Handbook, prior to initiating any earthmoving activities;

(E) identify a dust control supervisor that:

(i) is employed by or contracted with the property owner or developer;

(ii) is on the site or available on-site within 30 minutes during working hours;

(iii) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements;

(iv) has completed the AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and

(F) notify the Executive Officer in writing within 30 days after the site no longer qualifies as a large operation as defined by paragraph (c)(18).

(2) Any Large Operation Notification submitted to the Executive Officer or AQMD-approved dust control plan shall be valid for a period of one year from the date of written acceptance by the Executive Officer. Any Large Operation Notification accepted pursuant to paragraph (e)(1), excluding those submitted by aggregate-related plants and cement manufacturing facilities must be resubmitted annually by the person who conducts or authorizes the conducting of a large operation, at least 30 days prior to the expiration date, or the submittal shall no longer be valid as of the expiration date. If all fugitive dust sources and corresponding control measures or special circumstances remain identical to those identified in the previously accepted submittal or in an AQMD-approved dust control plan, the resubmittal may be a simple statement of no-change (Form 403NC).

(f) Compliance Schedule

The newly amended provisions of this Rule shall become effective upon adoption. Pursuant to subdivision (e), any existing site that qualifies as a large operation will have 60 days from the date of Rule adoption to comply with the notification and recordkeeping requirements for large operations. Any Large Operation

Notification or AQMD-approved dust control plan which has been accepted prior to the date of adoption of these amendments shall remain in effect and the Large Operation Notification or AQMD-approved dust control plan annual resubmittal date shall be one year from adoption of this Rule amendment.

(g) Exemptions

(1) The provisions of this Rule shall not apply to:

(A) Dairy farms.

(B) Confined animal facilities provided that the combined disturbed surface area within one continuous property line is one acre or less.

(C) Agricultural vegetative crop operations provided that the combined disturbed surface area within one continuous property line and not separated by a paved public road is 10 acres or less.

(D) Agricultural vegetative crop operations within the South Coast Air Basin, whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Agricultural Handbook;

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(E) Agricultural vegetative crop operations outside the South Coast Air Basin whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Coachella Valley Agricultural Handbook; and

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Coachella Valley Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(F) Active operations conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency.

(G) Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions.

(H) Any contractor subsequent to the time the contract ends, provided that such contractor implemented the required control measures during the contractual period.

(I) Any grading contractor, for a phase of active operations, subsequent to the contractual completion of that phase of earth-moving activities, provided that the required control measures have been implemented during the entire phase of earth-moving activities, through and including five days after the final grading inspection.

(J) Weed abatement operations ordered by a county agricultural commissioner or any state, county, or municipal fire department, provided that:

(i) mowing, cutting or other similar process is used which maintains weed stubble at least three inches above the soil; and

(ii) any discing or similar operation which cuts into and disturbs the soil, where watering is used prior to initiation of these activities, and a determination is made by the agency issuing the weed abatement order that, due to fire hazard conditions, rocks, or other physical obstructions, it is not practical to meet the conditions specified in clause (g)(1)(H)(i). The provisions this clause shall not exempt the owner of any property from stabilizing, in accordance with paragraph (d)(2), disturbed surface areas which have been created as a result of the weed abatement actions.

(K) sandblasting operations.

(2) The provisions of paragraphs (d)(1) and (d)(3) shall not apply:

(A) When wind gusts exceed 25 miles per hour, provided that:

(i) The required Table 3 contingency measures in this Rule are implemented for each applicable fugitive dust source type, and;

(ii) records are maintained in accordance with subparagraph (e)(1)(C).

(B) To unpaved roads, provided such roads:

(i) are used solely for the maintenance of wind-generating equipment; or

(ii) are unpaved public alleys as defined in Rule 1186; or

(iii) are service roads that meet all of the following criteria:

(a) are less than 50 feet in width at all points along the road;

(b) are within 25 feet of the property line; and

(c) have a traffic volume less than 20 vehicle-trips per day.

(C) To any active operation, open storage pile, or disturbed surface area for which necessary fugitive dust preventive or mitigative actions are in conflict with the federal Endangered Species Act, as determined in writing by the State or federal agency responsible for making such determinations.

(3) The provisions of (d)(2) shall not apply to any aggregate-related plant or cement manufacturing facility that implements the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards of paragraphs (d)(1) and (d)(3) can not be met through use of Table 2 actions.

(4) The provisions of paragraphs (d)(1), (d)(2), and (d)(3) shall not apply to:

(A) Blasting operations which have been permitted by the California Division of Industrial Safety; and

(B) Motion picture, television, and video production activities when dust emissions are required for visual effects. In order to obtain this exemption, the Executive Officer must receive notification in writing at least 72 hours in advance of any such activity and no nuisance results from such activity.

(5) The provisions of paragraph (d)(3) shall not apply if the dust control actions, as specified in Table 2, are implemented on a routine basis for

each applicable fugitive dust source type. To qualify for this exemption, a person must maintain records in accordance with subparagraph (e)(1)(C).

(6) The provisions of paragraph (d)(4) shall not apply to earth coverings of public paved roadways where such coverings are approved by a local government agency for the protection of the roadway, and where such coverings are used as roadway crossings for haul vehicles provided that such roadway is closed to through traffic and visible roadway dust is removed within one day following the cessation of activities.

(7) The provisions of subdivision (e) shall not apply to:

(A) officially-designated public parks and recreational areas, including national parks, national monuments, national forests, state parks, state recreational areas, and county regional parks.

(B) any large operation which is required to submit a dust control plan to any city or county government which has adopted a District-approved dust control ordinance.

(C) any large operation subject to Rule 1158, which has an approved dust control plan pursuant to Rule 1158, provided that all sources of fugitive dust are included in the Rule 1158 plan.

(8) The provisions of subparagraph (e)(1)(A) through (e)(1)(C) shall not apply to any large operation with an AQMD-approved fugitive dust control plan provided that there is no change to the sources and controls as identified in the AQMD-approved fugitive dust control plan.

(h) Fees

Any person conducting active operations for which the Executive Officer conducts upwind/downwind monitoring for PM_{10} pursuant to paragraph (d)(3) shall be assessed applicable Ambient Air Analysis Fees pursuant to Rule 304.1. Applicable fees shall be waived for any facility which is exempted from paragraph (d)(3) or meets the requirements of paragraph (d)(3).

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Backfilling	01-1 Stabilize backfill material when not actively handling; and 01-2 Stabilize backfill material during handling; and 01-3 Stabilize soil at completion of activity.	✓ Mix backfill soil with water prior to moving ✓ Dedicate water truck or high capacity hose to backfilling equipment ✓ Empty loader bucket slowly so that no dust plumes are generated ✓ Minimize drop height from loader bucket
Clearing and grubbing	02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and 02-2 Stabilize soil during clearing and grubbing activities; and 02-3 Stabilize soil immediately after clearing and grubbing activities.	✓ Maintain live perennial vegetation where possible ✓ Apply water in sufficient quantity to prevent generation of dust plumes
Clearing forms	03-1 Use water spray to clear forms; or 03-2 Use sweeping and water spray to clear forms; or 03-3 Use vacuum system to clear forms.	✓ Use of high pressure air to clear forms may cause exceedance of Rule requirements
Crushing	04-1 Stabilize surface soils prior to operation of support equipment; and 04-2 Stabilize material after crushing.	✓ Follow permit conditions for crushing equipment ✓ Pre-water material prior to loading into crusher ✓ Monitor crusher emissions opacity ✓ Apply water to crushed material to prevent dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Cut and fill	05-1 Pre-water soils prior to cut and fill activities; and 05-2 Stabilize soil during and after cut and fill activities.	✓ For large sites, pre-water with sprinklers or water trucks and allow time for penetration ✓ Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts
Demolition – mechanical/manual	06-1 Stabilize wind erodible surfaces to reduce dust; and 06-2 Stabilize surface soil where support equipment and vehicles will operate; and 06-3 Stabilize loose soil and demolition debris; and 06-4 Comply with AQMD Rule 1403.	✓ Apply water in sufficient quantities to prevent the generation of visible dust plumes
Disturbed soil	07-1 Stabilize disturbed soil throughout the construction site; and 07-2 Stabilize disturbed soil between structures	✓ Limit vehicular traffic and disturbances on soils where possible ✓ If interior block walls are planned, install as early as possible ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes
Earth-moving activities	08-1 Pre-apply water to depth of proposed cuts; and 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and 08-3 Stabilize soils once earth-moving activities are complete.	✓ Grade each project phase separately, timed to coincide with construction phase ✓ Upwind fencing can prevent material movement on site ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Importing/exporting of bulk materials	09-1 Stabilize material while loading to reduce fugitive dust emissions; and 09-2 Maintain at least six inches of freeboard on haul vehicles; and 09-3 Stabilize material while transporting to reduce fugitive dust emissions; and 09-4 Stabilize material while unloading to reduce fugitive dust emissions; and 09-5 Comply with Vehicle Code Section 23114.	✓ Use tarps or other suitable enclosures on haul trucks ✓ Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage ✓ Comply with track-out prevention/mitigation requirements ✓ Provide water while loading and unloading to reduce visible dust plumes
Landscaping	10-1 Stabilize soils, materials, slopes	✓ Apply water to materials to stabilize ✓ Maintain materials in a crusted condition ✓ Maintain effective cover over materials ✓ Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes ✓ Hydroseed prior to rain season
Road shoulder maintenance	11-1 Apply water to unpaved shoulders prior to clearing; and 11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.	✓ Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs ✓ Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Screening	12-1 Pre-water material prior to screening; and 12-2 Limit fugitive dust emissions to opacity and plume length standards; and 12-3 Stabilize material immediately after screening.	✓ Dedicate water truck or high capacity hose to screening operation ✓ Drop material through the screen slowly and minimize drop height ✓ Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point
Staging areas	13-1 Stabilize staging areas during use; and 13-2 Stabilize staging area soils at project completion.	✓ Limit size of staging area ✓ Limit vehicle speeds to 15 miles per hour ✓ Limit number and size of staging area entrances/exists
Stockpiles/ Bulk Material Handling	14-1 Stabilize stockpiled materials. 14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	✓ Add or remove material from the downwind portion of the storage pile ✓ Maintain storage piles to avoid steep sides or faces

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Traffic areas for construction activities	15-1 Stabilize all off-road traffic and parking areas; and 15-2 Stabilize all haul routes; and 15-3 Direct construction traffic over established haul routes.	✓ Apply gravel/paving to all haul routes as soon as possible to all future roadway areas ✓ Barriers can be used to ensure vehicles are only used on established parking areas/haul routes
Trenching	16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and 16-2 Stabilize soils at the completion of trenching activities.	✓ Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching ✓ Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment
Truck loading	17-1 Pre-water material prior to loading; and 17-2 Ensure that freeboard exceeds six inches (CVC 23114)	✓ Empty loader bucket such that no visible dust plumes are created ✓ Ensure that the loader bucket is close to the truck to minimize drop height while loading
Turf Overseeding	18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and 18-2 Cover haul vehicles prior to exiting the site.	✓ Haul waste material immediately off-site

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure		Guidance
Unpaved roads/parking lots	19-1	Stabilize soils to meet the applicable performance standards; and	✓ Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements
	19-2	Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	
Vacant land	20-1	In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	

Table 2
DUST CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY		CONTROL ACTIONS
Earth-moving (except construction cutting and filling areas, and mining operations)	(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR
	(1a-1)	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earth-moving: Construction fill areas:	(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Earth-moving: Construction cut areas and mining operations:	(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	(2a/b)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.
Disturbed surface areas: Completed grading areas	(2c)	Apply chemical stabilizers within five working days of grading completion; OR
	(2d)	Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive disturbed surface areas	(3a)	Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR
	(3b)	Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR
	(3c)	Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR
	(3d)	Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Unpaved Roads	(4a)	Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR
	(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR
	(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	(5a)	Apply chemical stabilizers; OR
	(5b)	Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR
	(5c)	Install temporary coverings; OR
	(5d)	Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.
All Categories	(6a)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

TABLE 3
CONTINGENCY CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY	CONTROL MEASURES
Earth-moving	(1A) Cease all active operations; OR (2A) Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	(0B) On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR (1B) Apply chemical stabilizers prior to wind event; OR (2B) Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR (3B) Take the actions specified in Table 2, Item (3c); OR (4B) Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	(1C) Apply chemical stabilizers prior to wind event; OR (2C) Apply water twice per hour during active operation; OR (3C) Stop all vehicular traffic.
Open storage piles	(1D) Apply water twice per hour; OR (2D) Install temporary coverings.
Paved road track-out	(1E) Cover all haul vehicles; OR (2E) Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	(1F) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

Table 4
(Conservation Management Practices for Confined Animal Facilities)

SOURCE CATEGORY	CONSERVATION MANAGEMENT PRACTICES
Manure Handling **(Only applicable to Commercial Poultry Ranches)**	(1a) Cover manure prior to removing material off-site; AND (1b) Spread the manure before 11:00 AM and when wind conditions are less than 25 miles per hour; AND (1c) Utilize coning and drying manure management by removing manure at laying hen houses at least twice per year and maintain a base of no less than 6 inches of dry manure after clean out; or in lieu of complying with conservation management practice (1c), comply with conservation management practice (1d). (1d) Utilize frequent manure removal by removing the manure from laying hen houses at least every seven days and immediately thin bed dry the material.
Feedstock Handling	(2a) Utilize a sock or boot on the feed truck auger when filling feed storage bins.
Disturbed Surfaces	(3a) Maintain at least 70 percent vegetative cover on vacant portions of the facility; OR (3b) Utilize conservation tillage practices to manage the amount, orientation and distribution of crop and other plant residues on the soil surface year-round, while growing crops (if applicable) in narrow slots or tilled strips; OR (3c) Apply dust suppressants in sufficient concentrations and frequencies to maintain a stabilized surface.
Unpaved Roads	(4a) Restrict access to private unpaved roads either through signage or physical access restrictions and control vehicular speeds to no more than 15 miles per hour through worker notifications, signage, or any other necessary means; OR (4b) Cover frequently traveled unpaved roads with low silt content material (i.e., asphalt, concrete, recycled road base, or gravel to a minimum depth of four inches); OR (4c) Treat unpaved roads with water, mulch, chemical dust suppressants or other cover to maintain a stabilized surface.
Equipment Parking Areas	(5a) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR (5b) Apply material with low silt content (i.e., asphalt, concrete, recycled road base, or gravel to a depth of four inches).