1	0.000734
2	0.000390
3	0.000289
4	0.000249
5	0.000228
10	0.000184
15	0.000178
20	0.000171
25	0.000171
30	0.000169
35	0.000166
40	0.000166
45	0.000166
50	0.000166
55	0.000157
60	0.000157

Pollutant Name : ACROLEIN

time(min)	Emission Factor
1	0.000000
2	0.000000
3	0.000000
4	0.000000
5	0.000000
10	0.000000
15	0.000000
20	0.000000
25	0.000000
30	0.000000
35	0.000000
40	0.000000
45	0.000000
50	0.000000
55	0.000000
60	0.000000

Pollutant Name : ACETALDEHYDE

time(min)	Emission Factor
1	0.000000
2	0.000000
3	0.000000
4	0.000000
5	0.000000
10	0.000000
15	0.000000
20	0.000000
25	0.000000
30	0.000000
35	0.000000
40	0.000000
45	0.000000
50	0.000000
55	0.000000
60	0.000000

---------- END----------

Appendix F

CO Hot Spot Analysis

JOB: Beach Blvd & McFadden Ave RUN: Project 2020 -- AM Peak Hour

DATE : 12/ 2/10
TIME : 8:47:52

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	542.0	.0	542.0	500.0	500.	360.	AG	3075.	1.7	.0	****		
2. NBD	542.0	500.0	542.0	1000.0	500.	360.	AG	3262.	1.7	.0	68.0		
3. NBQ	542.0	452.0	542.0	420.8	31.	180.	AG	11.	100.0	.0	84.0	.39	1.6
4. SBA	464.0	1000.0	464.0	500.0	500.	180.	AG	3119.	1.7	.0	92.0		
5. SBD	464.0	500.0	464.0	.0	500.	180.	AG	3100.	1.7	.0	68.0		
6. SBQ	464.0	548.0	464.0	584.9	37.	360.	AG	9.	100.0	.0	72.0	.46	1.9
7. EBA	.0	476.0	500.0	476.0	500.	90.	AG	784.	1.7	.0	64.0		
8. EBD	500.0	476.0	1000.0	476.0	500.	90.	AG	664.	1.7	.0	44.0		
9. EBQ	428.0	476.0	378.1	476.0	50.	270.	AG	21.	100.0	.0	44.0	.67	2.5
10. WBA	1000.0	524.0	500.0	524.0	500.	270.	AG	1090.	1.7	.0	68.0		
11. WBD	500.0	524.0	.0	524.0	500.	270.	AG	1042.	1.7	.0	44.0		
12. WBQ	584.0	524.0	695.7	524.0	112.	90.	AG	21.	100.0	.0	48.0	.93	5.7

JOB: Beach Blvd & McFadden Ave RUN: Project 2020 -- AM Peak Hour

DATE : 12/ 2/10
TIME : 8:47:52

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
3. NBQ	60	13	3.0	3075	1600	2.64	3	3
6. SBQ	60	13	3.0	3119	1600	2.64	3	3
9. EBQ	60	44	3.0	784	1600	2.64	3	3
12. WBQ	60	44	3.0	1090	1600	2.64	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. Rcpt_1	408.0	568.0	5.4
2. Rcpt_2	604.0	568.0	5.4
3. Rcpt_3	408.0	432.0	5.4
4. Rcpt_4	604.0	432.0	5.4

JOB: Beach Blvd & McFadden Ave RUN: Project 2020 -- AM Peak Hour

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

THE HIGHEST CONCENTRATION OF .50 PPM OCCURRED AT RECEPTOR REC3 .

JOB: Bristol St & I-405 NB Off-Ramps/SC Plaza RUN: Project 2020 -- PM Peak Hour

DATE : 12/ 1/10
TIME : 18: 4:45

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	2353.	1.7	.0	68.0		
2. NBD	524.0	500.0	524.0	1000.0	500.	360.	AG	3308.	1.7	.0	68.0		
3. NBQ	524.0	476.0	524.0	418.1	58.	180.	AG	8.	100.0	.0	48.0	.60	2.9
4. SBA	470.0	1000.0	470.0	500.0	500.	180.	AG	2586.	1.7	.0	80.0		
5. SBD	470.0	500.0	470.0	.0	500.	180.	AG	3620.	1.7	1.0	80.0		
6. SBQ	470.0	560.0	470.0	610.9	51.	360.	AG	11.	100.0	.0	60.0	.52	2.6
7. EBA	.0	488.0	500.0	488.0	500.	90.	AG	681.	1.7	.0	44.0		
8. EBQ	440.0	488.0	354.4	488.0	86.	270.	AG	9.	100.0	.0	24.0	.80	4.3
9. WBA	1000.0	530.0	500.0	530.0	500.	270.	AG	1642.	1.7	.0	80.0		
10. WBD	500.0	530.0	.0	530.0	500.	270.	AG	334.	1.7	.0	44.0		
11. WBQ	548.0	530.0	627.1	530.0	79.	90.	AG	23.	100.0	.0	60.0	.77	4.0

JOB: Bristol St & I-405 NB Off-Ramps/SC Plaza RUN: Project 2020 -- PM Peak Hour

DATE : 12/ 1/10
TIME : 18: 4:45

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
3. NBQ	60	18	3.0	2353	1600	2.64	3	3
6. SBQ	60	18	3.0	2586	1600	2.64	3	3
8. EBQ	60	39	3.0	681	1600	2.64	3	3
11. WBQ	60	39	3.0	1642	1600	2.64	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. Rcpt_1	420.0	580.0	5.4
2. Rcpt_2	568.0	580.0	5.4
3. Rcpt_3	420.0	456.0	5.4
4. Rcpt_4	568.0	456.0	5.4

JOB: Bristol St & I-405 NB Off-Ramps/SC Plaza RUN: Project 2020 -- PM Peak Hour

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	.4
10.	.3	.0	.3	.2
20.	.4	.0	.4	.2
30.	.3	.0	.4	.1
40.	.2	.0	.3	.1
50.	.2	.0	.3	.1
60.	.2	.0	.3	.1
70.	.2	.0	.4	.1
80.	.2	.0	.4	.1
90.	.3	.1	.3	.0
100.	.3	.2	.3	.0
110.	.3	.1	.3	.0
120.	.3	.1	.3	.0
130.	.2	.1	.3	.0
140.	.3	.2	.3	.0
150.	.3	.2	.3	.0
160.	.4	.2	.4	.0
170.	.4	.2	.4	.0
180.	.2	.3	.1	.1
190.	.0	.6	.0	.3
200.	.0	.5	.0	.4
210.	.0	.5	.0	.4
220.	.0	.4	.0	.3
230.	.0	.5	.0	.2
240.	.0	.4	.0	.2
250.	.0	.3	.0	.2
260.	.0	.3	.0	.2
270.	.0	.3	.0	.2
280.	.0	.3	.1	.3
290.	.0	.3	.1	.2
300.	.0	.3	.1	.2
310.	.0	.3	.0	.3
320.	.0	.3	.0	.3
330.	.0	.3	.0	.5
340.	.0	.4	.0	.5
350.	.0	.4	.0	.5
360.	.1	.1	.1	.4
MAX	.4	.6	.4	.5
DEGR.	20	190	20	330

THE HIGHEST CONCENTRATION OF .60 PPM OCCURRED AT RECEPTOR REC2 .

JOB: Euclid St & I-405 NB Ramps/Newhope St RUN: Project 2020 -- PM Peak Hour

DATE : 12/ 6/10
TIME : 8:51: 5

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	530.0	.0	530.0	500.0	500.	360.	AG	917.	1.7	.0	80.0		
2. NBD	530.0	500.0	530.0	1000.0	500.	360.	AG	1440.	1.7	.0	56.0		
3. NBQ	530.0	440.0	530.0	408.0	32.	180.	AG	19.	100.0	.0	60.0	.30	1.6
4. SBA	476.0	1000.0	476.0	500.0	500.	180.	AG	1242.	1.7	.0	68.0		
5. SBD	476.0	500.0	476.0	.0	500.	180.	AG	2406.	1.7	.0	56.0		
6. SBQ	476.0	548.0	476.0	602.2	54.	360.	AG	15.	100.0	.0	48.0	.51	2.8
7. EBA	.0	470.0	500.0	470.0	500.	90.	AG	2097.	1.7	.0	80.0		
8. EBD	500.0	470.0	1000.0	470.0	500.	90.	AG	454.	1.7	.0	44.0		
9. EBQ	452.0	470.0	394.7	470.0	57.	270.	AG	15.	100.0	.0	60.0	.52	2.9
10. WBA	1000.0	524.0	500.0	524.0	500.	270.	AG	712.	1.7	.0	68.0		
11. WBD	500.0	524.0	.0	524.0	500.	270.	AG	712.	1.7	.0	44.0		
12. WBQ	560.0	524.0	584.3	524.0	24.	90.	AG	12.	100.0	.0	48.0	.22	1.2

JOB: Euclid St & I-405 NB Ramps/Newhope St RUN: Project 2020 -- PM Peak Hour

DATE : 12/ 6/10
TIME : 8:51: 5

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
3. NBQ	60	32	3.0	917	1600	2.64	3	3
6. SBQ	60	32	3.0	1242	1600	2.64	3	3
9. EBQ	60	25	3.0	2097	1600	2.64	3	3
12. WBQ	60	25	3.0	712	1600	2.64	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. Rcpt_1	432.0	568.0	5.4
2. Rcpt_2	580.0	568.0	5.4
3. Rcpt_3	432.0	420.0	5.4
4. Rcpt_4	580.0	420.0	5.4

JOB: Euclid St & I-405 NB Ramps/Newhope St RUN: Project 2020 -- PM Peak Hour

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

THE HIGHEST CONCENTRATION OF .40 PPM OCCURRED AT RECEPTOR REC3 .

JOB: Goldenwest St & Bolsa Ave RUN: Project 2020 -- PM Peak Hour

DATE : 12/ 2/10
TIME : 13: 9:21

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	536.0	.0	536.0	500.0	500.	360.	AG	1785.	1.7	.0	92.0		
2. NBD	536.0	500.0	536.0	1000.0	500.	360.	AG	1923.	1.7	.0	56.0		
3. NBQ	536.0	428.0	536.0	379.3	49.	180.	AG	21.	100.0	.0	72.0	.45	2.5
4. SBA	464.0	1000.0	464.0	500.0	500.	180.	AG	1392.	1.7	.0	92.0		
5. SBD	464.0	500.0	464.0	.0	500.	180.	AG	1817.	1.7	.0	56.0		
6. SBQ	464.0	572.0	464.0	610.1	38.	360.	AG	21.	100.0	.0	72.0	.35	1.9
7. EBA	.0	464.0	500.0	464.0	500.	90.	AG	1779.	1.7	.0	92.0		
8. EBD	500.0	464.0	1000.0	464.0	500.	90.	AG	1893.	1.7	.0	68.0		
9. EBQ	428.0	464.0	384.3	464.0	44.	270.	AG	19.	100.0	.0	72.0	.40	2.2
10. WBA	1000.0	536.0	500.0	536.0	500.	270.	AG	1797.	1.7	.0	92.0		
11. WBD	500.0	536.0	.0	536.0	500.	270.	AG	1120.	1.7	.0	56.0		
12. WBQ	572.0	536.0	616.1	536.0	44.	90.	AG	19.	100.0	.0	72.0	.40	2.2

s

JOB: Goldenwest St & Bolsa Ave RUN: Project 2020 -- PM Peak Hour

DATE : 12/ 2/10
TIME : 13: 9:21

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
3. NBQ	60	30	3.0	1785	1600	2.64	3	3
6. SBQ	60	30	3.0	1392	1600	2.64	3	3
9. EBQ	60	27	3.0	1779	1600	2.64	3	3
12. WBQ	60	27	3.0	1797	1600	2.64	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. Rcpt_1	408.0	592.0	5.4
2. Rcpt_2	592.0	592.0	5.4
3. Rcpt_3	408.0	408.0	5.4
4. Rcpt_4	592.0	408.0	5.4

JOB: Goldenwest St & Bolsa Ave RUN: Project 2020 -- PM Peak Hour

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

THE HIGHEST CONCENTRATION OF .50 PPM OCCURRED AT RECEPTOR REC3 .

JOB: I-405 Off-Ramp/SR22 Ramps & Garden Grove RUN: Project 2020 -- PM Peak Hour

DATE : 11/24/10
TIME : 16:58:14

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	1252.	1.7	.0	56.0		
2. NBD	518.0	500.0	518.0	1000.0	500.	360.	AG	1330.	1.7	.0	32.0		
3. NBQ	518.0	464.0	518.0	397.9	66.	180.	AG	10.	100.0	.0	36.0	.60	3.4
4. SBA	488.0	1000.0	488.0	500.0	500.	180.	AG	465.	1.7	.0	44.0		
5. SBQ	488.0	536.0	488.0	572.8	37.	360.	AG	7.	100.0	.0	24.0	.33	1.9
6. EBA	.0	482.0	500.0	482.0	500.	90.	AG	1400.	1.7	.0	56.0		
7. EBD	500.0	482.0	1000.0	482.0	500.	90.	AG	576.	1.7	.0	32.0		
8. EBQ	476.0	482.0	404.7	482.0	71.	270.	AG	10.	100.0	.0	36.0	.65	3.6
9. WBA	1000.0	518.0	500.0	518.0	500.	270.	AG	365.	1.7	.0	56.0		
10. WBD	500.0	518.0	.0	518.0	500.	270.	AG	1576.	1.7	.0	44.0		
11. WBQ	536.0	518.0	554.5	518.0	19.	90.	AG	10.	100.0	.0	36.0	.17	.9

JOB: I-405 Off-Ramp/SR22 Ramps & Garden Grove RUN: Project 2020 -- PM Peak Hour

DATE : 11/24/10
TIME : 16:58:14

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
3. NBQ	60	29	3.0	1252	1600	2.64	3	3
5. SBQ	60	29	3.0	465	1600	2.64	3	3
8. EBQ	60	28	3.0	1400	1600	2.64	3	3
11. WBQ	60	28	3.0	365	1600	2.64	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. Rcpt_1	456.0	556.0	5.4
2. Rcpt_2	556.0	556.0	5.4
3. Rcpt_3	456.0	444.0	5.4
4. Rcpt_4	556.0	444.0	5.4

JOB: I-405 Off-Ramp/SR22 Ramps & Garden Grove RUN: Project 2020 -- PM Peak Hour

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

THE HIGHEST CONCENTRATION OF .40 PPM OCCURRED AT RECEPTOR REC3 .

JOB: I-405 SB Ramps & Ellis Ave RUN: Project 2020 -- PM Peak Hour

DATE : 12/ 2/10
TIME : 15:48:56

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	193.	1.7	.0	44.0		
2. NBD	512.0	500.0	512.0	1000.0	500.	360.	AG	1230.	1.7	.0	32.0		
3. NBQ	512.0	476.0	512.0	451.3	25.	180.	AG	11.	100.0	.0	24.0	.45	1.3
4. SBA	482.0	1000.0	482.0	500.0	500.	180.	AG	429.	1.7	.0	56.0		
5. SBD	482.0	500.0	482.0	.0	500.	180.	AG	35.	1.7	.0	32.0		
6. SBQ	482.0	548.0	482.0	588.5	41.	360.	AG	17.	100.0	.0	36.0	.67	2.1
7. EBA	.0	488.0	500.0	488.0	500.	90.	AG	554.	1.7	.0	44.0		
8. EBD	500.0	488.0	1000.0	488.0	500.	90.	AG	917.	1.7	.0	44.0		
9. EBQ	464.0	488.0	448.9	488.0	15.	270.	AG	2.	100.0	.0	24.0	.23	.8
10. WBA	1000.0	524.0	500.0	524.0	500.	270.	AG	2406.	1.7	.0	68.0		
11. WBD	500.0	524.0	.0	524.0	500.	270.	AG	1400.	1.7	.0	44.0		
12. WBQ	524.0	524.0	556.9	524.0	33.	90.	AG	5.	100.0	.0	48.0	.50	1.7

JOB: I-405 SB Ramps & Ellis Ave RUN: Project 2020 -- PM Peak Hour

DATE : 12/ 2/10
TIME : 15:48:56

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
3. NBQ	60	47	3.0	193	1600	2.64	3	3
6. SBQ	60	47	3.0	429	1600	2.64	3	3
9. EBQ	60	10	3.0	554	1600	2.64	3	3
12. WBQ	60	10	3.0	2406	1600	2.64	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. Rcpt_1	444.0	568.0	5.4
2. Rcpt_2	544.0	568.0	5.4
3. Rcpt_3	444.0	456.0	5.4
4. Rcpt_4	544.0	456.0	5.4

JOB: I-405 SB Ramps & Ellis Ave RUN: Project 2020 -- PM Peak Hour

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

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

JOB: Magnolia St & Warner Ave RUN: Project 2020 -- PM Peak Hour

DATE : 12/ 1/10
TIME : 18: 7:38

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	530.0	.0	530.0	500.0	500.	360.	AG	1389.	1.7	.0	80.0		
2. NBD	530.0	500.0	530.0	1000.0	500.	360.	AG	1440.	1.7	.0	44.0		
3. NBQ	530.0	428.0	530.0	381.0	47.	180.	AG	18.	100.0	.0	60.0	.43	2.4
4. SBA	470.0	1000.0	470.0	500.0	500.	180.	AG	1585.	1.7	.0	80.0		
5. SBD	470.0	500.0	470.0	.0	500.	180.	AG	1457.	1.7	.0	56.0		
6. SBQ	470.0	572.0	470.0	625.7	54.	360.	AG	18.	100.0	.0	60.0	.50	2.7
7. EBA	.0	464.0	500.0	464.0	500.	90.	AG	1694.	1.7	.0	92.0		
8. EBD	500.0	464.0	1000.0	464.0	500.	90.	AG	1754.	1.7	.0	68.0		
9. EBQ	440.0	464.0	399.9	464.0	40.	270.	AG	18.	100.0	.0	72.0	.36	2.0
10. WBA	1000.0	536.0	500.0	536.0	500.	270.	AG	1931.	1.7	.0	92.0		
11. WBD	500.0	536.0	.0	536.0	500.	270.	AG	1948.	1.7	.0	56.0		
12. WBQ	560.0	536.0	605.6	536.0	46.	90.	AG	18.	100.0	.0	72.0	.42	2.3

JOB: Magnolia St & Warner Ave RUN: Project 2020 -- PM Peak Hour

DATE : 12/ 1/10
TIME : 18: 7:38

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
3. NBQ	60	31	3.0	1389	1600	2.64	3	3
6. SBQ	60	31	3.0	1585	1600	2.64	3	3
9. EBQ	60	26	3.0	1694	1600	2.64	3	3
12. WBQ	60	26	3.0	1931	1600	2.64	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. Rcpt_1	420.0	592.0	5.4
2. Rcpt_2	580.0	592.0	5.4
3. Rcpt_3	420.0	408.0	5.4
4. Rcpt_4	580.0	408.0	5.4

JOB: Magnolia St & Warner Ave RUN: Project 2020 -- PM Peak Hour

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

THE HIGHEST CONCENTRATION OF .40 PPM OCCURRED AT RECEPTOR REC3 .

JOB: Seal Beach Blvd & I-405 SB Ramps RUN: Project 2020 -- PM Peak Hour

DATE : 11/24/10
TIME : 17:59:32

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	1791.	1.7	.0	68.0		
2. NBD	524.0	500.0	524.0	1000.0	500.	360.	AG	2112.	1.7	.0	56.0		
3. NBQ	524.0	476.0	524.0	439.3	37.	180.	AG	7.	100.0	.0	48.0	.42	1.9
4. SBA	470.0	1000.0	470.0	500.0	500.	180.	AG	2217.	1.7	.0	80.0		
5. SBD	470.0	500.0	470.0	.0	500.	180.	AG	2052.	1.7	.0	56.0		
6. SBQ	470.0	536.0	470.0	572.3	36.	360.	AG	9.	100.0	.0	60.0	.42	1.8
7. EBA	.0	488.0	500.0	488.0	500.	90.	AG	230.	1.7	.0	44.0		
8. EBD	500.0	488.0	1000.0	488.0	500.	90.	AG	1119.	1.7	.0	32.0		
9. EBQ	440.0	488.0	413.6	488.0	26.	270.	AG	10.	100.0	.0	24.0	.33	1.3
10. WBA	1000.0	518.0	500.0	518.0	500.	270.	AG	1191.	1.7	.0	56.0		
11. WBD	500.0	518.0	.0	518.0	500.	270.	AG	146.	1.7	.0	32.0		
12. WBQ	548.0	518.0	1245.6	518.0	698.	90.	AG	15.	100.0	.0	36.0	1.15	35.4

JOB: Seal Beach Blvd & I-405 SB Ramps RUN: Project 2020 -- PM Peak Hour

DATE : 11/24/10
TIME : 17:59:32

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
3. NBQ	60	15	3.0	1791	1600	2.64	3	3
6. SBQ	60	15	3.0	2217	1600	2.64	3	3
9. EBQ	60	42	3.0	230	1600	2.64	3	3
12. WBQ	60	42	3.0	1191	1600	2.64	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. Rcpt_1	420.0	556.0	5.4
2. Rcpt_2	568.0	556.0	5.4
3. Rcpt_3	420.0	456.0	5.4
4. Rcpt_4	568.0	456.0	5.4

JOB: Seal Beach Blvd & I-405 SB Ramps RUN: Project 2020 -- PM Peak Hour

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	.3	.1
30.	.3	.0	.2	.2
40.	.2	.0	.2	.2
50.	.2	.0	.3	.2
60.	.2	.0	.3	.2
70.	.2	.0	.3	.3
80.	.2	.0	.5	.3
90.	.4	.1	.3	.1
100.	.5	.3	.2	.0
110.	.4	.3	.2	.0
120.	.1	.3	.2	.0
130.	.2	.2	.2	.0
140.	.3	.1	.2	.0
150.	.3	.1	.2	.0
160.	.2	.1	.3	.0
170.	.3	.1	.2	.0
180.	.1	.2	.1	.1
190.	.0	.4	.0	.3
200.	.0	.3	.0	.3
210.	.0	.4	.0	.2
220.	.0	.3	.0	.2
230.	.0	.3	.0	.2
240.	.0	.2	.0	.2
250.	.0	.2	.0	.2
260.	.0	.2	.0	.2
270.	.0	.2	.0	.2
280.	.0	.2	.0	.2
290.	.0	.2	.0	.1
300.	.0	.2	.0	.3
310.	.0	.2	.0	.3
320.	.0	.2	.0	.4
330.	.0	.2	.0	.4
340.	.0	.3	.0	.4
350.	.0	.3	.0	.4
360.	.1	.1	.1	.2
MAX	.5	.4	.5	.4
DEGR.	100	190	80	320

THE HIGHEST CONCENTRATION OF .50 PPM OCCURRED AT RECEPTOR REC3 .

JOB: Springdale St & Westminster Blvd RUN: Project 2020 -- PM Peak Hour

DATE : 11/24/10
TIME : 16:39:29

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	530.0	.0	530.0	500.0	500.	360.	AG	1441.	1.7	.0	80.0		
2. NBD	530.0	500.0	530.0	1000.0	500.	360.	AG	1097.	1.7	.0	44.0		
3. NBQ	530.0	440.0	530.0	395.9	44.	180.	AG	17.	100.0	.0	60.0	.40	2.2
4. SBA	470.0	1000.0	470.0	500.0	500.	180.	AG	1553.	1.7	.0	80.0		
5. SBD	470.0	500.0	470.0	.0	500.	180.	AG	1306.	1.7	.0	44.0		
6. SBQ	470.0	560.0	470.0	607.5	47.	360.	AG	17.	100.0	.0	60.0	.43	2.4
7. EBA	.0	470.0	500.2	470.0	500.	90.	AG	1483.	1.7	.0	80.0		
8. EBD	500.0	470.0	1000.0	470.0	500.	90.	AG	2441.	1.7	.0	56.0		
9. EBQ	440.0	470.0	393.1	470.0	47.	270.	AG	17.	100.0	.0	60.0	.43	2.4
10. WBA	1000.0	530.0	500.0	530.0	500.	270.	AG	1504.	1.7	.0	80.0		
11. WBD	500.0	530.0	.0	530.0	500.	270.	AG	1137.	1.7	.0	44.0		
12. WBQ	560.0	530.0	607.6	530.0	48.	90.	AG	17.	100.0	.0	60.0	.43	2.4

JOB: Springdale St & Westminster Blvd RUN: Project 2020 -- PM Peak Hour

DATE : 11/24/10
TIME : 16:39:29

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
3. NBQ	60	28	3.0	1441	1600	2.64	3	3
6. SBQ	60	28	3.0	1553	1600	2.64	3	3
9. EBQ	60	29	3.0	1483	1600	2.64	3	3
12. WBQ	60	29	3.0	1504	1600	2.64	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. Rcpt_1	420.0	580.0	5.4
2. Rcpt_2	580.0	580.0	5.4
3. Rcpt_3	420.0	420.0	5.4
4. Rcpt_4	580.0	420.0	5.4

JOB: Springdale St & Westminster Blvd RUN: Project 2020 -- PM Peak Hour

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

THE HIGHEST CONCENTRATION OF .40 PPM OCCURRED AT RECEPTOR REC3 .

JOB: Beach Blvd & Center Ave/I-405 SB Ramps RUN: Project 2020 -- PM Peak Hour

DATE : 12/ 6/10
TIME : 8:43:29

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	530.0	.0	530.0	500.0	500.	360.	AG	2883.	1.7	.0	80.0		
2. NBD	530.0	500.0	530.0	1000.0	500.	360.	AG	3323.	1.7	.0	80.0		
3. NBQ	530.0	440.0	530.0	405.4	35.	180.	AG	6.	100.0	.0	60.0	.49	1.8
4. SBA	470.0	1000.0	470.0	500.0	500.	180.	AG	3530.	1.7	.0	80.0		
5. SBD	470.0	500.0	470.0	.0	500.	180.	AG	3787.	.9	.0	68.0		
6. SBQ	470.0	500.0	470.0	542.5	42.	360.	AG	6.	100.0	.0	60.0	.60	2.2
7. EBA	.0	470.0	500.0	470.0	500.	90.	AG	1569.	1.7	.0	80.0		
8. EBQ	440.0	470.0	-466.2	470.0	906.	270.	AG	27.	100.0	.0	60.0	1.31	46.0
9. WBD	500.0	500.0	.0	500.0	500.	270.	AG	872.	1.7	.0	44.0		

JOB: Beach Blvd & Center Ave/I-405 SB Ramps RUN: Project 2020 -- PM Peak Hour

DATE : 12/ 6/10
TIME : 8:43:29

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
3. NBQ	60	11	3.0	2883	1600	2.64	3	3
6. SBQ	60	11	3.0	3530	1600	2.64	3	3
8. EBQ	60	46	3.0	1569	1600	2.64	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. Rcpt_1	420.0	520.0	5.4
2. Rcpt_2	580.0	520.0	5.4
3. Rcpt_3	420.0	420.0	5.4
4. Rcpt_4	580.0	420.0	5.4

JOB: Beach Blvd & Center Ave/I-405 SB Ramps RUN: Project 2020 -- PM Peak Hour

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	.4	.1
10.	.4	.0	.6	.0
20.	.5	.0	.5	.0
30.	.3	.0	.4	.0
40.	.3	.0	.4	.0
50.	.3	.0	.3	.0
60.	.3	.0	.3	.0
70.	.3	.0	.2	.0
80.	.3	.0	.2	.0
90.	.4	.0	.2	.0
100.	.3	.0	.2	.0
110.	.3	.0	.2	.0
120.	.5	.0	.2	.0
130.	.4	.0	.2	.0
140.	.4	.0	.2	.0
150.	.4	.0	.2	.0
160.	.4	.0	.3	.0
170.	.5	.0	.2	.0
180.	.4	.1	.1	.1
190.	.2	.4	.0	.3
200.	.2	.3	.0	.3
210.	.3	.3	.0	.3
220.	.3	.2	.0	.3
230.	.3	.2	.0	.2
240.	.3	.3	.0	.2
250.	.3	.5	.0	.2
260.	.4	.5	.0	.2
270.	.3	.6	.2	.4
280.	.0	.2	.3	.4
290.	.0	.2	.2	.5
300.	.0	.3	.2	.2
310.	.0	.3	.2	.2
320.	.0	.3	.2	.2
330.	.0	.4	.2	.4
340.	.0	.5	.2	.5
350.	.0	.4	.2	.5
360.	.1	.1	.4	.1
MAX	.5	.6	.6	.5
DEGR.	20	270	10	290

THE HIGHEST CONCENTRATION OF .60 PPM OCCURRED AT RECEPTOR REC3 .

JOB: Beach Blvd & Center Ave/I-405 SB Ramps RUN: Project 2040 -- PM Peak Hour

DATE : 12/ 6/10
TIME : 8:45:37

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	530.0	.0	530.0	500.0	500.	360.	AG	3071.	.9	.0	80.0		
2. NBD	530.0	500.0	530.0	1000.0	500.	360.	AG	3532.	.9	.0	80.0		
3. NBQ	530.0	440.0	530.0	403.1	37.	180.	AG	3.	100.0	.0	60.0	.52	1.9
4. SBA	470.0	1000.0	470.0	500.0	500.	180.	AG	3849.	.9	.0	80.0		
5. SBD	470.0	500.0	470.0	.0	500.	180.	AG	4089.	.9	.0	56.0		
6. SBQ	470.0	500.0	470.0	546.3	46.	360.	AG	3.	100.0	.0	60.0	.66	2.3
7. EBA	.0	470.0	500.0	470.0	500.	90.	AG	1690.	.9	.0	80.0		
8. EBQ	440.0	470.0	-726.5	470.0	1166.	270.	AG	14.	100.0	.0	60.0	1.41	59.3
9. WBD	500.0	500.0	.0	500.0	500.	270.	AG	989.	.9	.0	44.0		

JOB: Beach Blvd & Center Ave/I-405 SB Ramps RUN: Project 2040 -- PM Peak Hour

DATE : 12/ 6/10
TIME : 8:45:37

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
3. NBQ	60	11	3.0	3071	1600	1.39	3	3
6. SBQ	60	11	3.0	3849	1600	1.39	3	3
8. EBQ	60	46	3.0	1690	1600	1.39	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. Rcpt_1	420.0	520.0	5.4
2. Rcpt_2	580.0	520.0	5.4
3. Rcpt_3	420.0	420.0	5.4
4. Rcpt_4	580.0	420.0	5.4

JOB: Beach Blvd & Center Ave/I-405 SB Ramps RUN: Project 2040 -- PM Peak Hour

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

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

JOB: Beach Blvd & McFadden Ave RUN: Project 2040 -- AM Peak Hour

DATE : 12/ 2/10
TIME : 16: 9:29

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	542.0	.0	542.0	500.0	500.	360.	AG	3437.	.9	.0	****		
2. NBD	542.0	500.0	542.0	1000.0	500.	360.	AG	3587.	.9	.0	68.0		
3. NBQ	542.0	452.0	542.0	417.1	35.	180.	AG	6.	100.0	.0	84.0	.44	1.8
4. SBA	464.0	1000.0	464.0	500.0	500.	180.	AG	3370.	.9	.0	92.0		
5. SBD	464.0	500.0	464.0	.0	500.	180.	AG	3370.	.9	.0	68.0		
6. SBQ	464.0	548.0	464.0	587.9	40.	360.	AG	5.	100.0	.0	72.0	.50	2.0
7. EBA	.0	476.0	500.0	476.0	500.	90.	AG	838.	.9	.0	64.0		
8. EBD	500.0	476.0	1000.0	476.0	500.	90.	AG	727.	.9	.0	44.0		
9. EBQ	428.0	476.0	372.3	476.0	56.	270.	AG	11.	100.0	.0	48.0	.71	2.8
10. WBA	1000.0	524.0	500.0	524.0	500.	270.	AG	1148.	.9	.0	68.0		
11. WBD	500.0	524.0	.0	524.0	500.	270.	AG	1109.	.9	.0	44.0		
12. WBQ	584.0	524.0	724.1	524.0	140.	90.	AG	11.	100.0	.0	48.0	.98	7.1

JOB: Beach Blvd & McFadden Ave RUN: Project 2040 -- AM Peak Hour

DATE : 12/ 2/10
TIME : 16: 9:29

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
3. NBQ	60	13	3.0	3437	1600	1.39	3	3
6. SBQ	60	13	3.0	3370	1600	1.39	3	3
9. EBQ	60	44	3.0	838	1600	1.39	3	3
12. WBQ	60	44	3.0	1148	1600	1.39	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. Rcpt_1	408.0	568.0	5.4
2. Rcpt_2	604.0	568.0	5.4
3. Rcpt_3	408.0	432.0	5.4
4. Rcpt_4	604.0	432.0	5.4

JOB: Beach Blvd & McFadden Ave RUN: Project 2040 -- AM Peak Hour

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

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

JOB: Bristol St & I-405 NB Off-Ramps/SC Plaza RUN: Project 2040 -- PM Peak Hour

DATE : 12/ 2/10
TIME : 16:43:50

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	2437.	.9	.0	68.0		
2. NBD	524.0	500.0	524.0	1000.0	500.	360.	AG	3456.	.9	.0	68.0		
3. NBQ	524.0	476.0	524.0	412.7	63.	180.	AG	5.	100.0	.0	48.0	.64	3.2
4. SBA	470.0	1000.0	470.0	500.0	500.	180.	AG	2820.	.9	.0	80.0		
5. SBD	470.0	500.0	470.0	.0	500.	180.	AG	3976.	.9	1.0	80.0		
6. SBQ	470.0	560.0	470.0	618.6	59.	360.	AG	6.	100.0	.0	60.0	.59	3.0
7. EBA	.0	488.0	500.0	488.0	500.	90.	AG	709.	.9	.0	44.0		
8. EBQ	440.0	488.0	356.1	488.0	84.	270.	AG	5.	100.0	.0	24.0	.78	4.3
9. WBA	1000.0	530.0	500.0	530.0	500.	270.	AG	1841.	.9	.0	80.0		
10. WBD	500.0	530.0	.0	530.0	500.	270.	AG	375.	.9	.0	44.0		
11. WBQ	548.0	530.0	639.8	530.0	92.	90.	AG	12.	100.0	.0	60.0	.81	4.7

JOB: Bristol St & I-405 NB Off-Ramps/SC Plaza RUN: Project 2040 -- PM Peak Hour

DATE : 12/ 2/10
TIME : 16:43:50

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
3. NBQ	60	19	3.0	2437	1600	1.39	3	3
6. SBQ	60	19	3.0	2820	1600	1.39	3	3
8. EBQ	60	38	3.0	709	1600	1.39	3	3
11. WBQ	60	38	3.0	1841	1600	1.39	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. Rcpt_1	420.0	580.0	5.4
2. Rcpt_2	568.0	580.0	5.4
3. Rcpt_3	420.0	456.0	5.4
4. Rcpt_4	568.0	456.0	5.4

JOB: Bristol St & I-405 NB Off-Ramps/SC Plaza RUN: Project 2040 -- PM Peak Hour

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.	.1	.0	.2	.0
20.	.2	.0	.2	.0
30.	.2	.0	.2	.0
40.	.2	.0	.3	.0
50.	.2	.0	.2	.0
60.	.2	.0	.1	.1
70.	.2	.0	.2	.1
80.	.2	.0	.2	.0
90.	.2	.0	.1	.0
100.	.3	.1	.1	.0
110.	.3	.1	.1	.0
120.	.2	.1	.1	.0
130.	.1	.1	.1	.0
140.	.1	.1	.2	.0
150.	.3	.0	.2	.0
160.	.2	.0	.3	.0
170.	.2	.0	.2	.0
180.	.1	.1	.1	.1
190.	.0	.2	.0	.2
200.	.0	.3	.0	.2
210.	.0	.2	.0	.2
220.	.0	.2	.0	.2
230.	.0	.1	.0	.2
240.	.0	.1	.0	.2
250.	.0	.2	.0	.2
260.	.0	.2	.0	.2
270.	.0	.2	.0	.2
280.	.0	.2	.0	.2
290.	.0	.2	.0	.2
300.	.0	.2	.0	.1
310.	.0	.2	.0	.1
320.	.0	.2	.0	.2
330.	.0	.2	.0	.2
340.	.0	.3	.0	.2
350.	.0	.2	.0	.3
360.	.1	.1	.1	.1
MAX	.3	.3	.3	.3
DEGR.	100	200	40	350

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

JOB: Euclid St & I-405 NB Ramps/Newhope St RUN: Project 2040 -- PM Peak Hour

DATE : 12/ 6/10
TIME : 8:52:38

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	530.0	.0	530.0	500.0	500.	360.	AG	1052.	.9	.0	80.0		
2. NBD	530.0	500.0	530.0	1000.0	500.	360.	AG	1647.	.9	.0	56.0		
3. NBQ	530.0	440.0	530.0	403.3	37.	180.	AG	10.	100.0	.0	60.0	.34	1.9
4. SBA	476.0	1000.0	476.0	500.0	500.	180.	AG	1420.	.9	.0	68.0		
5. SBD	476.0	500.0	476.0	.0	500.	180.	AG	2724.	.9	.0	56.0		
6. SBQ	476.0	548.0	476.0	610.1	62.	360.	AG	8.	100.0	.0	48.0	.58	3.2
7. EBA	.0	470.0	500.0	470.0	500.	90.	AG	2395.	.9	.0	80.0		
8. EBD	500.0	470.0	1000.0	470.0	500.	90.	AG	524.	.9	.0	44.0		
9. EBQ	452.0	470.0	386.5	470.0	65.	270.	AG	8.	100.0	.0	60.0	.60	3.3
10. WBA	1000.0	524.0	500.0	524.0	500.	270.	AG	743.	.9	.0	68.0		
11. WBD	500.0	524.0	.0	524.0	500.	270.	AG	714.	.9	.0	44.0		
12. WBQ	560.0	524.0	585.3	524.0	25.	90.	AG	6.	100.0	.0	48.0	.23	1.3

JOB: Euclid St & I-405 NB Ramps/Newhope St RUN: Project 2040 -- PM Peak Hour

DATE : 12/ 6/10
TIME : 8:52:38

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
3. NBQ	60	32	3.0	1052	1600	1.39	3	3
6. SBQ	60	32	3.0	1420	1600	1.39	3	3
9. EBQ	60	25	3.0	2395	1600	1.39	3	3
12. WBQ	60	25	3.0	743	1600	1.39	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. Rcpt_1	432.0	568.0	5.4
2. Rcpt_2	580.0	568.0	5.4
3. Rcpt_3	432.0	420.0	5.4
4. Rcpt_4	580.0	420.0	5.4

JOB: Euclid St & I-405 NB Ramps/Newhope St RUN: Project 2040 -- PM Peak Hour

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.	.0	.0	.1	.0
10.	.1	.0	.2	.0
20.	.1	.0	.1	.0
30.	.1	.0	.2	.0
40.	.0	.0	.2	.0
50.	.0	.0	.1	.0
60.	.0	.0	.1	.0
70.	.0	.0	.1	.0
80.	.0	.0	.1	.0
90.	.0	.0	.1	.0
100.	.0	.0	.1	.0
110.	.0	.0	.1	.0
120.	.0	.0	.1	.0
130.	.0	.0	.1	.0
140.	.0	.0	.1	.0
150.	.1	.0	.1	.0
160.	.1	.0	.1	.0
170.	.1	.0	.1	.0
180.	.1	.0	.0	.0
190.	.0	.1	.0	.1
200.	.0	.1	.0	.1
210.	.0	.1	.0	.1
220.	.0	.1	.0	.1
230.	.1	.0	.0	.1
240.	.1	.1	.0	.0
250.	.1	.1	.0	.1
260.	.0	.1	.0	.0
270.	.0	.0	.0	.1
280.	.0	.0	.1	.1
290.	.0	.0	.1	.1
300.	.0	.0	.1	.0
310.	.0	.0	.1	.0
320.	.0	.1	.1	.0
330.	.0	.1	.1	.0
340.	.0	.1	.1	.1
350.	.0	.1	.1	.1
360.	.0	.0	.1	.0
MAX	.1	.1	.2	.1
DEGR.	10	190	10	190

THE HIGHEST CONCENTRATION OF .20 PPM OCCURRED AT RECEPTOR REC3 .

JOB: Goldenwest St & Bolsa Ave RUN: Project 2040 -- PM Peak Hour

DATE : 12/ 2/10
TIME : 17:24:37

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	536.0	.0	536.0	500.0	500.	360.	AG	2011.	.9	.0	92.0		
2. NBD	536.0	500.0	536.0	1000.0	500.	360.	AG	2285.	.9	.0	56.0		
3. NBQ	536.0	428.0	536.0	373.0	55.	180.	AG	11.	100.0	.0	72.0	.50	2.8
4. SBA	464.0	1000.0	464.0	500.0	500.	180.	AG	1473.	.9	.0	92.0		
5. SBD	464.0	500.0	464.0	.0	500.	180.	AG	1926.	.9	.0	56.0		
6. SBQ	464.0	572.0	464.0	612.2	40.	360.	AG	11.	100.0	.0	72.0	.37	2.0
7. EBA	.0	464.0	500.0	464.0	500.	90.	AG	1867.	.9	.0	92.0		
8. EBD	500.0	464.0	1000.0	464.0	500.	90.	AG	1990.	.9	.0	68.0		
9. EBQ	428.0	464.0	382.1	464.0	46.	270.	AG	10.	100.0	.0	72.0	.42	2.3
10. WBA	1000.0	536.0	500.0	536.0	500.	270.	AG	2025.	.9	.0	92.0		
11. WBD	500.0	536.0	.0	536.0	500.	270.	AG	1175.	.9	.0	56.0		
12. WBQ	572.0	536.0	621.8	536.0	50.	90.	AG	10.	100.0	.0	72.0	.45	2.5

JOB: Goldenwest St & Bolsa Ave RUN: Project 2040 -- PM Peak Hour

DATE : 12/ 2/10
TIME : 17:24:37

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
3. NBQ	60	30	3.0	2011	1600	1.39	3	3
6. SBQ	60	30	3.0	1473	1600	1.39	3	3
9. EBQ	60	27	3.0	1867	1600	1.39	3	3
12. WBQ	60	27	3.0	2025	1600	1.39	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. Rcpt_1	408.0	592.0	5.4
2. Rcpt_2	592.0	592.0	5.4
3. Rcpt_3	408.0	408.0	5.4
4. Rcpt_4	592.0	408.0	5.4

JOB: Goldenwest St & Bolsa Ave RUN: Project 2040 -- PM Peak Hour

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.	.0	.0	.0	.0
10.	.1	.0	.1	.0
20.	.1	.0	.1	.0
30.	.1	.0	.0	.1
40.	.0	.0	.0	.1
50.	.0	.0	.1	.1
60.	.0	.0	.0	.1
70.	.0	.0	.2	.1
80.	.0	.0	.1	.1
90.	.0	.0	.0	.0
100.	.1	.1	.0	.0
110.	.1	.1	.0	.0
120.	.0	.1	.0	.0
130.	.0	.1	.1	.0
140.	.0	.1	.1	.0
150.	.0	.0	.1	.0
160.	.2	.0	.1	.0
170.	.1	.0	.1	.0
180.	.0	.0	.0	.0
190.	.0	.1	.0	.1
200.	.0	.1	.0	.1
210.	.0	.0	.0	.1
220.	.0	.1	.0	.1
230.	.0	.1	.0	.1
240.	.0	.1	.0	.0
250.	.0	.1	.0	.0
260.	.0	.2	.0	.0
270.	.0	.1	.0	.0
280.	.0	.1	.1	.1
290.	.0	.1	.1	.1
300.	.0	.1	.1	.0
310.	.0	.1	.1	.1
320.	.0	.1	.0	.1
330.	.0	.1	.0	.0
340.	.0	.1	.0	.1
350.	.0	.1	.0	.1
360.	.0	.0	.0	.0
MAX	.2	.2	.2	.1
DEGR.	160	260	70	30

THE HIGHEST CONCENTRATION OF .20 PPM OCCURRED AT RECEPTOR REC3 .

JOB: I-405 Off-Ramp/SR22 Ramps & Garden Grove RUN: Project 2040 -- PM Peak Hour

DATE : 12/ 2/10
TIME : 18:14:13

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	518.0	.0	518.0	500.0	500.	360.	AG	1297.	.9	.0	56.0		
2. NBD	518.0	500.0	518.0	1000.0	500.	360.	AG	1391.	.9	.0	32.0		
3. NBQ	518.0	464.0	518.0	393.1	71.	180.	AG	6.	100.0	.0	36.0	.65	3.6
4. SBA	488.0	1000.0	488.0	500.0	500.	180.	AG	503.	.9	.0	44.0		
5. SBQ	488.0	536.0	488.0	577.2	41.	360.	AG	4.	100.0	.0	24.0	.38	2.1
6. EBA	.0	482.0	500.0	482.0	500.	90.	AG	1564.	.9	.0	56.0		
7. EBD	500.0	482.0	1000.0	482.0	500.	90.	AG	697.	.9	.0	32.0		
8. EBQ	476.0	482.0	399.1	482.0	77.	270.	AG	5.	100.0	.0	36.0	.70	3.9
9. WBA	1000.0	518.0	500.0	518.0	500.	270.	AG	458.	.9	.0	56.0		
10. WBD	500.0	518.0	.0	518.0	500.	270.	AG	1734.	.9	.0	44.0		
11. WBQ	536.0	518.0	558.4	518.0	22.	90.	AG	5.	100.0	.0	36.0	.20	1.1

JOB: I-405 Off-Ramp/SR22 Ramps & Garden Grove RUN: Project 2040 -- PM Peak Hour

DATE : 12/ 2/10
TIME : 18:14:13

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
3. NBQ	60	30	3.0	1297	1600	1.39	3	3
5. SBQ	60	30	3.0	503	1600	1.39	3	3
8. EBQ	60	27	3.0	1564	1600	1.39	3	3
11. WBQ	60	27	3.0	458	1600	1.39	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. Rcpt_1	456.0	556.0	5.4
2. Rcpt_2	556.0	556.0	5.4
3. Rcpt_3	456.0	444.0	5.4
4. Rcpt_4	556.0	444.0	5.4

JOB: I-405 Off-Ramp/SR22 Ramps & Garden Grove RUN: Project 2040 -- PM Peak Hour

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.	.0	.0	.0	.0
10.	.0	.0	.0	.0
20.	.0	.0	.0	.0
30.	.0	.0	.0	.0
40.	.0	.0	.0	.0
50.	.0	.0	.0	.0
60.	.0	.0	.0	.0
70.	.0	.0	.0	.0
80.	.0	.0	.0	.0
90.	.0	.0	.0	.0
100.	.0	.0	.0	.0
110.	.0	.0	.0	.0
120.	.0	.0	.0	.0
130.	.0	.0	.0	.0
140.	.0	.0	.0	.0
150.	.0	.0	.0	.0
160.	.0	.0	.0	.0
170.	.1	.0	.0	.0
180.	.0	.0	.0	.0
190.	.0	.1	.0	.1
200.	.0	.0	.0	.1
210.	.0	.0	.0	.1
220.	.1	.0	.0	.0
230.	.1	.0	.0	.0
240.	.1	.0	.0	.0
250.	.2	.2	.0	.0
260.	.1	.1	.0	.0
270.	.0	.0	.0	.0
280.	.0	.0	.1	.2
290.	.0	.0	.2	.2
300.	.0	.0	.1	.0
310.	.0	.0	.1	.0
320.	.0	.0	.0	.0
330.	.0	.1	.0	.0
340.	.0	.1	.0	.1
350.	.0	.1	.0	.1
360.	.0	.0	.0	.0
MAX	.2	.2	.2	.2
DEGR.	250	250	290	280

THE HIGHEST CONCENTRATION OF .20 PPM OCCURRED AT RECEPTOR REC1 .

JOB: Magnolia St & Warner Ave -- PM RUN: Project 2040 -- PM Peak Hour

DATE : 11/29/10
TIME : 14: 9:42

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	530.0	.0	530.0	500.0	500.	360.	AG	1554.	.9	.0	80.0		
2. NBD	530.0	500.0	530.0	1000.0	500.	360.	AG	1686.	.9	.0	56.0		
3. NBQ	530.0	428.0	530.0	375.5	53.	180.	AG	10.	100.0	.0	60.0	.49	2.7
4. SBA	470.0	1000.0	470.0	500.0	500.	180.	AG	1777.	.9	.0	80.0		
5. SBD	470.0	500.0	470.0	.0	500.	180.	AG	1563.	.9	.0	56.0		
6. SBQ	470.0	572.0	470.0	632.2	60.	360.	AG	10.	100.0	.0	60.0	.56	3.1
7. EBA	.0	464.0	500.0	464.0	500.	90.	AG	1766.	.9	.0	92.0		
8. EBD	500.0	464.0	1000.0	464.0	500.	90.	AG	1834.	.9	.0	68.0		
9. EBQ	440.0	464.0	398.2	464.0	42.	270.	AG	10.	100.0	.0	72.0	.38	2.1
10. WBA	1000.0	536.0	500.0	536.0	500.	270.	AG	2153.	.9	.0	92.0		
11. WBD	500.0	536.0	.0	536.0	500.	270.	AG	2167.	.9	.0	56.0		
12. WBQ	560.0	536.0	610.9	536.0	51.	90.	AG	10.	100.0	.0	72.0	.46	2.6

JOB: Magnolia St & Warner Ave -- PM RUN: Project 2040 -- PM Peak Hour

DATE : 11/29/10
TIME : 14: 9:42

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
3. NBQ	60	31	3.0	1554	1600	1.39	3	3
6. SBQ	60	31	3.0	1777	1600	1.39	3	3
9. EBQ	60	26	3.0	1766	1600	1.39	3	3
12. WBQ	60	26	3.0	2153	1600	1.39	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. Rcpt_1	420.0	592.0	5.4
2. Rcpt_2	580.0	592.0	5.4
3. Rcpt_3	420.0	408.0	5.4
4. Rcpt_4	580.0	408.0	5.4

JOB: Magnolia St & Warner Ave -- PM RUN: Project 2040 -- PM Peak Hour

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.	.0	.0	.0	.0
10.	.1	.0	.1	.0
20.	.1	.0	.1	.0
30.	.1	.0	.0	.0
40.	.1	.0	.0	.1
50.	.0	.0	.0	.1
60.	.0	.0	.0	.1
70.	.0	.0	.2	.1
80.	.0	.0	.1	.1
90.	.0	.0	.0	.0
100.	.1	.1	.0	.0
110.	.1	.1	.0	.0
120.	.0	.1	.0	.0
130.	.0	.1	.0	.0
140.	.1	.1	.0	.0
150.	.1	.1	.1	.0
160.	.0	.0	.1	.0
170.	.1	.0	.1	.0
180.	.0	.1	.0	.0
190.	.0	.1	.0	.1
200.	.0	.0	.0	.1
210.	.1	.1	.0	.1
220.	.1	.0	.0	.0
230.	.1	.0	.0	.0
240.	.1	.0	.0	.0
250.	.1	.1	.0	.0
260.	.1	.1	.0	.0
270.	.0	.0	.0	.0
280.	.0	.0	.1	.1
290.	.0	.0	.1	.2
300.	.0	.0	.1	.0
310.	.0	.0	.1	.0
320.	.0	.1	.0	.0
330.	.0	.1	.0	.0
340.	.0	.1	.0	.1
350.	.0	.1	.0	.1
360.	.0	.0	.0	.0
MAX	.1	.1	.2	.2
DEGR.	10	100	70	290

THE HIGHEST CONCENTRATION OF .20 PPM OCCURRED AT RECEPTOR REC3 .

JOB: Seal Beach Blvd & I-405 SB Ramps RUN: Project 2040 -- PM Peak Hour

DATE : 11/29/10
TIME : 13:28:35

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	524.0	.0	524.0	500.0	500.	360.	AG	2318.	.9	.0	80.0		
2. NBD	524.0	500.0	524.0	1000.0	500.	360.	AG	2705.	.9	.0	56.0		
3. NBQ	524.0	476.0	524.0	440.6	35.	180.	AG	4.	100.0	.0	60.0	.42	1.8
4. SBA	470.0	1000.0	470.0	500.0	500.	180.	AG	2379.	.9	.0	80.0		
5. SBD	470.0	500.0	470.0	.0	500.	180.	AG	2244.	.9	.0	56.0		
6. SBQ	470.0	536.0	470.0	572.4	36.	360.	AG	4.	100.0	.0	60.0	.43	1.8
7. EBA	.0	488.0	500.0	488.0	500.	90.	AG	240.	.9	.0	44.0		
8. EBD	500.0	488.0	1000.0	488.0	500.	90.	AG	1170.	.9	.0	32.0		
9. EBQ	440.0	488.0	411.8	488.0	28.	270.	AG	5.	100.0	.0	24.0	.38	1.4
10. WBA	1000.0	518.0	500.0	518.0	500.	270.	AG	1343.	.9	.0	56.0		
11. WBD	500.0	518.0	.0	518.0	500.	270.	AG	161.	.9	.0	32.0		
12. WBQ	548.0	518.0	2035.4	518.0	1487.	90.	AG	8.	100.0	.0	36.0	1.40	75.6

JOB: Seal Beach Blvd & I-405 SB Ramps RUN: Project 2040 -- PM Peak Hour

DATE : 11/29/10
TIME : 13:28:35

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
3. NBQ	60	14	3.0	2318	1600	1.39	3	3
6. SBQ	60	14	3.0	2379	1600	1.39	3	3
9. EBQ	60	43	3.0	240	1600	1.39	3	3
12. WBQ	60	43	3.0	1343	1600	1.39	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. Rcpt_1	420.0	556.0	5.4
2. Rcpt_2	568.0	556.0	5.4
3. Rcpt_3	420.0	456.0	5.4
4. Rcpt_4	568.0	456.0	5.4

JOB: Seal Beach Blvd & I-405 SB Ramps RUN: Project 2040 -- PM Peak Hour

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

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

JOB: Springdale St & Westminster Blvd RUN: Project 2040 -- PM Peak Hour

DATE : 12/ 2/10
TIME : 17:40:33

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	530.0	.0	530.0	500.0	500.	360.	AG	1523.	.9	.0	80.0		
2. NBD	530.0	500.0	530.0	1000.0	500.	360.	AG	1150.	.9	.0	44.0		
3. NBQ	530.0	440.0	530.0	391.8	48.	180.	AG	9.	100.0	.0	60.0	.44	2.4
4. SBA	470.0	1000.0	470.0	500.0	500.	180.	AG	1654.	.9	.0	80.0		
5. SBD	470.0	500.0	470.0	.0	500.	180.	AG	1359.	.9	.0	44.0		
6. SBQ	470.0	560.0	470.0	612.3	52.	360.	AG	9.	100.0	.0	60.0	.48	2.7
7. EBA	.0	470.0	500.2	470.0	500.	90.	AG	1543.	.9	.0	80.0		
8. EBD	500.0	470.0	1000.0	470.0	500.	90.	AG	2632.	.9	.0	56.0		
9. EBQ	440.0	470.0	392.8	470.0	47.	270.	AG	9.	100.0	.0	60.0	.43	2.4
10. WBA	1000.0	530.0	500.0	530.0	500.	270.	AG	1646.	.9	.0	80.0		
11. WBD	500.0	530.0	.0	530.0	500.	270.	AG	1225.	.9	.0	44.0		
12. WBQ	560.0	530.0	610.4	530.0	50.	90.	AG	9.	100.0	.0	60.0	.46	2.6

JOB: Springdale St & Westminster Blvd RUN: Project 2040 -- PM Peak Hour

DATE : 12/ 2/10
TIME : 17:40:33

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
3. NBQ	60	29	3.0	1523	1600	1.39	3	3
6. SBQ	60	29	3.0	1654	1600	1.39	3	3
9. EBQ	60	28	3.0	1543	1600	1.39	3	3
12. WBQ	60	28	3.0	1646	1600	1.39	3	3

RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. Rcpt_1	420.0	580.0	5.4
2. Rcpt_2	580.0	580.0	5.4
3. Rcpt_3	420.0	420.0	5.4
4. Rcpt_4	580.0	420.0	5.4

JOB: Springdale St & Westminster Blvd RUN: Project 2040 -- PM Peak Hour

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.	.0	.0	.0	.1
10.	.1	.0	.1	.1
20.	.1	.0	.1	.1
30.	.1	.0	.0	.1
40.	.1	.0	.0	.1
50.	.0	.0	.0	.1
60.	.0	.0	.1	.1
70.	.0	.0	.1	.1
80.	.0	.0	.1	.1
90.	.0	.0	.0	.0
100.	.1	.1	.0	.0
110.	.2	.2	.0	.0
120.	.1	.2	.0	.0
130.	.1	.2	.0	.0
140.	.0	.0	.0	.0
150.	.0	.0	.0	.0
160.	.0	.0	.1	.0
170.	.1	.0	.1	.0
180.	.0	.0	.0	.0
190.	.0	.1	.0	.1
200.	.0	.0	.0	.1
210.	.0	.0	.0	.1
220.	.0	.0	.0	.0
230.	.0	.0	.0	.0
240.	.0	.0	.0	.0
250.	.0	.0	.0	.0
260.	.0	.1	.0	.0
270.	.0	.0	.0	.0
280.	.0	.0	.1	.1
290.	.0	.0	.1	.0
300.	.0	.0	.1	.0
310.	.0	.0	.0	.1
320.	.0	.0	.0	.1
330.	.0	.0	.0	.1
340.	.0	.0	.0	.1
350.	.0	.0	.0	.2
360.	.0	.0	.0	.1
MAX	.2	.2	.1	.2
DEGR.	110	110	10	350

THE HIGHEST CONCENTRATION OF .20 PPM OCCURRED AT RECEPTOR REC1 .

Appendix G

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.