Section 5.0
Air and Public Health Appendices

APPENDIX 8.1A

Calculation of Maximum Hourly, Daily and Annual Emissions

Tables presented in this Appendix are as follows:

8.1A-1	Ammonia Slip Emissions
8.1A-2	Facility Criteria Pollutant Emissions Calculations
8.1A-3	Turbine HAPs Emissions
8.1A-4	Cooling Tower Criteria Pollutant Emissions
8.1A-5	Cooling Tower HAPs Emissions
8.1A-6	Fire Pump Criteria Pollutant Emissions
8.1A-7	Fire Pump Engine HAPs Emissions
8.1A-8	Emergency Generator Criteria Pollutant Emissions (not being permitted at this time)
8.1A-9	Emergency Generator HAPs Emissions (not being permitted at this time)
8.1A-10	Commissioning Emissions
8.1A-11	Fuel Use Calculations
8.1A-12	South Coast AQMD Monthly Emissions Calculations

Calculation of ammonia emissions from the gas turbines is based on the proposed ammonia slip limit of 5 ppmvd.

TABLE 8.1A-1
Ammonia Emissions

Scenario (100% Load, 59 F) GE Case 103	Emissions 1 turbine	Emissions 5 turbines
Maximum hourly (lbs)	4.91	24.55
Maximum annual (tons), based on proposed annual operating scenario	11.9	59.5
Annualized hourly emissions (lbs), at 8760 hrs/yr	2.717	13.584
Annualized Emissions, g/sec	0.343	1.713

In addition to the above tables, other miscellaneous support data for the device specific emissions calculations is also included in this Appendix.

Table 8.1A-2a
Detailed Calculations for Criteria Pollutant Emissions Estimates Base

Maximum Hourly, Daily and Annual Emissions								NOx			SO2	CO			VOC			PM10
		Base Load		Startup		Shutdown		Base Load	Startup	Shutdown		Base Load	Startup	Shutdown	Base Load	Startup	Shutdown	Base Load
	max. hour	hrs/day	hrs/yr	starts/day	starts/yr	stops/day	stops/yr	lb/hr	lb/event	lb/event	lb/hr	lb/hr	lb/event	lb/event	lb/hr	lb/event	lb/event	lb/hr
Turbine 1	1	22	3200	2	350	2	350	8.1	7	4.3	0.62	11.9	15.40	18.2	2.36	2.10	1.60	6.0
Turbine 2	1	22	3200	2	350	2	350	8.1	7	4.3	0.62	11.9	15.40	18.2	2.36	2.10	1.60	6.0
Turbine 3	1	22	3200	2	350	2	350	8.1	7	4.3	0.62	11.9	15.40	18.2	2,36	2.10	1.60	6.0
Turbine 4	1	22	3200	2	350	2	350	8.1	7	4.3	0.62	11.9	15.40	18.2	2.36	2.10	1.60	6.0
Turbine 5	1	22	3200	2	350	2	350	8.1	7	4.3	0.62	11.9	15.40	18.2	2.36	2.10	1.60	6.0
Fire pump engine	1	1	50	0	0	0	0	3.44	0	0	0.004	0.18	0	0	0.1	0.0	0.0	0.06
Cooling tower	1	24	3200	0	350	0	350	0	0	0	0	0	0	0	0.0	0.0	0.0	0.444

	NOx			SO2			CO			VOC			PM10			Ammonia		
	Max	Max	Total	Max	Max	Total	Max	Max	Total	Max	Max	Total	Max	Max	Total	Max	Max	Total
	lb/hr	lb/day	tpy	lb/hr	lb/day	tpy	lb/hr	lb/day	tpy	lb/hr	lb/day	tpy	lb/hr	lb/day	tpy	lb/hr	lb/day	tpy
Turbine 1	8.1	200.8	14.9	0.62	14.6	1.1	18.2	329.0	24.9	2.36	59.3	4.4	6.0	141.2	10.4	4.91	117.8	9.6
Turbine 2	8.1	200.8	14.9	0.62	14.6	1.1	18.2	329.0	24.9	2.36	59.3	4.4	6.0	141.2	10.4	4.91	117.8	9.6
Turbine 3	8.1	200.8	14.9	0.62	14.6	1.1	18.2	329.0	24.9	2.36	59.3	4.4	6.0	141.2	10.4	4.91	117.8	9.6
Turbine 4	8.1	200.8	14.9	0.62	14.6	1.1	18.2	329.0	24.9	2.36	59.3	4.4	6.0	141.2	10.4	4.91	117.8	9.6
Turbine 5	8.1	200.8	14.9	0.62	14.6	1.1	18.2	329.0	24.9	2.36	59.3	4.4	6.0	141.2	10.4	4.91	117.8	9.6
Fire pump engine	3.4	3.4	0.09	0.0	0.0	0.0001	0.2	0.2	0.0045	0.1	0.1	0.0025	0.06	0.06	0.0015	0.0	0.0	0.0
Cooling tower	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.444	10.7	0.87	0.0	0.0	0.0
Total	43.9	1007.4	74.8	3.1	73.0	5.38	91.2	1,645.2	124.6	11.9	296.7	22.1	30.5	716.7	52.9	24.6	589.2	47.9
	lb/hr	lb/day	tpy	lb/hr	lb/day	tpy	lb/hr	lb/day	tpy	lb/hr	lb/day	tpy	lb/hr	lb/day	tpy	lb/hr	lb/day	tpy

Assumptions:

Each turbine will startup in a 60 minute period, with all five starting up during a 1-hour time-frame.

Fire pump will not be tested more than 50 hours per year.

Turbine BACT will be:

NOx	2.5 ppm (1-hour)
CO	6.0 ppm (3-hour)
VOC	2.0 ppm

Annual Emissions are based on 3200 hours with 350 startups and 350 shutdowns for a total of 3,468 hours/yr

Startup duration = 1.2 hours per day (70 minutes) or 35 minutes per start
Shutdown duration = 0.4 hours per day (22 minutes) or 11 minutes per shutdown

Table 8.1A-2b
Detailed Calculations for Criteria Pollutant Air Quality Modeling Assessment

Maximum Hourly, Daily and Annual Emissions

		Base Load			Startup		Shutdown		NOx			SO2	CO			VOC			PM10
	max. hour	hrs/day	hrs/yr	hrs/day	hrs/yr	hrs/day	hrs/yr	Base Load lb/hr	Startup lb/hr	Shutdown lb/hr	lb/hr	Base Load lb/hr	Startup lb/hr	Shutdown lb/hr	Base Load lb/hr	Startup lb/hr	Shutdown lb/hr	lb/hr
Turbine 1	1	20	4000	2	419	2	419	8.1	12	10.75	0.62	11.9	26.40	26.92	2.36	3.60	3.47	6.0
Turbine 2	1	20	4000	2	419	2	419	8.1	12	10.75	0.62	11.9	26.40	26.92	2.36	3.60	3.47	6.0
Turbine 3	1	20	4000	2	419	2	419	8.1	12	10.75	0.62	11.9	26.40	26.92	2.36	3.60	3.47	6.0
Turbine 4	1	20	4000	2	419	2	419	8.1	12	10.75	0.62	11.9	26.40	26.92	2.36	3.60	3.47	6.0
Turbine 5	1	20	4000	2	419	2	419	8.1	12	10.75	0.62	11.9	26.40	26.92	2.36	3.60	3.47	6.0
Emergency generator	1	1	52	0	0	0	0	32.03	0	0	0.030	4.63	0	0	1.54	0.0	0.0	0.5020
Fire pump engine	0	0	52	0	0	0	0	3.44	0	0	0.004	0.18	0	0	0.1	0.0	0.0	0.06
Cooling tower	1	20	4000	2	419	2	419	0	0	0	0	0	0	0	0.0	0.0	0.0	0.444

	NOx			SO2			CO			VOC			PM10			Ammonia		
	Max lb/hr	Max lb/day	Total tpy	Max lb/hr	Max lb/day	Total tpy	Max lb/hr	Max lb/day	Total tpy	Max lb/hr	Max lb/day	Total tpy	Max lb/hr	Max lb/day	Total tpy	Max lb/hr	Max lb/day	Total tpy
Turbine 1	12.0	207.5	21.0	0.6	14.9	1.5	26.9	344.6	35.0	3.6	61.3	6.2	6.0	144.0	14.5	4.91	117.8	11.9
Turbine 2	12.0	207.5	21.0	0.6	14.9	1.5	26.9	344.6	35.0	3.6	61.3	6.2	6.0	144.0	14.5	4.91	117.8	11.9
Turbine 3	12.0	207.5	21.0	0.6	14.9	1.5	26.9	344.6	35.0	3.6	61.3	6.2	6.0	144.0	14.5	4.91	117.8	11.9
Turbine 4	12.0	207.5	21.0	0.6	14.9	1.5	26.9	344.6	35.0	3.6	61.3	6.2	6.0	144.0	14.5	4.91	117.8	11.9
Turbine 5	12.0	207.5	21.0	0.6	14.9	1.5	26.9	344.6	35.0	3.6	61.3	6.2	6.0	144.0	14.5	4.91	117.8	11.9
Emergency generator	32.0	32.0	0.83	0.0	0.0	0.0008	4.6	4.6	0.1204	1.5	1.5	0.0400	0.50	0.50	0.0131	0.0	0.0	0.0
Fire pump engine	0.0	0.0	0.09	0.0	0.0	0.0001	0.0	0.0	0.0047	0.0	0.0	0.0026	0.00	0.00	0.0015	0.0	0.0	0.0
Cooling tower	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.444	10.7	1.07	0.0	0.0	0.0
Total	92.0 lb/hr	1069.5 lb/day	105.8 tpy	3.1 lb/hr	74.4 lb/day	7.5 tpy	139.2 lb/hr	1,727.8 lb/day	175.0 tpy	19.5 lb/hr	308.2 lb/day	31.0 tpy	30.9 lb/hr	731.2 lb/day	73.7 tpy	24.6 lb/hr	589.2 lb/day	59.4 tpy

Assumptions:

Each turbine will startup in a 60 minute period, with all five starting up during a 1-hour time-frame.
Emergency generator and fire pump will not both be tested on the same day.
Fire pump will not be tested more than 50 hours per year.
Emergency generator will not be tested over 50 hours per year.

Table 8.1A-3
Calculation of Noncriteria Pollutant Emissions for WCEP Turbines

Calculation of Noncriteria Pollutant Emissions from Gas Turbines (each turbine)					Emission Rates for Modeling (g/s each turbine)	
Compound	Emission Factor, lb/MMscf (1)	Maximum Hourly Emissions, lb/hr/tur (2)	Maximum Daily Emissions, lb/day/tur	Annual Emissions, ton/yr/tur (3)	One-hour g/s/turbine	Annual g/s/turbine
Acetaldehyde	4.08E-02	3.61E-02	8.66E-01	8.71E-02	4.55E-03	2.51E-03
Acrolein	3.69E-03	3.26E-03	7.84E-02	7.88E-03	4.11E-04	2.27E-04
Ammonia	(4)	4.91E+00	2.93E+02	1.19E+01	0.619	3.42E-01
Benzene	3.33E-03	2.95E-03	7.07E-02	7.11E-03	3.71E-04	2.05E-04
1,3-Butadiene	1.27E-04	1.12E-04	2.70E-03	2.71E-04	1.42E-05	7.80E-06
Ethylbenzene	1.79E-02	1.58E-02	3.80E-01	3.82E-02	2.00E-03	1.10E-03
Formaldehyde	1.10E-01	9.73E-02	2.34E+00	2.35E-01	1.23E-02	6.76E-03
Hexane	2.59E-01	2.29E-01	5.50E+00	5.53E-01	2.89E-02	1.59E-02
Naphthalene	1.33E-03	1.18E-03	2.82E-02	2.84E-03	1.48E-04	8.17E-05
PAHs (total)	1.65E-04	1.46E-04	3.50E-03	3.52E-04	1.84E-05	1.01E-05
Propylene	7.70E-01	6.81E-01	1.63E+01	1.64E+00	8.58E-02	4.73E-02
Propylene oxide	2.96E-02	2.62E-02	6.29E-01	6.32E-02	3.30E-03	1.82E-03
Toluene	7.10E-02	6.28E-02	1.51E+00	1.52E-01	7.91E-03	4.36E-03
Xylene	2.61E-02	2.31E-02	5.54E-01	5.57E-02	2.91E-03	1.60E-03

Notes:

(1) Provided by CARB CATEF database and other AFC values for similar sized turbines.
(2) Based on maximum hourly turbine fuel use of 884.73 MMBtu/hr/turbine (w/o duct burner)
and fuel HHV of 1000 Btu/scf gives 0.8847 MMscf/hr/turbine.
(3) Based on maximum annual turbine fuel use of 4,270,000 MMBtu/yr/turbine (w/o duct burner)
and fuel HHV of 1000 Btu/scf gives 4270.0000 MMscf/yr/turbine.
(4) Based on 5 ppm ammonia slip from SCR system.
(5) Polycyclic aromatic hydrocarbons, excluding naphthalene (treated separately).

Table 8.1A-4

Expected Cooling Tower PM10 Emissions

Project:	EME-Walnut Creek EP	Tower Dimensions	
Mfg:	Marley	Deck Height:	27.09 Ft. AGL
# Cells:	5	Deck Length:	210.7 Ft.
acfm/Cell:	883000	Deck Width:	36.67 Ft.
Drift Loss	0.0005 %	Fan Exit Height:	39.09 Ft. AGL
Drift Frac:	0.000005	Exhaust Fan Diam:	22 Ft.

Water Source:	Reclaim/Recyled Water	Operational Data:	
TDS (mg/l) * :	5000	Hrs/Day:	24
Cycles of Concentration:	8.1	Hrs/Yr:	4838
Circulating Water Rate (gpm):	35500		
Circulating Water Rate (MMlbs/hr):	17.74		

Total PM10 Emissions:	lbs/hr:	0.444	
	lbs/day:	10.65	
	tons/yr:	1.07	
	Hourly g/sec/cell:	0.0112	
	Annual g/sec/cell:	0.0062	(annualized for 8760 hours/yr)

* Total Maximum TDS expected in circulating water.

Table 8.1A-5
Calculation of Noncriteria Pollutant Emissions from WCEP Cooling Tower

Calculation of Noncriteria Pollutant Emissions from Cooling Tower (all cells)						Emission Rates for Modeling (g/s each cell)	
Constituent	Concentration in Cooling Tower Water *		Maximum Hourly Emissions, lb/hr	Maximum Daily Emissions, lb/day	Annual Emissions, ton/yr	One-hour g/s/cell	Annual g/s/cell
Ammonia	0	ppmw	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Arsenic	0.00727	ppmw	3.23E-09	7.75E-08	7.81E-09	8.13E-11	4.49E-11
Cadmium	0.00242	ppmw	1.07E-09	2.58E-08	2.60E-09	2.71E-11	1.50E-11
Chromium	0.081	ppmw	3.60E-08	8.63E-07	8.70E-08	9.06E-10	5.01E-10
Copper	0.0485	ppmw	2.15E-08	5.17E-07	5.21E-08	5.43E-10	3.00E-10
Lead	0.0081	ppmw	3.60E-09	8.63E-08	8.70E-09	9.06E-11	5.01E-11
Mercury	0.00024	ppmw	1.07E-10	2.56E-09	2.58E-10	2.69E-12	1.48E-12
Nickel	0.145	ppmw	6.44E-08	1.55E-06	1.56E-07	1.62E-09	8.96E-10
Silver	0.0016	ppmw	7.10E-10	1.70E-08	1.72E-09	1.79E-11	9.89E-12
Zinc	0.6462	ppmw	2.87E-07	6.89E-06	6.94E-07	7.23E-09	3.99E-09

Notes:
(1) Emissions calculated from max total drift rate of 0.444 lb/hr for 5 cells
(2) Daily emissions assumes: 24.0 hrs/day operation.
(3) Annual emissions assumes: 4838.0 hrs/yr operation.
ppmw = mg/l
* Based on 8.1 cycles of concentration and avg constituents per water analysis data.

Table 8.1A-6 EXPECTED INTERNAL COMBUSTION ENGINE EMISSIONS

Liquid Fuel — Engine ID: Fire Pump

Mfg:	Clarke
Model:	JW6H-UF40
Capacity:	0 Kw
BHP:	300
RPM:	2350
Fuel:	#2 Diesel
Fuel Use:	14.5 Gph
FuelHHV:	137000 Btu/gal
mmbtu/hr:	1.99 HHV
# of Cyl:	6
Engine Design:	Lean-Burn
# of Exhaust Stacks:	1
Fuel Wt:	6.87 Lbs/gal
Fuel S:	0.05 % wt.
Fuel S:	3.435 Lbs/1000 gal
SO2:	6.87 Lbs/1000 gal

Stack Data (per stack)

Height:	48.3 Ft.
Diameter:	5 inches
Temp:	738 deg F
ACFM:	2058 at stack temp
O2:	%
H2O:	%
DSCFM:	at STP
Area:	0.137 Sq.Ft.
Velocity:	15029 Ft/Min
Max Daily Op Hrs:	1
Max Annual Op Hrs:	52

Efs (g/bhp/hr)		Lb/Hr	Lb/Day	Tons/Yr
NOx	5.2	3.44	3.44	0.0893
CO	0.27	0.18	0.18	0.0046
VOC	0.15	0.10	0.10	0.0026
PM10	0.09	0.06	0.06	0.0015
SOx	0.0055	0.0036	0.0036	0.0001
SOx(fuel)	NA	0.10	0.10	0.0026

Efs(lb/mmbtu)		Lb/Hr	Lb/Day	Tons/Yr
NOx	0	0	0	0
CO	0	0	0	0
VOC	0	0	0	0
PM10	0	0	0	0

Table 8.1A-7
Liquid Fuel IC Engine Air Toxics Emissions Calculations

Engine ID: Fire Pump
Fuel Type: Diesel
Gal/Hr: 14.5
Mgal/Hr: 0.0145
Mgal/Yr: 0.754

Max Hrs/Day: 1
Max Hrs/Yr: 52

Substance	EF lbs/Mgal	lbs/hr	lbs/yr	tons/yr	Max Hr. g/sec	Annual g/sec
Acenaphtene	6.71E-04	9.73E-06	5.06E-04	2.53E-07	1.23E-06	7.28E-09
Acenapthylene	1.02E-03	1.48E-05	7.69E-04	3.85E-07	1.87E-06	1.11E-08
Anthracene	2.23E-04	3.23E-06	1.68E-04	8.41E-08	4.08E-07	2.42E-09
Benzo-a-anthracene	9.60E-05	1.39E-06	7.24E-05	3.62E-08	1.76E-07	1.04E-09
BaP	7.90E-05	1.15E-06	5.96E-05	2.98E-08	1.44E-07	8.58E-10
Benzo-a-fluoranthene	1.12E-04	1.62E-06	8.44E-05	4.22E-08	2.05E-07	1.22E-09
Benzo-ghi-perylene	9.00E-05	1.31E-06	6.79E-05	3.39E-08	1.65E-07	9.77E-10
Benzo-k-fluoranthene	7.83E-05	1.14E-06	5.90E-05	2.95E-08	1.43E-07	8.50E-10
Chrysene	1.30E-04	1.89E-06	9.80E-05	4.90E-08	2.38E-07	1.41E-09
Dibenz-ah-anthracene	8.20E-05	1.19E-06	6.18E-05	3.09E-08	1.50E-07	8.90E-10
Fluoranthene	3.30E-04	4.79E-06	2.49E-04	1.24E-07	6.03E-07	3.58E-09
Fluorene	9.65E-04	1.40E-05	7.28E-04	3.64E-07	1.76E-06	1.05E-08
Indeno-123cd-pyrene	8.45E-05	1.23E-06	6.37E-05	3.19E-08	1.55E-07	9.17E-10
Naphthalene	1.60E-02	2.32E-04	1.21E-02	6.03E-06	2.93E-05	1.74E-07
Phenanthrene	3.54E-03	5.13E-05	2.67E-03	1.33E-06	6.47E-06	3.84E-08
Pyrene	2.64E-04	3.83E-06	1.99E-04	9.95E-08	4.83E-07	2.87E-09
Ethylbenzene	6.76E-03	9.80E-05	5.10E-03	2.55E-06	1.24E-05	7.34E-08
13 Butadiene	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Acetaldehyde	3.47E-03	5.03E-05	2.62E-03	1.31E-06	6.35E-06	3.77E-08
Acrolein	1.07E-03	1.55E-05	8.07E-04	4.03E-07	1.96E-06	1.16E-08
Benzene	1.81E-01	2.62E-03	1.36E-01	6.82E-05	3.31E-04	1.96E-06
Formaldehyde	5.10E-02	7.40E-04	3.85E-02	1.92E-05	9.33E-05	5.54E-07
Propylene	3.41E-01	4.94E-03	2.57E-01	1.29E-04	6.24E-04	3.70E-06
Toluene	6.10E-02	8.85E-04	4.60E-02	2.30E-05	1.12E-04	6.62E-07
Xylenes	2.10E-02	3.05E-04	1.58E-02	7.92E-06	3.84E-05	2.28E-07
Hexane	1.39E-03	2.02E-05	1.05E-03	5.24E-07	2.54E-06	1.51E-08
Arsenic	1.60E-03	2.32E-05	1.21E-03	6.03E-07	2.93E-06	1.74E-08
Beryllium	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Cadmium	1.50E-03	2.18E-05	1.13E-03	5.66E-07	2.74E-06	1.63E-08
Hex Chromium	1.00E-04	1.45E-06	7.54E-05	3.77E-08	1.83E-07	1.09E-09
Copper	4.10E-03	5.95E-05	3.09E-03	1.55E-06	7.50E-06	4.45E-08
Lead	8.30E-03	1.20E-04	6.26E-03	3.13E-06	1.52E-05	9.01E-08
Manganese	3.10E-03	4.50E-05	2.34E-03	1.17E-06	5.67E-06	3.36E-08
Mercury	2.00E-03	2.90E-05	1.51E-03	7.54E-07	3.66E-06	2.17E-08
Nickel	3.90E-03	5.66E-05	2.94E-03	1.47E-06	7.13E-06	4.23E-08
Selenium	2.20E-03	3.19E-05	1.66E-03	8.29E-07	4.02E-06	2.39E-08
Zinc	2.24E-02	3.25E-04	1.69E-02	8.44E-06	4.10E-05	2.43E-07
Diesel PM	8.3E+00	1.20E-01	6.2E+00	3.12E-03	1.51E-02	8.99E-05

EFs: CARB-CATEF Database (mean values for source type and category)
Metals EFs from VCAPCD, 1/8/96

Table 8.1A-8 EXPECTED INTERNAL COMBUSTION ENGINE EMISSIONS

Liquid Fuel — Engine ID: Gen Set

Mfg:	Caterpillar
Model:	3516B TA
Capacity:	1750 Kw
BHP:	2347
RPM:	2350
Fuel:	#2 Diesel
Fuel Use:	119.3 Gph
FuelHHV:	137000 Btu/gal
mmbtu/hr:	16.34 HHV
# of Cyl:	12
Engine Design:	Lean-Burn
# of Exhaust Stacks:	1
Fuel Wt:	6.87 Lbs/gal
Fuel S:	0.05 % wt.
Fuel S:	3.435 Lbs/1000 gal
SO2:	6.87 Lbs/1000 gal

Stack Data (per stack)

Height:	53.3 Ft.
Diameter:	8 inches
Temp:	797 deg F
ACFM:	13843 at stack temp
O2:	%
H2O:	%
DSCFM:	at STP
Area:	0.351 Sq.Ft.
Velocity:	39490 Ft/Min
Max Daily Op Hrs:	1
Max Annual Op Hrs:	52

Efs (g/bhp/hr)		Lb/Hr	Lb/Day	Tons/Yr
NOx	6.19	32.00	32.00	0.8320
CO	0.89	4.60	4.60	0.1196
VOC	0.3	1.55	1.55	0.0403
PM10	0.1	0.52	0.52	0.0134
SOx	0.0055	0.0284	0.0284	0.0007
SOx(fuel)	NA	0.82	0.82	0.0213

Efs(lb/mmbtu)		Lb/Hr	Lb/Day	Tons/Yr
NOx	0	0	0	0
CO	0	0	0	0
VOC	0	0	0	0
PM10	0	0	0	0

Table 8.1A-9
Liquid Fuel IC Engine Air Toxics Emissions Calculations

Engine ID: Emer Gen Set
Fuel Type: Diesel
Gal/Hr: 119.3
Mgal/Hr: 0.1193
Mgal/Yr: 6.2036
Max Hrs/Day: 1
Max Hrs/Yr: 52

Substance	EF lbs/Mgal	lbs/hr	lbs/yr	tons/yr	Max Hr. g/sec	Annual g/sec
Acenaphtene	6.71E-04	8.01E-05	4.16E-03	2.08E-06	1.01E-05	5.99E-08
Acenapthylene	1.02E-03	1.22E-04	6.33E-03	3.16E-06	1.53E-05	9.11E-08
Anthracene	2.23E-04	2.66E-05	1.38E-03	6.92E-07	3.36E-06	1.99E-08
Benzo-a-anthracene	9.60E-05	1.15E-05	5.96E-04	2.98E-07	1.44E-06	8.57E-09
BaP	7.90E-05	9.42E-06	4.90E-04	2.45E-07	1.19E-06	7.06E-09
Benzo-a-fluoranthene	1.12E-04	1.34E-05	6.95E-04	3.47E-07	1.69E-06	1.00E-08
Benzo-ghi-perylene	9.00E-05	1.07E-05	5.58E-04	2.79E-07	1.35E-06	8.04E-09
Benzo-k-fluoranthene	7.83E-05	9.34E-06	4.86E-04	2.43E-07	1.18E-06	6.99E-09
Chrysene	1.30E-04	1.55E-05	8.06E-04	4.03E-07	1.96E-06	1.16E-08
Dibenz-ah-anthracene	8.20E-05	9.78E-06	5.09E-04	2.54E-07	1.23E-06	7.32E-09
Fluoranthene	3.30E-04	3.94E-05	2.05E-03	1.02E-06	4.96E-06	2.95E-08
Fluorene	9.65E-04	1.15E-04	5.99E-03	2.99E-06	1.45E-05	8.62E-08
Indeno-123cd-pyrene	8.45E-05	1.01E-05	5.24E-04	2.62E-07	1.27E-06	7.55E-09
Naphthalene	1.60E-02	1.91E-03	9.93E-02	4.96E-05	2.41E-04	1.43E-06
Phenanthrene	3.54E-03	4.22E-04	2.20E-02	1.10E-05	5.33E-05	3.16E-07
Pyrene	2.64E-04	3.15E-05	1.64E-03	8.19E-07	3.97E-06	2.36E-08
Ethylbenzene	6.76E-03	8.06E-04	4.19E-02	2.10E-05	1.02E-04	6.04E-07
13 Butadiene	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Acetaldehyde	3.47E-03	4.14E-04	2.15E-02	1.08E-05	5.22E-05	3.10E-07
Acrolein	1.07E-03	1.28E-04	6.64E-03	3.32E-06	1.61E-05	9.56E-08
Benzene	1.81E-01	2.16E-02	1.1E+00	5.61E-04	2.72E-03	1.62E-05
Formaldehyde	5.10E-02	6.08E-03	3.16E-01	1.58E-04	7.67E-04	4.55E-06
Propylene	3.41E-01	4.07E-02	2.1E+00	1.06E-03	5.13E-03	3.05E-05
Toluene	6.10E-02	7.28E-03	3.78E-01	1.89E-04	9.18E-04	5.45E-06
Xylenes	2.10E-02	2.51E-03	1.30E-01	6.51E-05	3.16E-04	1.88E-06
Hexane	1.39E-03	1.66E-04	8.62E-03	4.31E-06	2.09E-05	1.24E-07
Arsenic	1.60E-03	1.91E-04	9.93E-03	4.96E-06	2.41E-05	1.43E-07
Beryllium	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Cadmium	1.50E-03	1.79E-04	9.31E-03	4.65E-06	2.26E-05	1.34E-07
Hex Chromium	1.00E-04	1.19E-05	6.20E-04	3.10E-07	1.50E-06	8.93E-09
Copper	4.10E-03	4.89E-04	2.54E-02	1.27E-05	6.17E-05	3.66E-07
Lead	8.30E-03	9.90E-04	5.15E-02	2.57E-05	1.25E-04	7.41E-07
Manganese	3.10E-03	3.70E-04	1.92E-02	9.62E-06	4.66E-05	2.77E-07
Mercury	2.00E-03	2.39E-04	1.24E-02	6.20E-06	3.01E-05	1.79E-07
Nickel	3.90E-03	4.65E-04	2.42E-02	1.21E-05	5.87E-05	3.48E-07
Selenium	2.20E-03	2.62E-04	1.36E-02	6.82E-06	3.31E-05	1.96E-07
Zinc	2.24E-02	2.67E-03	1.39E-01	6.95E-05	3.37E-04	2.00E-06
Diesel PM	8.3E+00	9.88E-01	5.1E+01	2.57E-02	1.25E-01	7.39E-04

EFs: CARB-CATEF Database (mean values for source type and category)
Metals EFs from VCAPCD, 1/8/96

Table 8.1A-10 Commissioning Emissions

Commissioning Phase	1	2	3	4	5	6	Total
Water Injection	No	No	50%	Yes	Yes	Yes	
SCR Installed	No	No	No	No	50%	Yes	
CO Catalyst Installed	No	No	No	No	Yes	Yes	
Hours per Unit	20	14	24	12	24	40	134
# Units Operating Simultaneously *	4	3	1	5	5	5	
Avg Load %	0	5	50	100	75	100	
NOx lb/hr	91	99	175	81	35	8.1	
CO lb/hr	55	60	168	255	9	12	
VOC lb/hr	2	2	3	5	4	2	
MMBtu/hr - HHV	150	180	500	900.5	700	900.5	
NOx lb/mmscf	641	581	370	95	53	9	
CO lb/mmscf	387	352	355	299	14	14	
VOC lb/mmscf	14	12	6	6	6	2	
Total NOx lbs (5 units)	9,100	6,930	21,000	4,860	4,200	1,620	47,710
Total CO lbs (5 units)	5,500	4,200	20,160	15,300	1,080	2,400	48,640
Total VOC lbs	200	140	360	300	480	400	1,880

* Assume this number of units operate simultaneously at condition stated with the remaining units operating at fully commissioned full output conditions.

Nat. Gas MMBtu/mmscf	1056
Number of GT Units	5

Phase	Description
1	Pre- break in checkout
2	Controlled break-in run
3	Water injection commissioning
4	Complete AVR commissioning
5	SCR commissioning
6	Full load testing & checkout

Assume that water injection is 50% effective

Assume that NOx SCR is 50% effective and CO catalyst is 100% effective

Table 8.1A- 11
Fuel Use Calculations

Assumptions

1	Operational scenario (see Table 8.1A-2A)		
2	GE run case 103a @ 811.3 mmbtu/hr LHV	811.3	
3	LHV x 1.11 = HHV = 900.54 mmbtu/hr HHV	900.54	
4	Total run hours = 3468 (normal ops plus startups and shutdowns)	3468	
5	Startup and shutdown hours assumed full hour fuel use		
6	Gas heat content = 1000 btu/scf per CEC definitions	1000	
	(vs. 1056 btu/scf stated in AFC)	1056	0.9470
7	Max daily hours = 24 (22+1.5+.5)	24	
8	5 turbines total	5	

	1 Turbine			5 Turbines		
	mmbtu	scf(1)	scf(2)	mmbtu	scf(1)	scf(2)
Max Hour	9.01E+02	9.01E+05	8.53E+05	4.50E+03	4.50E+06	4.26E+06
Max Daily	2.16E+04	2.16E+07	2.05E+07	1.08E+05	1.08E+08	1.02E+08
Max Annual	3.12E+06	3.12E+09	2.96E+09	1.56E+07	1.56E+10	1.48E+10

scf(1) = 1000 btu/scf **
scf(2) = 1056 btu/scf

CEC definition: 1 Mcf = 1000 scf = 10^6 btu therefore 1000 btu/scf

** Due to the inherent fluctuations in gas btu content, this value should be used for purposes of computing toxics emissions, and for potential setting of gas use limitations on the air permit.

Table 8.1A-12 South Coast AQMD Monthly Emissions Calculations (lbs)

		lbs/hr	lbs/day	31 day lbs/month	30 day avg lbs/month	Offsets Req'd lbs/month	Offsets Req'd lb-day	Annual TPY
Cooling Tower	PM10	0.444	10.7	330.3	319.7	383.6	13	0.8
Fire Pump	NOx	3.44	3.44	17.2	16.6			0.086
	CO	0.2	0.2	1.0	1.0	1.2	0	0.005
	VOC	0.1	0.1	0.5	0.5	0.6	0	0.003
	PM10	0.06	0.06	0.3	0.3	0.3	0	0.002
	SOx	0.004	0.004	0.0	0.0			0.0001
Turbine 1	NOx	8.1	200.8	3951.2	3823.7			14.9
	CO	11.9	329.0	6484.8	6275.6	7530.7	251	24.9
	VOC	2.36	59.3	1167.52	1129.9	1355.8	45	4.4
	PM10	6	141.2	2776	2686.5	3223.7	107	10.4
	SOx	0.62	14.6	286.85	277.6			1.1
	NH3	4.91	115.5	2271.69	2198.4			8.5
Turbine 2	NOx	8.1	200.8	3951.2	3823.7			14.9
	CO	11.9	329.0	6484.8	6275.6	7530.7	251	24.9
	VOC	2.36	59.3	1167.52	1129.9	1355.8	45	4.4
	PM10	6	141.2	2776	2686.5	3223.7	107	10.4
	SOx	0.62	14.6	286.85	277.6			1.1
	NH3	4.91	115.5	2271.69	2198.4			8.5
Turbine 3	NOx	8.1	200.8	3951.2	3823.7			14.9
	CO	11.9	329.0	6484.8	6275.6	7530.7	251	24.9
	VOC	2.36	59.3	1167.52	1129.9	1355.8	45	4.4
	PM10	6	141.2	2776	2686.5	3223.7	107	10.4
	SOx	0.62	14.6	286.85	277.6			1.1
	NH3	4.91	115.5	2271.69	2198.4			8.5
Turbine 4	NOx	8.1	200.8	3951.2	3823.7			14.9
	CO	11.9	329.0	6484.8	6275.6	7530.7	251	24.9
	VOC	2.36	59.3	1167.52	1129.9	1355.8	45	4.4
	PM10	6	141.2	2776	2686.5	3223.7	107	10.4
	SOx	0.62	14.6	286.85	277.6			1.1
	NH3	4.91	115.5	2271.69	2198.4			8.5
Turbine 5	NOx	8.1	200.8	3951.2	3823.7			14.9
	CO	11.9	329.0	6484.8	6275.6	7530.7	251	24.9
	VOC	2.36	59.3	1167.52	1129.9	1355.8	45	4.4
	PM10	6	141.2	2776	2686.5	3223.7	107	10.4
	SOx	0.62	14.6	286.85	277.6			1.1
	NH3	4.91	115.5	2271.69	2198.4			8.5

Max Month Avg Daily Emissions (lb-day)	NOx	CO	VOC	PM10	SOx
(adjusted for the ERC ratio)	N/A	1255.2	226.0	550.1	N/A

Total Annual Emissions (tons):	NOx	CO	VOC	PM10	SOx
	74.77	124.61	22.12	52.80	5.38
	RTCs				RTCs

Monthly Operations Data — Max Month = 31 days

Base		Annual	Max Month
	Hours	3200	432
	Startups	350	40
	Shutdowns	350	40
	Total	3468	463

	Normal lbs/hr	Startup lb/event	Shutdown lb/event
NOx	8.1	7	4.3
CO	11.9	15.4	18.2
VOC	2.36	2.1	1.6
PM10	6	3.5	1.1
SOx	0.62	0.36	0.11
NH3	4.91	2.86	0.90

RTCs for NOx and SOx based on a 1:1 ratio.

ERC ratio for PM10, VOC, and CO is 1.2:1

Estimated Average Engine Performance NOT FOR GUARANTEE

GE Energy

Performance By: Johnny Metcalf
Project Info:

Engine: LMS100 PA
Deck Info: G0179C - 87o.scp
Generator: BDAX 98-330ER 60Hz, 13.8kV, 0.9PF (35410)
Fuel: Site Gas Fuel#900-1056, 20629 Btu/lb,LHV

Date: 08/09/2005
Time: 10:26:42 AM
Version: 3.3.6

Case #	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114
Ambient Conditions															
Dry Bulb, °F	30.0	30.0	30.0	59.0	59.0	59.0	84.0	84.0	84.0	90.0	90.0	90.0	110.0	110.0	110.0
Wet Bulb, °F	26.2	26.2	26.2	51.3	51.3	51.3	70.7	70.7	70.7	69.7	69.7	69.7	67.9	67.9	67.9
RH, %	60.0	60.0	60.0	60.0	60.0	60.0	53.0	53.0	53.0	37.0	37.0	37.0	10.0	10.0	10.0
Altitude, ft	1460.0	1460.0	1460.0	1460.0	1460.0	1460.0	1460.0	1460.0	1460.0	1460.0	1460.0	1460.0	1460.0	1460.0	1460.0
Ambient Pressure, psia	13.937	13.937	13.937	13.937	13.937	13.937	13.937	13.937	13.937	13.937	13.937	13.937	13.937	13.937	13.937
Engine Inlet															
Comp Inlet Temp, °F	30.0	30.0	30.0	52.5	52.5	52.5	72.7	72.7	72.7	72.8	72.8	72.8	74.2	74.2	74.2
RH, %	60.0	60.0	60.0	92.9	92.9	92.9	91.0	91.0	91.0	86.4	86.4	86.4	73.1	73.1	73.1
Conditioning	NONE	NONE	NONE	EVAP	EVAP	EVAP	EVAP	EVAP	EVAP	EVAP	EVAP	EVAP	EVAP	EVAP	EVAP
Tons or kBtu/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pressure Losses															
Inlet Loss, inH20	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
Exhaust Loss, inH20	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Partload %	100	75	50	100	75	50	100	75	50	100	75	50	100	75	50
kW, Gen Terms	103803	77872	51932	101304	75998	50683	94235	70698	47151	94420	70837	47243	94446	70856	47256
Est. Btu/kW-hr, LHV	7739	8087	8899	7814	8148	8981	7942	8307	9178	7937	8302	9172	7937	8301	9178
Guar. Btu/kW-hr, LHV	8061	8424	9270	8140	8488	9355	8272	8653	9560	8268	8648	9555	8267	8647	9561
Fuel Flow															
MMBtu/hr, LHV	803.3	629.7	462.1	791.6	619.3	455.2	748.4	587.3	432.8	749.5	588.1	433.3	749.6	588.2	433.7
lb/hr	38941	30527	22402	38373	30019	22065	36277	28468	20978	36330	28507	21006	36337	28513	21025
NOx Control	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Water Injection															
lb/hr	35385	24795	15760	32449	22235	13945	28325	18872	11031	28389	18917	11074	28408	18932	11527
Temperature, °F	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Intercooler	Water-Air	Water-Air	Water-Air	Water-Air	Water-Air	Water-Air	Water-Air	Water-Air	Water-Air	Water-Air	Water-Air	Water-Air	Water-Air	Water-Air	Water-Air
Humidification	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

IC Heat Extraction, btu/s	22335	16763	10577	24475	19046	12361	26950	21072	13424	26649	20807	13219	26042	20285	13357
KOD Water Extraction, lb/s	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.1	0.2	1.4	0.8	0.0	0.7	0.2	0.0
Control Parameters															
HP Speed, RPM	9304	9121	8945	9350	9144	8969	9357	9150	8979	9357	9150	8979	9357	9150	8975
LP Speed, RPM	5246	4802	4578	5332	4889	4665	5272	4942	4719	5273	4942	4719	5274	4945	4723
PT Speed, RPM	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600	3600
PS3 - CDP, psia	567.0	470.6	364.1	553.9	461.2	357.2	525.0	438.2	340.2	525.7	438.8	340.6	525.8	438.9	340.8
T23 - Intcrl Inlet Temp, °F	304.8	279.6	242.7	329.7	307.5	269.4	345.8	325.6	288.2	346.2	326.0	288.6	348.5	328.3	290.7
P23 - Intcrl Inlet Pressure, psia	55.8	50.4	42.5	54.0	49.3	41.6	51.4	47.1	39.9	51.4	47.1	39.9	51.4	47.2	40.0
W23 - Intcrl Inlet Flow, lb/s	451.1	393.2	343.8	438.2	377.8	331.2	417.4	360.2	316.0	417.7	360.3	316.2	417.0	359.8	315.8
T25 - HPC Inlet Temp, °F	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
T3CRF - CDT, °F	723	690	661	725	688	660	721	685	657	721	685	657	721	685	657
T48IN, °R	2013	1934	1868	2031	1942	1877	2031	1943	1879	2031	1943	1879	2031	1943	1878
T48IN, °F	1553	1475	1408	1571	1482	1417	1572	1483	1419	1572	1483	1419	1572	1483	1419
Exhaust Parameters															
Temperature, °F	761.6	747.9	765.2	781.6	760.1	777.7	796.6	775.7	793.5	796.2	775.4	793.2	796.1	775.3	792.6
lb/sec	469.3	399.6	316.2	455.5	390.2	309.0	431.3	370.2	293.8	432.0	370.7	294.2	432.0	370.8	294.5
lb/hr	1689503	1438390	1138229	1639789	1404741	1112333	1552794	1332730	1057689	1555029	1334518	1058981	1555360	1334755	1060148
Energy, Btu/s- ref 0 °R	147783	123572	98734	146566	122430	97924	140846	118056	94776	141000	118177	94866	141020	118194	94820
Cp, Btu/lb-R	0.2742	0.2718	0.2707	0.2763	0.2733	0.2723	0.2774	0.2747	0.2741	0.2774	0.2747	0.2741	0.2773	0.2747	0.2738
Emissions (NOT FOR USE IN ENVIRONMENTAL PERMITS)															
NOx ppmvd Ref 15% O2	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
NOx as NO2, lb/hr	81	63	46	80	62	46	75	59	43	75	59	44	75	59	44
CO ppmvd Ref 15% O2	144	149	132	129	126	108	115	107	80	115	107	80	115	107	85
CO, lb/hr	282.76	229.64	148.93	249.82	191.71	119.89	211.11	153.49	84.89	211.64	153.91	85.32	211.82	154.04	90.65
CO2, lb/hr	104573.10	82019.13	60263.20	103080.40	80704.15	59395.87	97493.02	76580.73	56515.52	97634.09	76686.30	56591.03	97651.41	76701.73	56634.83
HC ppmvd Ref 15% O2	7	7	6	6	6	4	5	4	2	5	4	2	5	4	2
HC, lb/hr	7.72	6.39	3.85	6.37	4.82	2.64	4.95	3.36	1.26	4.96	3.37	1.28	4.97	3.38	1.51
SOX as SO2, lb/hr	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
Maximim Emissions - Turbine															
NOx ppmvd Ref 15% O2	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
CO ppmvd Ref 15% O2	168	168	168	148	148	148	139	139	139	139	139	139	138	138	138
VOC ppmvd Ref 15% O2	4.2	4.2	3.6	3.6	3.6	2.4	3.0	2.4	1.2	3.0	2.4	1.2	3.0	2.4	1.2
PM10 lbs/hr	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Predicted (P) / Guaranteed Emissions - Stack															
NOx ppmvd Ref 15% O2	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5
NOx as NO2, lb/hr	8.1	6.3	4.6	8.0	6.2	4.6	7.5	5.9	4.3	7.5	5.9	4.4	7.5	5.9	4.4
NH3 Slip ppmvd Ref 15% O2	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
CO ppmvd Ref 15% O2	6.3 (P)	6.3 (P)	6.3 (P)	5.6 / 6.0	5.6 / 6.0	5.6 / 6.0	5.3 / 6.0	5.3 / 6.0	5.3 / 6.0	5.3 / 6.0	5.3 / 6.0	5.3 / 6.0	5.2 / 6.0	5.2 / 6.0	5.2 / 6.0
CO, lb/hr	12.4	9.7	7.1	10.9/11.6	8.5/9.2	6.2/6.7	9.7/11.0	7.6/8.6	5.6/6.4	9.8/11.1	7.6/8.7	5.7/6.4	9.6/11.1	7.5/8.7	5.6/6.4
VOC ppmvd Ref 15% O2	2.8 (P)	2.8 (P)	2.4 (P)	2.3 (P)	2.4 (P)	1.6 (P)	1.9 (P)	1.6 (P)	0.8 (P)	1.9 (P)	1.6 (P)	0.8 (P)	1.9 (P)	1.6 (P)	0.8 (P)
VOC, lb/hr	3.1	2.6	1.6	2.5	1.9	1.1	1.9	1.4	0.5	1.9	1.4	0.5	1.9	1.4	0.6
PM10 lbs/hr	Based on the stated level of SOx (i.e. 0), there should be no particulate contribution from the catalysts.														

Exh Wght % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS)

AR	1.2286	1.2358	1.2421	1.2224	1.2300	1.2362	1.2194	1.2259	1.2296	1.2194	1.2259	1.2297	1.2194	1.2259	1.2313
N2	72.0558	72.4716	72.8424	71.6891	72.1367	72.4972	71.5120	71.8908	72.1099	71.5128	71.8915	72.1130	71.5138	71.8924	72.2103
O2	13.2820	14.1068	14.8075	13.0339	13.9464	14.6406	12.9931	13.8730	14.5212	12.9933	13.8729	14.5212	12.9939	13.8729	14.5528
CO2	6.1896	5.7021	5.2945	6.2862	5.7451	5.3398	6.2786	5.7462	5.3433	6.2786	5.7464	5.3439	6.2784	5.7465	5.3422
H20	7.2234	6.4643	5.7973	7.7495	6.9247	6.2724	7.9797	7.2494	6.7851	7.9787	7.2486	6.7813	7.9772	7.2474	6.6520
SO2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CO	0.0167	0.0160	0.0131	0.0152	0.0136	0.0108	0.0136	0.0115	0.0080	0.0136	0.0115	0.0081	0.0136	0.0115	0.0086
HC	0.0005	0.0004	0.0003	0.0004	0.0003	0.0002	0.0003	0.0003	0.0001	0.0003	0.0003	0.0001	0.0003	0.0003	0.0001
NOX	0.0033	0.0030	0.0028	0.0033	0.0030	0.0028	0.0033	0.0030	0.0028	0.0033	0.0030	0.0028	0.0033	0.0030	0.0028

Exh Mole % Dry (NOT FOR USE IN ENVIRONMENTAL PERMITS)

AR	0.9735	0.9700	0.9671	0.9744	0.9705	0.9676	0.9744	0.9706	0.9678	0.9744	0.9706	0.9678	0.9744	0.9706	0.9677
N2	81.4133	81.1209	80.8788	81.4855	81.1589	80.9169	81.4894	81.1697	80.9338	81.4894	81.1698	80.9341	81.4892	81.1698	80.9292
O2	13.1384	13.8244	14.3941	12.9704	13.7371	14.3064	12.9625	13.7133	14.2688	12.9625	13.7131	14.2683	12.9629	13.7130	14.2792
CO2	4.4516	4.0629	3.7420	4.5483	4.1145	3.7938	4.5542	4.1298	3.8175	4.5542	4.1299	3.8178	4.5540	4.1300	3.8112
H20	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SO2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CO	0.0189	0.0179	0.0145	0.0173	0.0154	0.0120	0.0155	0.0130	0.0090	0.0155	0.0130	0.0090	0.0155	0.0130	0.0096
HC	0.0009	0.0009	0.0007	0.0008	0.0007	0.0005	0.0006	0.0005	0.0002	0.0006	0.0005	0.0002	0.0006	0.0005	0.0003
NOX	0.0033	0.0030	0.0028	0.0034	0.0030	0.0028	0.0034	0.0030	0.0028	0.0034	0.0030	0.0028	0.0034	0.0030	0.0028

Exh Mole % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS)

AR	0.8639	0.8719	0.8791	0.8570	0.8656	0.8726	0.8537	0.8610	0.8653	0.8537	0.8610	0.8654	0.8537	0.8610	0.8672
N2	72.2445	72.9165	73.5198	71.6687	72.3890	72.9727	71.3942	72.0049	72.3643	71.3954	72.0060	72.3691	71.3971	72.0074	72.5218
O2	11.6588	12.4262	13.0844	11.4078	12.2527	12.9018	11.3567	12.1650	12.7580	11.3569	12.1649	12.7583	11.3575	12.1651	12.7958
CO2	3.9503	3.6520	3.4015	4.0004	3.6699	3.4213	3.9900	3.6635	3.4133	3.9901	3.6637	3.4138	3.9900	3.6638	3.4152
H20	11.2621	10.1139	9.0988	12.0473	10.8058	9.8178	12.3883	11.2910	10.5883	12.3868	11.2897	10.5826	12.3846	11.2880	10.3887
SO2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CO	0.0168	0.0161	0.0132	0.0152	0.0137	0.0109	0.0136	0.0115	0.0081	0.0136	0.0116	0.0081	0.0136	0.0116	0.0086
HC	0.0008	0.0008	0.0006	0.0007	0.0006	0.0004	0.0006	0.0004	0.0002	0.0006	0.0004	0.0002	0.0006	0.0004	0.0003
NOX	0.0029	0.0027	0.0025	0.0030	0.0027	0.0025	0.0029	0.0027	0.0025	0.0029	0.0027	0.0025	0.0029	0.0027	0.0025

Aero Energy Fuel Number	son Mission)		900-1056 (Edison Mission)		900-1056 (Edison Mission)		900-1056 (Edison Mission)		900-1056 (Edison Mission)	
	Volume %	Weight %	Volume %	Weight %	Volume %	Weight %	Volume %	Weight %	Volume %	Weight %
Hydrogen	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Methane	96.1130	91.5453	96.1130	91.5453	96.1130	91.5453	96.1130	91.5453	96.1130	91.5453
Ethane	1.8030	3.2188	1.8030	3.2188	1.8030	3.2188	1.8030	3.2188	1.8030	3.2188
Ethylene	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Propane	0.3030	0.7933	0.3030	0.7933	0.3030	0.7933	0.3030	0.7933	0.3030	0.7933
Propylene	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Butane	0.1030	0.3554	0.1030	0.3554	0.1030	0.3554	0.1030	0.3554	0.1030	0.3554
Butylene	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Butadiene	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Cyclopentane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hexane	0.0330	0.1688	0.0330	0.1688	0.0330	0.1688	0.0330	0.1688	0.0330	0.1688
Heptane	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Carbon Monoxide	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Carbon Dioxide	1.2430	3.2480		1.2430	3.2480		1.2430	3.2480		1.2430	3.2480		1.2430	3.2480	
Nitrogen	0.4030	0.6703		0.4030	0.6703		0.4030	0.6703		0.4030	0.6703		0.4030	0.6703	
Water Vapor	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	
Oxygen	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	
Hydrogen Sulfide	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	
Ammonia	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	
Btu/lb, LHV	20629			20629			20629			20629			20629		
Btu/scf, LHV	918			918			918			918			918		
Btu/scf, HHV	1018			1018			1018			1018			1018		
Btu/lb, HHV	22871			22871			22871			22871			22871		
Fuel Temp, °F	77.0			77.0			77.0			77.0			77.0		
NOx Scalar	0.983			0.983			0.983			0.983			0.983		
Specific Gravity	0.58			0.58			0.58			0.58			0.58		
Engine Exhaust															
Exhaust MW	28.1	28.2	28.3	28.0	28.1	28.2	28.0	28.1	28.1	28.0	28.1	28.1	28.0	28.1	28.1
Exhaust Flow, ACFM	913696	766517	613290	903968	758083	607130	867542	729849	586418	868512	730611	586989	868637	730721	586901
Exhaust Flow, SCFM	364419	309169	243886	354723	302731	238987	336362	287761	227933	336845	288145	228205	336913	288194	228284
Exhaust Flow, Btu/lb	315	309	312	322	314	317	327	319	323	326	319	322	326	319	322
Exhaust Flow, Calories/s	37241198	31140240	24881057	36934636	30852332	24676779	35493302	29750051	23883558	35532063	29780596	23906328	35537016	29784977	23894532
Inlet Flow Wet, pps	451.4	393.4	344.0	438.5	378.0	331.4	417.6	360.3	316.1	417.9	360.5	316.3	417.2	360.0	315.9
Inlet Flow Dry, pps	450.4	392.6	343.3	434.9	374.9	328.7	410.7	354.4	310.9	411.3	354.8	311.3	411.4	354.9	311.5
Shaft HP	141384	106387	71439	138009	103861	69758	128463	96716	65004	128714	96903	65128	128749	96929	65146
Generator Information															
Capacity kW	122564	122564	122564	130500	130500	130500	126633	126633	126633	122927	122927	122927	103096	103096	103096
Efficiency	0.985	0.982	0.975	0.984	0.981	0.974	0.984	0.980	0.973	0.984	0.980	0.973	0.984	0.980	0.973
Inlet Temp, °F	30.0	30.0	30.0	59.0	59.0	59.0	84.0	84.0	84.0	90.0	90.0	90.0	110.0	110.0	110.0
Gear Box Loss	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8th Stage Bleed															
Flow, pps	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pressure, psia	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Temperature, °R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CDP Bleed															
Flow, pps	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pressure, psia	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CardPack	87o	87o	87o	87o	87o	87o	87o	87o	87o	87o	87o	87o	87o	87o	87o
Intercooler Cardpack	87m	87m	87m	87m	87m	87m	87m	87m	87m	87m	87m	87m	87m	87m	87m
NSI	332	0	0	334	0	0	334	0	0	334	0	0	334	0	0
NSI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NSI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Estimated Average Engine Performance NOT FOR GUARANTEE

GE Energy

Performance By: Johnny Metcalf
Project Info:

Engine: LMS100 PA
Deck Info: G0179C - 87o.scp
Generator: BDAX 98-330ER 60Hz, 13.8kV, 0.9PF (35410)
Fuel: Site Gas Fuel#900-1056, 20629 Btu/lb,LHV

Date: 08/09/2005
Time: 2:44:28 PM
Version: 3.3.6

Case #	100	101	102	103	104	105	106	107	108
Ambient Conditions									
Dry Bulb, °F	84.0	84.0	84.0	90.0	90.0	90.0	110.0	110.0	110.0
Wet Bulb, °F	70.7	70.7	70.7	69.7	69.7	69.7	67.9	67.9	67.9
RH, %	53.0	53.0	53.0	37.0	37.0	37.0	10.0	10.0	10.0
Altitude, ft	1460.0	1460.0	1460.0	1640.0	1640.0	1640.0	1460.0	1460.0	1460.0
Ambient Pressure, psia	13.937	13.937	13.937	13.846	13.846	13.846	13.937	13.937	13.937
Engine Inlet									
Comp Inlet Temp, °F	84.0	84.0	84.0	90.0	90.0	90.0	110.0	110.0	110.0
RH, %	53.0	53.0	53.0	37.0	37.0	37.0	10.0	10.0	10.0
Conditioning	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Tons or kBtu/hr	0	0	0	0	0	0	0	0	0
Pressure Losses									
Inlet Loss, inH20	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
Exhaust Loss, inH20	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Partload %	100	75	50	100	75	50	100	75	50
kW, Gen Terms	91737	68825	45903	89891	67441	44981	86273	64729	43173
Est. Btu/kW-hr, LHV	7998	8374	9271	8030	8418	9324	8163	8570	9503
Guar. Btu/kW-hr, LHV	8331	8723	9657	8365	8768	9712	8503	8927	9899
Fuel Flow									
MMBtu/hr, LHV	733.7	576.3	425.5	721.9	567.7	419.4	704.2	554.7	410.3
lb/hr	35566	27937	20629	34992	27519	20330	34138	26889	19889
NOx Control	Water	Water	Water	Water	Water	Water	Water	Water	Water
Water Injection									
lb/hr	27543	18335	11204	27273	18517	11451	28984	19977	12582
Temperature, °F	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Intercooler	Water-Air	Water-Air	Water-Air	Water-Air	Water-Air	Water-Air	Water-Air	Water-Air	Water-Air
Humidification	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
IC Heat Extraction, btu/s	26366	20657	13817	25956	20733	14059	27176	21888	15157
KOD Water Extraction, lb/s	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Parameters									
HP Speed, RPM	9357	9148	8971	9355	9144	8964	9344	9128	8942
LP Speed, RPM	5272	4969	4747	5273	4984	4760	5299	5034	4805
PT Speed, RPM	3600	3600	3600	3600	3600	3600	3600	3600	3600
PS3 - CDP, psia	514.9	430.2	334.6	506.7	423.6	329.8	493.7	413.4	322.8
T23 - Intcrl Inlet Temp, °F	358.2	338.2	300.8	364.9	344.8	307.6	386.2	366.1	329.5
P23 - Intcrl Inlet Pressure, psia	50.4	46.3	39.3	49.6	45.6	38.8	48.2	44.4	38.0
W23 - Intcrl Inlet Flow, lb/s	408.3	352.7	309.6	401.2	347.1	304.4	390.6	338.6	296.3
T25 - HPC Inlet Temp, °F	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
T3CRF - CDT, °F	720	684	657	720	685	657	722	686	657
T48IN, °R	2031	1942	1878	2031	1943	1877	2031	1942	1874
T48IN, °F	1572	1483	1418	1572	1483	1417	1571	1482	1414
Exhaust Parameters									
Temperature, °F	801.9	780.8	797.4	804.6	783.4	799.1	813.0	791.2	804.5
lb/sec	423.0	363.5	289.2	416.3	358.0	285.2	406.0	349.7	279.6
lb/hr	1522954	1308436	1041046	1498790	1288642	1026631	1461495	1258984	1006699
Energy, Btu/s- ref 0 °R	138769	116414	93483	136802	114790	92199	133904	112501	90479
Cp, Btu/lb-R	0.2776	0.2749	0.2739	0.2775	0.2747	0.2736	0.2769	0.2739	0.2727

Estimated Average Engine Performance NOT FOR GUARANTEE

GE Energy

Performance By: Johnny Metcalf
Project Info:

Engine: LMS100 PA
Deck Info: G0179C - 87o.scp
Generator: BDAX 98-330ER 60Hz, 13.8kV, 0.9PF (35410)
Fuel: Site Gas Fuel#900-1056, 20629 Btu/lb,LHV

Date: 08/09/2005
Time: 2:44:28 PM
Version: 3.3.6

Emissions (NOT FOR USE IN ENVIRONMENTAL PERMITS)									
NOx ppmvd Ref 15% O2	25	25	25	25	25	25	25	25	25
NOx as NO2, lb/hr	74	58	43	73	57	42	71	56	41
CO ppmvd Ref 15% O2	114	105	84	115	109	89	130	127	109
CO, lb/hr	204.70	148.49	87.73	203.14	151.72	91.57	223.57	173.07	109.10
CO2, lb/hr	95584.27	75157.44	55568.98	94040.90	74024.34	54755.95	91704.84	72289.57	53539.39
HC ppmvd Ref 15% O2	5	4	2	5	4	3	6	6	4
HC, lb/hr	4.75	3.20	1.43	4.75	3.39	1.62	5.72	4.38	2.43
SOX as SO2, lb/hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximim Emissions									
NOx ppmvd Ref 15% O2	25	25	25	25	25	25	25	25	25
CO ppmvd Ref 15% O2	132	132	132	128	128	128	120	120	120
VOC ppmvd Ref 15% O2	3.00	3.00	3.00	3.00	3.00	3.00	3.60	3.60	3.00
PM10 lbs/hr	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Predicted (P) / Guaranteed Emissions - Stack									
NOx ppmvd Ref 15% O2	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5
NOx as NO2, lb/hr	7.4	5.8	4.3	7.3	5.7	4.2	7.1	5.6	4.1
NH3 Slip ppmvd Ref 15% O2	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
CO ppmvd Ref 15% O2	3.7/6.0	3.7/6.0	3.7/6.0	3.4/6.0	3.4/6.0	3.4/6.0	3.0/6.0	3.0/6.0	3.0/6.0
CO, lb/hr	6.6/10.7	5.2/8.4	4.0/6.4	6.1/10.8	4.8/8.4	3.6/6.4	5.2/10.4	4.1/8.2	3.3/6.5
VOC ppmvd Ref 15% O2	1.8 (P)	1.8 (P)	1.7 (P)	1.8 (P)	1.8 (P)	1.7 (P)	2.1 (P)	2.2 (P)	1.7 (P)
VOC, lb/hr	1.9	1.5	1.0	1.8	1.5	1.0	2.1	1.7	1.0
PM10 lbs/hr	Based on the stated level of SOx (i.e. 0), there should be no particulate contribution from the catalysts.								

Exh Wght % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS)									
AR	1.2193	1.2258	1.2315	1.2201	1.2275	1.2336	1.2253	1.2330	1.2394
N2	71.5097	71.8880	72.2192	71.5544	71.9876	72.3426	71.8627	72.3093	72.6817
O2	12.9960	13.8753	14.5619	13.0121	13.9048	14.6051	13.1035	14.0039	14.7278
CO2	6.2762	5.7441	5.3378	6.2745	5.7444	5.3336	6.2747	5.7419	5.3183
H20	7.9816	7.2522	6.6383	7.9217	7.1206	6.4733	7.5147	6.6947	6.0189
SO2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CO	0.0134	0.0113	0.0084	0.0136	0.0118	0.0089	0.0153	0.0137	0.0108
HC	0.0003	0.0002	0.0001	0.0003	0.0003	0.0002	0.0004	0.0003	0.0002
NOX	0.0033	0.0030	0.0028	0.0033	0.0030	0.0028	0.0033	0.0030	0.0028

Exh Mole % Dry (NOT FOR USE IN ENVIRONMENTAL PERMITS)									
AR	0.9744	0.9706	0.9677	0.9743	0.9705	0.9676	0.9742	0.9704	0.9674
N2	81.4881	81.1686	80.9264	81.4649	81.1645	80.9192	81.4704	81.1494	80.8976
O2	12.9656	13.7160	14.2859	12.9730	13.7254	14.3026	13.0058	13.7592	14.3517
CO2	4.5526	4.1284	3.8074	4.5483	4.1227	3.7976	4.5282	4.1019	3.7681
H20	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SO2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CO	0.0153	0.0128	0.0094	0.0154	0.0133	0.0100	0.0173	0.0154	0.0121
HC	0.0006	0.0005	0.0003	0.0006	0.0005	0.0003	0.0008	0.0007	0.0005
NOX	0.0034	0.0030	0.0028	0.0034	0.0030	0.0028	0.0033	0.0030	0.0028

Exh Mole % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS)									
AR	0.8536	0.8610	0.8674	0.8545	0.8628	0.8697	0.8602	0.8688	0.8761
N2	71.3908	72.0005	72.5359	71.4604	72.1562	72.7300	71.9398	72.6604	73.2651
O2	11.3590	12.1668	12.8048	11.3770	12.2021	12.8551	11.4844	12.3199	12.9978
CO2	3.9885	3.6621	3.4127	3.9888	3.6652	3.4133	3.9985	3.6728	3.4126
H20	12.3911	11.2951	10.3680	12.3024	11.0987	10.1202	11.6982	10.4610	9.4348
SO2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CO	0.0134	0.0114	0.0085	0.0135	0.0118	0.0090	0.0153	0.0138	0.0109

Estimated Average Engine Performance NOT FOR GUARANTEE

GE Energy

Performance By: Johnny Metcalf
Project Info:

Engine: LMS100 PA
Deck Info: G0179C - 87o.scp
Generator: BDAX 98-330ER 60Hz, 13.8kV, 0.9PF (35410)
Fuel: Site Gas Fuel#900-1056, 20629 Btu/lb,LHV

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HC	0.0005	0.0004	0.0002	0.0006	0.0005	0.0003	0.0007	0.0006	0.0004
NOX	0.0029	0.0027	0.0025	0.0029	0.0027	0.0025	0.0030	0.0027	0.0025

Aero Energy Fuel Number	son Mission)		900-1056 (Edison Mission)			900-1056 (Edison Mission)		
	Volume %	Weight %	Volume %	Weight %		Volume %	Weight %	
Hydrogen	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	
Methane	96.1130	91.5453	96.1130	91.5453		96.1130	91.5453	
Ethane	1.8030	3.2188	1.8030	3.2188		1.8030	3.2188	
Ethylene	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	
Propane	0.3030	0.7933	0.3030	0.7933		0.3030	0.7933	
Propylene	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	
Butane	0.1030	0.3554	0.1030	0.3554		0.1030	0.3554	
Butylene	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	
Butadiene	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	
Pentane	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	
Cyclopentane	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	
Hexane	0.0330	0.1688	0.0330	0.1688		0.0330	0.1688	
Heptane	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	
Carbon Monoxide	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	
Carbon Dioxide	1.2430	3.2480	1.2430	3.2480		1.2430	3.2480	
Nitrogen	0.4030	0.6703	0.4030	0.6703		0.4030	0.6703	
Water Vapor	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	
Oxygen	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	
Hydrogen Sulfide	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	
Ammonia	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	
Btu/lb, LHV	20629		20629			20629		
Btu/scf, LHV	918		918			918		
Btu/scf, HHV	1018		1018			1018		
Btu/lb, HHV	22871		22871			22871		
Fuel Temp, °F	77.0		77.0			77.0		
NOx Scalar	0.983		0.983			0.983		
Specific Gravity	0.58		0.58			0.58		

Engine Exhaust									
Exhaust MW	28.0	28.1	28.1	28.0	28.1	28.2	28.0	28.2	28.2
Exhaust Flow, ACFM	854502	719505	578506	847782	714129	574389	824954	695860	560558
Exhaust Flow, SCFM	329904	282520	224154	324468	277956	220778	315725	270953	215975
Exhaust Flow, Btu/lb	328	320	323	329	321	323	330	322	324
Exhaust Flow, Calories/s	34969796	29336383	23557795	34474124	28926978	23234077	33743714	28350236	22800736
Inlet Flow Wet, pps	408.5	352.8	309.7	401.4	347.3	304.5	390.8	338.7	296.4
Inlet Flow Dry, pps	402.8	347.9	305.4	396.7	343.1	300.9	388.5	336.8	294.7
Shaft HP	125092	94192	63325	122600	92327	62084	117718	88672	59652
Generator Information									
Capacity kW	126633	126633	126633	122927	122927	122927	103096	103096	103096
Efficiency	0.983	0.980	0.972	0.983	0.980	0.972	0.983	0.979	0.971
Inlet Temp, °F	84.0	84.0	84.0	90.0	90.0	90.0	110.0	110.0	110.0
Gear Box Loss	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8th Stage Bleed									
Flow, pps	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pressure, psia	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Temperature, °R	0	0	0	0	0	0	0	0	0

Estimated Average Engine Performance NOT FOR GUARANTEE

GE Energy

Performance By: Johnny Metcalf
Project Info:

Engine: LMS100 PA
Deck Info: G0179C - 87o.scp
Generator: BDAX 98-330ER 60Hz, 13.8kV, 0.9PF (35410)
Fuel: Site Gas Fuel#900-1056, 20629 Btu/lb,LHV

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CDP Bleed									
Flow, pps	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pressure, psia	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CardPack	87o	87o	87o	87o	87o	87o	87o	87o	87o
Intercooler Cardpack	87m	87m	87m	87m	87m	87m	87m	87m	87m
NSI	334	0	0	334	0	0	334	0	0
NSI	0	0	0	0	0	0	0	0	0
NSI	0	0	0	0	0	0	0	0	0

Estimated Average Engine Performance NOT FOR GUARANTEE

GE Energy

Performance By: Johnny Metcalf
Project Info:

Engine: LMS100 PA
Deck Info: G0179C - 87o.scp
Generator: BDAX 98-330ER 60Hz, 13.8kV, 0.9PF (35410)
Fuel: Site Gas Fuel#900-1056, 20629 Btu/lb,LHV

Date: 08/09/2005
Time: 1:38:16 PM
Version: 3.3.6

Case #	100	101	102	103	104	105	106	107	108
Ambient Conditions									
Dry Bulb, °F	84.0	84.0	84.0	90.0	90.0	90.0	110.0	110.0	110.0
Wet Bulb, °F	70.9	70.9	70.9	70.0	70.0	70.0	68.4	68.4	68.4
RH, %	53.0	53.0	53.0	37.0	37.0	37.0	10.0	10.0	10.0
Altitude, ft	360.0	360.0	360.0	360.0	360.0	360.0	360.0	360.0	360.0
Ambient Pressure, psia	14.506	14.506	14.506	14.506	14.506	14.506	14.506	14.506	14.506
Engine Inlet									
Comp Inlet Temp, °F	84.0	84.0	84.0	90.0	90.0	90.0	110.0	110.0	110.0
RH, %	53.0	53.0	53.0	37.0	37.0	37.0	10.0	10.0	10.0
Conditioning	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
Tons or kBtu/hr	0	0	0	0	0	0	0	0	0
Pressure Losses									
Inlet Loss, inH20	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
Exhaust Loss, inH20	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Partload %	100	75	50	100	75	50	100	75	50
kW, Gen Terms	95938	71975	48002	94689	71039	47377	90214	67683	45142
Est. Btu/kW-hr, LHV	7988	8360	9248	8019	8402	9298	8152	8555	9480
Guar. Btu/kW-hr, LHV	8321	8708	9634	8353	8752	9686	8492	8911	9875
Fuel Flow									
MMBtu/hr, LHV	766.3	601.7	443.9	759.3	596.9	440.5	735.4	579.0	427.9
lb/hr	37149	29168	21520	36808	28933	21355	35650	28068	20744
NOx Control	Water	Water	Water	Water	Water	Water	Water	Water	Water
Water Injection									
lb/hr	29329	19593	12016	29317	19999	12432	30724	21204	13371
Temperature, °F	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Intercooler	Water-Air	Water-Air	Water-Air	Water-Air	Water-Air	Water-Air	Water-Air	Water-Air	Water-Air
Humidification	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
IC Heat Extraction, btu/s	27512	21558	14441	27288	21785	14798	28364	22836	15837
KOD Water Extraction, lb/s	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Parameters									
HP Speed, RPM	9358	9148	8970	9356	9145	8963	9346	9130	8942
LP Speed, RPM	5277	4971	4748	5279	4986	4761	5303	5035	4807
PT Speed, RPM	3600	3600	3600	3600	3600	3600	3600	3600	3600
PS3 - CDP, psia	537.4	448.8	349.1	532.4	445.0	346.5	515.0	431.2	336.7
T23 - Intcrl Inlet Temp, °F	358.5	338.4	301.2	365.2	345.0	308.0	366.4	366.3	329.9
P23 - Intcrl Inlet Pressure, psia	52.6	48.3	41.0	52.1	47.8	40.7	50.3	46.3	39.7
W23 - Intcrl Inlet Flow, lb/s	426.0	367.9	322.8	421.5	364.5	319.5	407.4	353.1	308.8
T25 - HPC Inlet Temp, °F	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
T3CRF - CDT, °F	721	685	657	721	685	657	722	687	658
T48IN, °R	2031	1942	1876	2031	1942	1875	2031	1942	1872
T48IN, °F	1572	1483	1416	1572	1483	1415	1571	1482	1412
Exhaust Parameters									
Temperature, °F	800.9	779.6	795.3	803.3	782.0	796.7	812.0	790.1	802.6
lb/sec	441.5	379.3	301.9	437.5	376.1	299.8	423.6	364.8	291.8
lb/hr	1589505	1365340	1086690	1575091	1353965	1079109	1524911	1313327	1050554
Energy, Btu/s- ref 0 °R	144691	121333	97390	143611	120449	96696	139614	117255	94262
Cp, Btu/lb-R	0.2775	0.2748	0.2738	0.2775	0.2746	0.2735	0.2769	0.2739	0.2726

Estimated Average Engine Performance NOT FOR GUARANTEE

GE Energy

Performance By: Johnny Metcalf
Project Info:

Engine: LMS100 PA
Deck Info: G0179C - 87o.scp
Generator: BDAX 98-330ER 60Hz, 13.8kV, 0.9PF (35410)
Fuel: Site Gas Fuel#900-1056, 20629 Btu/lb,LHV

Date: 08/09/2005
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Emissions (NOT FOR USE IN ENVIRONMENTAL PERMITS)									
NOx ppmvd Ref 15% O2	25	25	25	25	25	25	25	25	25
NOx as NO2, lb/hr	77	60	45	76	60	44	74	58	43
CO ppmvd Ref 15% O2	117	109	88	118	114	94	133	131	112
CO, lb/hr	219.46	160.50	95.60	220.09	166.21	101.51	238.70	185.60	117.72
CO2, lb/hr	99829.87	78459.73	57964.02	98908.83	77816.77	57509.67	95757.44	75449.41	55834.02
HC ppmvd Ref 15% O2	5	4	3	5	5	3	6	6	5
HC, lb/hr	5.21	3.58	1.66	5.27	3.85	1.94	6.20	4.78	2.70
SOX as SO2, lb/hr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximim Emissions									
NOx ppmvd Ref 15% O2	25	25	25	25	25	25	25	25	25
CO ppmvd Ref 15% O2	132	132	132	128	128	128	120	120	120
VOC ppmvd Ref 15% O2	3.0	3.0	3.0	3.0	3.0	3.0	3.6	3.6	3.0
PM10 lbs/hr	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Predicted (P) / Guaranteed Emissions - Stack									
NOx ppmvd Ref 15% O2	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5	2.5 / 2.5
NOx as NO2, lb/hr	7.7	6.0	4.5	7.6	6.0	4.4	7.4	5.8	4.3
NH3 Slip ppmvd Ref 15% O2	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
CO ppmvd Ref 15% O2	4.0/6.0	4.0/6.0	4.0/6.0	3.8/6.0	3.8/6.0	3.8/6.0	3.3/6.0	3.3/6.0	3.3/6.0
CO, lb/hr	7.5/11.3	5.9/8.8	4.5/6.7	7.1/11.2	5.7/9.0	4.2/6.8	5.9/10.7	4.6/8.4	3.5/6.4
VOC ppmvd Ref 15% O2	1.8 (P)	1.9 (P)	1.8 (P)	1.8 (P)	1.8 (P)	1.7 (P)	2.2 (P)	2.2 (P)	1.7 (P)
VOC, lb/hr	2.0	1.6	1.1	2.0	1.5	1.1	2.2	1.8	1.0
PM10 lbs/hr	Based on the stated level of SOx (i.e. 0), there should be no particulate contribution from the catalysts.								
CO	0.0138	0.0118	0.0088	0.0140	0.0123	0.0094	0.0157	0.0141	0.0112
HC	0.0003	0.0003	0.0002	0.0003	0.0003	0.0002	0.0004	0.0004	0.0003
NOX	0.0033	0.0030	0.0028	0.0033	0.0030	0.0028	0.0033	0.0030	0.0028
Exh Mole % Dry (NOT FOR USE IN ENVIRONMENTAL PERMITS)									
AR	0.9744	0.9706	0.9677	0.9744	0.9706	0.9676	0.9742	0.9704	0.9673
N2	81.4903	81.1695	80.9237	81.4877	81.1659	80.9165	81.4737	81.1515	80.8958
O2	12.9602	13.7136	14.2921	12.9662	13.7216	14.3084	12.9978	13.7541	14.3557
CO2	4.5554	4.1295	3.8036	4.5518	4.1245	3.7938	4.5324	4.1044	3.7654
H20	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
SO2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CO	0.0157	0.0133	0.0099	0.0159	0.0138	0.0105	0.0178	0.0159	0.0125
HC	0.0007	0.0005	0.0003	0.0007	0.0006	0.0004	0.0008	0.0007	0.0005
NOX	0.0034	0.0030	0.0028	0.0034	0.0030	0.0028	0.0033	0.0030	0.0028
Exh Mole % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS)									
AR	0.8538	0.8612	0.8677	0.8546	0.8630	0.8699	0.8600	0.8687	0.8761
N2	71.4030	72.0220	72.5651	71.4693	72.1682	72.7499	71.9253	72.6513	73.2650
O2	11.3559	12.1681	12.8159	11.3721	12.2005	12.8643	11.4745	12.3134	13.0016
CO2	3.9915	3.6641	3.4108	3.9922	3.6672	3.4109	4.0012	3.6745	3.4102
H20	12.3785	11.2697	10.3290	12.2943	11.0856	10.0926	11.7195	10.4744	9.4328
SO2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
CO	0.0138	0.0118	0.0088	0.0140	0.0123	0.0095	0.0157	0.0142	0.0113
HC	0.0006	0.0005	0.0003	0.0006	0.0005	0.0003	0.0007	0.0006	0.0005
NOX	0.0029	0.0027	0.0025	0.0029	0.0027	0.0025	0.0030	0.0027	0.0025

Aero Energy Fuel Number	son Mission)		900-1056 (Edison Mission)		900-1056 (Edison Mission)	
	Volume %	Weight %	Volume %	Weight %	Volume %	Weight %
Hydrogen	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Methane	96.1130	91.5453	96.1130	91.5453	96.1130	91.5453

Estimated Average Engine Performance NOT FOR GUARANTEE

GE Energy

Performance By: Johnny Metcalf
Project Info:

Engine: LMS100 PA
Deck Info: G0179C - 87o.scp
Generator: BDAX 98-330ER 60Hz, 13.8kV, 0.9PF (35410)
Fuel: Site Gas Fuel#900-1056, 20629 Btu/lb,LHV

Date: 08/09/2005
Time: 1:38:16 PM
Version: 3.3.6

Ethane	1.8030	3.2188		1.8030	3.2188		1.8030	3.2188	
Ethylene	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	
Propane	0.3030	0.7933		0.3030	0.7933		0.3030	0.7933	
Propylene	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	
Butane	0.1030	0.3554		0.1030	0.3554		0.1030	0.3554	
Butylene	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	
Butadiene	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	
Pentane	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	
Cyclopentane	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	
Hexane	0.0330	0.1688		0.0330	0.1688		0.0330	0.1688	
Heptane	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	
Carbon Monoxide	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	
Carbon Dioxide	1.2430	3.2480		1.2430	3.2480		1.2430	3.2480	
Nitrogen	0.4030	0.6703		0.4030	0.6703		0.4030	0.6703	
Water Vapor	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	
Oxygen	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	
Hydrogen Sulfide	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	
Ammonia	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	
Btu/lb, LHV	20629			20629			20629		
Btu/scf, LHV	918			918			918		
Btu/scf, HHV	1018			1018			1018		
Btu/lb, HHV	22871			22871			22871		
Fuel Temp, °F	77.0			77.0			77.0		
NOx Scalar	0.983			0.983			0.983		
Specific Gravity	0.58			0.58			0.58		
Engine Exhaust									
Exhaust MW	28.0	28.1	28.1	28.0	28.1	28.2	28.0	28.1	28.2
Exhaust Flow, ACFM	857103	721425	579841	850712	716286	575886	827398	697673	561822
Exhaust Flow, SCFM	344867	295262	234334	341627	292590	232485	329992	283128	225755
Exhaust Flow, Btu/lb	328	320	323	328	320	323	330	321	323
Exhaust Flow, Calories/s	36462061	30575822	24542341	36190074	30353028	24367372	35182830	29548191	23753987
Inlet Flow Wet, pps	426.2	368.1	322.9	421.7	364.7	319.6	407.6	353.2	309.0
Inlet Flow Dry, pps	420.5	363.1	318.6	416.9	360.6	316.0	405.3	351.3	307.3
Shaft HP	130763	98437	66149	129077	97175	65309	123037	92653	62301
Generator Information									
Capacity kW	126633	126633	126633	122927	122927	122927	103096	103096	103096
Efficiency	0.984	0.981	0.973	0.984	0.980	0.973	0.983	0.980	0.972
Inlet Temp, °F	84.0	84.0	84.0	90.0	90.0	90.0	110.0	110.0	110.0
Gear Box Loss	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8th Stage Bleed									
Flow, pps	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pressure, psia	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Temperature, °R	0	0	0	0	0	0	0	0	0
CDP Bleed									
Flow, pps	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pressure, psia	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CardPack	87o	87o	87o	87o	87o	87o	87o	87o	87o
Intercooler Cardpack	87m	87m	87m	87m	87m	87m	87m	87m	87m

Estimated Average Engine Performance NOT FOR GUARANTEE

GE Energy

Performance By: Johnny Metcalf
Project Info:

Engine: LMS100 PA
Deck Info: G0179C - 87o.scp
Generator: BDAX 98-330ER 60Hz, 13.8kV, 0.9PF (35410)
Fuel: Site Gas Fuel#900-1056, 20629 Btu/lb,LHV

Date: 08/09/2005
Time: 1:38:16 PM
Version: 3.3.6

NSI	334	0	0	334	0	0	334	0	0
NSI	0	0	0	0	0	0	0	0	0
NSI	0	0	0	0	0	0	0	0	0

TURBINE GEN SET PERFORMANCE
FOR
Edison Mission Energy

GUARANTEED PARAMETERS

JOBSITE LOCATION: TBD, California

Emissions per Unit with GE Supplied SCR and CO Catalyst
100% to 50% Load

Btu/kW·hr, LHV	AT	UNIT NET KW
8281		97258
(kJ/kW·hr, LHV)		
8736		

GUARANTEE
John Metcalf
Date: 09/19/05

NOx EMISSIONS
2.5 PPMVD AT 15 % O2
CO EMISSIONS
6 PPMVD AT 15 %O2
PM10 *
6 lbs/hr (front and back half)
VOC EMISSIONS *
2.0 PPMVD AT 15 %O2
NH3 SLIP
5 PPMVD AT 15 %O2

NOT VALID WITHOUT STAMP

BASIS OF GUARANTEE:	BASE LOAD, GAS FUEL NOZZLE SYSTEM NO BLEED OR EXTRACTED POWER
ENGINE:	(1) GE LMS100PA GAS TURBINE
FUEL:	20629 Btu/lb / (47983 kJ/kg) LHV, GAS FUEL (#900-1056)
FUEL TEMP:	50°F(28°C) above dew point,@ GE ENERGY BASEPLATE Maximum Fuel Temperature 250°F(121.1°C)
GENERATOR OUTPUT:	13.8 kV, 60 Hz
POWER FACTOR:	≥ .9
AMBIENT TEMP:	84.0°F / (28.9°C)
AMBIENT RH:	53.4%
INLET CONDITIONING:	EVAP TO 73.0°F / (22.8°C)
ALTITUDE:	360.0 ft/ (109.7 m)
INLET FILTER LOSS:	≤ 4.50 inH_2O/ (114.3 mmH_2O)
EXHAUST LOSS:	≤ 12.70 inH_2O/ (322.6 mmH_2O)
NOX CONTROL:	WATER
INJECTION RATE:	30128 PPH/ (13666 KG/hr) ±20% FLOW
INJECTION TEMP:	100 °F/ (37.8 °C) @ GE ENERGY BASEPLATE
ENGINE CONDITION:	NEW AND CLEAN ≤ 200 SITE FIRED HOURS
FIELD TEST METHODS	
PERFORMANCE:	GE ENERGY SGTGPTM
NOX:	SCAQMD Test Method 100.1
CO:	SCAQMD Test Method 100.1
VOC:	TO 12
PM10:	SCAQMD Test Method 5.1
NH3:	SCAQMD Test Method 207.1

** SI values are for reference purposes only

THIS GUARANTEE SUPERSEDES ANY PREVIOUS GUARANTEES PRESENTED

*Conditions for PM10 Emissions Guarantee

1. Fuel must meet GE specification MID-TD-000-01.
2. The timing of test to coincide with lowest site ambient particulate levels.
3. Gas turbine must run for a minimum of 300 total fired hours at base load prior to testing.
4. Gas turbine inlet and exhaust system must be free of any dirt,sand,mud,rust,oil or any other contaminates.
5. Sampling probe internal surfaces must be made of chemically inert and non-catalytic material such as quartz.
6. The filter material shall be quartz.
7. Probe wash shall be high purity acetone per EPA Method 5.
8. Re-testing (at purchaser's expense) must be allowed, if required.
9. GE receives a copy of the final test results.
10. A compressor wash prior to testing is highly recommended.
11. The area around the turbine is to be treated (e.g.sprayed down with water) to minimize airborne dust.

*Conditions for VOC Emissions Guarantee

1. Fuel must meet GE specification MID-TD-000-01.
2. The timing of test to coincide with lowest site ambient VOCs levels.
3. Gas turbine must run for a minimum of 300 total fired hours at base load prior to testing.
4. Gas turbine inlet and exhaust system must be free of any dirt,sand,mud,rust,oil or any other contaminates.
5. Re-testing (at purchaser's expense) must be allowed, if required.
6. GE receives a copy of the final test results.
7. A compressor wash prior to testing is highly recommended.

Estimated Average Engine Performance NOT FOR GUARANTEE

GE Energy

Performance By: Jennifer Woods
Project Info: So Cal Edison

Engine: LM6100 PA
Deck Info: G9179C - 67a.scp
Generator: GH55A 60Hz, 13.8kV, 0.9PF (16283)
Fuel: Site Gas Fuel#900-1054, 20429 Btu/lb,LHV

Date: 05/25/2005
Time: 8:52:37 AM
Version: 3.3.1

Case #	100
Ambient Conditions	
Dry Bulb, °F	84.0
Wet Bulb, °F	71.0
RH, %	53.4
Altitude, ft	360.0
Ambient Pressure, psia	14.506
Engine Inlet	
Comp Inlet Temp, °F	73.0
RH, %	91.1
Conditioning	EVAP
Tons or kBtu/hr	0
Pressure Losses	
Inlet Loss, inH20	4.50
Exhaust Loss, inH20	12.70
kW, Gen Terms	96431
Est. Btu/kW-hr, LHV	7937
Guar. Btu/kW-hr, LHV	8267
GTG Auxiliary, kW	1173
Fuel Flow	
MMBtu/hr, LHV	781.2
lb/hr	37869
NOx Control	Water
Water Injection	
lb/hr	30128
Temperature, °F	100.0
Intercooler	Water-Air
Humidification	OFF
IC Heat Extraction, btu/s	28141
KOD Water Extraction, lb/s	1.8
Control Parameters	
HP Speed, RPM	9358
LP Speed, RPM	5277
PT Speed, RPM	3600
PS3 - CDP, psia	547.5
T23 - Intcl Inlet Temp, °F	346.3
P23 - Intcl Inlet Pressure, psia	53.5
W23 - Intcl Inlet Flow, lb/s	435.2
T25 - HPC Inlet Temp, °F	100.0
T3CRF - CDT, °F	722
T48IN, °R	2031
T48IN, °F	1572
Exhaust Parameters	
Temperature, °F	796.2
lb/sec	449.9
lb/hr	1619667
Energy, Btu/s- ref 0 °R	146548
Cp, Btu/lb-R	0.2773

Net Package Power and Heat Rate

97258	kW
8032	Btu/kW-hr
8281	Btu/kW-hr

Emissions (NOT FOR USE IN ENVIRONMENTAL PERMITS)	
NOx ppmvd Ref 15% O2	25
NOx as NO2, lb/hr	79
CO ppmvd Ref 15% O2	118
CO, lb/hr	226.08
CO2, lb/hr	101760.80
HC ppmvd Ref 15% O2	5
HC, lb/hr	5.41
SOX as SO2, lb/hr	0.00

Estimated Average Engine Performance NOT FOR GUARANTEE

GE Energy

Performance By: Jennifer Woods
Project Info: So Cal Edison

Engine: LM6100 PA
Deck Info: G0179C - 67o.scp
Generator: GH55A 60Hz, 13.8kV, 0.9PF (16283)
Fuel: Site Gas Fuel#900-1056, 20629 Btu/lb,LHV

Date: 08/25/2005
Time: 8:52:37 AM
Version: 3.3.1

Exh Wght % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS)

AR	1.2195
N2	71.5193
O2	12.9687
CO2	8.2828
H20	7.9720
SO2	0.0000
CO	0.0140
HC	0.0003
NOX	0.0033

Exh Mole % Dry (NOT FOR USE IN ENVIRONMENTAL PERMITS)

AR	0.9744
N2	81.4916
O2	12.9571
CO2	4.5570
H20	0.0000
SO2	0.0000
CO	0.0159
HC	0.0007
NOX	0.0034

Exh Mole % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS)

AR	0.8538
N2	71.4053
O2	11.3534
CO2	3.9930
H20	12.3770
SO2	0.0000
CO	0.0139
HC	0.0006
NOX	0.0029

Aero Energy Fuel Number	900-1056 (Edison Mission)	
	Volume %	Weight %
Hydrogen	0.0000	0.0000
Methane	96.1130	91.5453
Ethane	1.8030	3.2186
Ethylene	0.0000	0.0000
Propane	0.3030	0.7933
Propylene	0.0000	0.0000
Butane	0.1030	0.3554
Butylene	0.0000	0.0000
Butadiene	0.0000	0.0000
Pentane	0.0000	0.0000
Cyclopentane	0.0000	0.0000
Hexane	0.0330	0.1688
Heptane	0.0000	0.0000
Carbon Monoxide	0.0000	0.0000
Carbon Dioxide	1.2430	3.2480
Nitrogen	0.4030	0.6703
Water Vapor	0.0000	0.0000
Oxygen	0.0000	0.0000
Hydrogen Sulfide	0.0000	0.0000
Ammonia	0.0000	0.0000

Btu/lb, LHV	20629
Btu/scf, LHV	918
Btu/scf, HHV	1018
Btu/lb, HHV	22871
Fuel Temp, °F	77.0
NOx Scalar	0.963
Specific Gravity	0.58

Estimated Average Engine Performance NOT FOR GUARANTEE

GE Energy

Performance By: Jennifer Woods
Project Info: So Cal Edison

Engine: LMS100 PA
Deck Info: G0179C - 87o.acp
Generator: GH55A 60Hz, 13.8kV, 0.9PF (16283)
Fuel: Site Gas Fuel#900-1054, 20429 Btu/lb,LHV

Date: 05/25/2006
Time: 8:52:45 AM
Version: 3.3.1

Case #	100
Ambient Conditions	
Dry Bulb, °C	28.9
Wet Bulb, °C	21.7
RH, %	53.4
Altitude, m	109.7
Ambient Pressure, kPa	100.015
Engine Inlet	
Comp Inlet Temp, °C	22.8
RH, %	91.1
Conditioning	EVAP
Tons or kBtu/hr	0
Pressure Losses	
Inlet Loss, mmH2O	114.30
Exhaust Loss, mmH2O	322.58
kW, Gen Terms	98431
Est. kJ/kWh, LHV	8374
Gear. kJ/kWh, LHV	8722
GTG Auxiliary, kW	1173
Fuel Flow	
GJ/hr, LHV	824.2
kg/hr	17177
NOx Control	Water
Water Injection	
kg/hr	13666
Temperature, °C	37.8
Intercooler	Water-Air
Humidification	OFF
IC Heat Extraction, kJ/s	29690
KOD Water Extraction, kg/s	0.8
Control Parameters	
HP Speed, RPM	9358
LP Speed, RPM	5277
PT Speed, RPM	3600
PS3 - CDP, kPa	3775.0
T23 - Intcl Inlet Temp, °C	174.6
P23 - Intcl Inlet Pressure, kPa	369.0
W23 - Intcl Inlet Flow, kg/s	197.4
T25 - HPC Inlet Temp, °C	37.8
T3CRF - CDT, °C	383
T48IN, °R	1129
T48IN, °C	855
Exhaust Parameters	
Temperature, °C	424.5
kg/sec	204.1
kg/hr	734676
Energy, Jlo- ref 0 °K	154933616
KJ/kg-R	1.1608

Net Power and Heat Rate

97258	kW
8474	kJ/kWh
8736	kJ/kWh

Emissions (NOT FOR USE IN ENVIRONMENTAL PERMITS)

NOx mg/Nm3 Ref 15% O2	51
NOx as NO2, kg/hr	36
CO mg/Nm3 Ref 15% O2	148
CO, kg/hr	102.55
CO2, kg/hr	46158.42
HC mg/Nm3 Ref 15% O2	4
HC, kg/hr	2.45
SOX as SO2, kg/hr	0.00

Estimated Average Engine Performance NOT FOR GUARANTEE

GE Energy

Performance By: Jennifer Woods
Project Info: So Cal Edison

Engine: LM6100 PA
Deck Info: G0179C - 87o.ecp
Generator: GH55A 60Hz, 13.8kV, 0.9PF (16283)
Fuel: Site Gas Fuel#900-1066, 20629 Btu/lb,LHV

Date: 05/26/2006
Time: 8:52:46 AM
Version: 3.3.1

Exh Wght % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS)

AR	1.2195
N2	71.5193
O2	12.9887
CO2	6.2828
H20	7.9720
SO2	0.0000
CO	0.0140
HC	0.0003
NOX	0.0033

Exh Mole % Dry (NOT FOR USE IN ENVIRONMENTAL PERMITS)

AR	0.9744
N2	81.4916
O2	12.9571
CO2	4.5570
H20	0.0000
SO2	0.0000
CO	0.0159
HC	0.0007
NOX	0.0034

Exh Mole % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS)

AR	0.8536
N2	71.4053
O2	11.3534
CO2	3.9930
H20	12.3770
SO2	0.0000
CO	0.0139
HC	0.0006
NOX	0.0029

Aero Energy Fuel Number	900-1066 (Edison Mission)	
	Volume %	Weight %
Hydrogen	0.0000	0.0000
Methane	96.1130	91.5453
Ethane	1.8030	3.2188
Ethylene	0.0000	0.0000
Propane	0.3030	0.7933
Propylene	0.0000	0.0000
Butane	0.1030	0.3554
Butylene	0.0000	0.0000
Butadiene	0.0000	0.0000
Pentane	0.0000	0.0000
Cyclopentane	0.0000	0.0000
Hexane	0.0330	0.1688
Heptane	0.0000	0.0000
Carbon Monoxide	0.0000	0.0000
Carbon Dioxide	1.2430	3.2480
Nitrogen	0.4030	0.6703
Water Vapor	0.0000	0.0000
Oxygen	0.0000	0.0000
Hydrogen Sulfide	0.0000	0.0000
Ammonia	0.0000	0.0000

kJ/kg, LHV	47983
kJ/Nm3, LHV	36051
kJ/Nm3, HHV	39975
kJ/kg, HHV	53198
Fuel Temp, °C	25.0
NOx Scalar	0.983
Specific Gravity	0.58

Edison Mission Energy
Recycled Water Supply and Cooling Water
Air Emissions Modelling Composition Basis

Constituent	Walnut Site San Jose Creek WRP Average Daily Design Basis Concentration as Such (mg/l)	Walnut Site Recirculating Cooling Water Composition At 8.1 Cycles of Concentration Concentration as Such (mg/l)
General Parameters		
Alkalinity as CaCO3	147	1187.3925
Hardness as CaCO3	192	1550.88
Nitrate as NO_3	19	153.4725
pH (Units)	6.9	7.6
Total Dissolved Solids	619	5000
Total Solids	677	5050
Turbidity	<2 NTU	<100 NTU
Chemical Parameters		
Arsenic	<0.0009	<0.00727
Boron	0.47	3.796425
Cadmium	<0.0003	<0.00242
Calcium	48.6	392.5665
Chloride	147	1187.3925
Chromium, T	<0.01	<0.081
Copper	<0.006	<0.0485
Fluoride	0.33	2.665575
Iron	0.093	0.7512075
Lead	<0.001	<0.0081
Magnesium	17	137.3175
Manganese	0.027	0.2180925
Mercury	<0.00003	<0.00024
Nickel	<0.018	<0.145
Potassium	14.6	117.9315
Silica	No Data	No Data
Silver	<0.0002	<0.0016
Sodium	134	1082.385
Sulfate	127	1025.8425
Zinc	0.08	0.6462

Generator and Fire Pump Engine Emissions

		Emission Factors					Full Load Emissions				
	(kW)	NOx (g/kW-hr)	SO2[c] (g/kW-hr)	CO (g/kW-hr)	PM (g/kW-hr)	HC (g/kW-hr)	NOx (lb/hr)	SO2 (lb/hr)	CO (lb/hr)	PM (lb/hr)	HC (lb/hr)
Generator[a,b]	1,750	8.3	0.0074	1.2	0.13	0.4	32.02	0.03	4.63	0.50	1.54
	hp	NOx (g/hp-hr)	SO2[c] (g/hp-hr)	CO (g/hp-hr)	PM (g/hp-hr)	HC (g/hp-hr)	NOx (lb/hr)	SO2 (lb/hr)	CO (lb/hr)	PM (lb/hr)	HC (lb/hr)
Generator	2,347	6.19	0.0055	0.89	0.10	0.30	32.02	0.03	4.63	0.50	1.54

		Emission Factors					Full Load Emissions				
Fire Pump[d,e] Engine	hp	NOx (g/hp-hr)	SO2[c] (g/hp-hr)	CO (g/hp-hr)	PM (g/hp-hr)	HC (g/hp-hr)	NOx (lb/hr)	SO2 (lb/hr)	CO (lb/hr)	PM (lb/hr)	HC (lb/hr)
	300	5.2	0.0055	0.27	0.09	0.15	3.44	0.004	0.18	0.06	0.10

[a] Generator emission factors from CARB certified emissions data for 2005 (engine family number 5CPXL78.1ERK) Executive Order U-R-001-0267

[b] Generator engine: Catpillar model 3516B TA, 1750 kW at 1800 RPM (2,347 hp)

[c] SO2 emission factor from Chapter 3, Table3.4-1 of EPA AP-42, Compilation of Air Pollutant Emission Factors with 15 ppm sulfur (0.0015% S) content in oi

d Fire pump engine: Clarke model JW6H-UF40, 300 hp at 2,350 RPM.

[e] Emission factors based on vendor information

Standard Diesel Fuel Analysis Data

Parameter	1	2	3	4	5	6	7	8	9	10	*Avg.*
C %	86.73	87.96	87.84	84.77	86.78	86.8	83.93	84.07	84.64	85.05	*85.86*
H %	13.01	11.28	11.41	12.72	12.91	12.96	15.55	15.63	15.16	12.9	*13.35*
O %	.2	.59	.58	2.46	.2	.2	.2	.2	.2	1.68	*0.65*
N %	.01	.14	.14	.01	.04	.03	.25	.19	.15	.01	*0.097*
S %	.05	.02	.02	.05	.06	.055	.05	.055	.06	.05	*0.047*
Ash %	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	*0.01*
Btu/lb	19600	20485	20572	19600	19600	19600	19100	19250	19500	19500	*19680*

Data derived from AB2588 fuel tests for sources in the South Coast AQMD.

APPENDIX 8.1B

Modeling Support Data

Tables presented in this Appendix are as follows:

8.1B-1	Screening Modeling Parameters
8.1B-2	Emission Rates and Stack Parameters for Modeling
8.1B-3	Summary Table of Building Dimensions
8.1B-4	Detailed Stack and Building Information
8.1B-5	Los Angeles County Historical Air Data
8.1B-6	Orange County Historical Air Data
8.1B-7	San Bernardino Historical Air Data
8.1B-8	SCAQMD Significance Thresholds
8.1B-9	SCAQMD Met Data Listing
8.1B-10	Construction Impacts Modeling Input Data
8.1B-11	Construction Impacts Summary

In addition, this appendix contains data on the annual and quarterly wind roses for the Walnut met data site, climatic summaries for Pomona and the City of Industry, and Figures 8.1B-1 and 8.1B-2 (SLAMS and NAMS station locations).

Modeling input/output files are included in the enclosed CD's.

Table 8.1B-1
Gas Turbines: Parameters for Screening Modeling

Walnut

Turbine Screening Analysis Summary
Refined Grid

GE LMS100 PA Gas Turbines Parameters for Screening Modeling

Scenario	GE Case No.	Ambient Temp (°F)	Case Description	Stack Height (m)	Exhaust Temp (Kelvin)	Exhaust Vel (m/s)	Stack Diam (m)	NO_x (lb/hr/tur)	NO_x (g/s/tur)	SO_2 (lb/hr/tur)	SO_2 (g/s/tur)	CO (lb/hr/tur)	CO (g/s/tur)	PM_{10} (lb/hr/tur)	PM_{10} (g/s/tur)
1	112	110	110 deg F Full Load w/ EVAP	27.43	697.3	30.9	4.15	7.9	0.995		0.078	11.5	1.449	6.0	0.75600
2	113	110	110 deg F 75%l Load w/ EVAP	27.43	685.6	26.0	4.15	6.2	0.781		0.078	9.1	1.147	5.0	0.630
3	114	110	110 deg F 50%l Load w/ EVAP	27.43	694.8	20.9	4.15	4.5	0.567		0.078	6.7	0.844	4.0	0.504
4	106	84	84 deg F Full Load w/ EVAP	27.43	697.4	30.9	4.15	7.9	0.995		0.078	11.5	1.449	6.0	0.756
5	107	84	84 deg F 75%l Load w/ EVAP	27.43	685.7	26.0	4.15	6.2	0.781		0.078	9.1	1.147	5.0	0.630
6	108	84	84 deg F 50%l Load w/ EVAP	27.43	695.0	20.9	4.15	4.5	0.567		0.078	6.7	0.844	4.0	0.504
7	103	59	59 deg F Full Load w/ EVAP	27.43	686.4	31.6	4.15	8.1	1.021		0.078	11.9	1.499	6.0	0.756
8	104	59	59 deg F 75%l Load w/ EVAP	27.43	676.5	26.5	4.15	6.3	0.794		0.078	9.3	1.172	5.0	0.630
9	105	59	59 deg F 50%l Load w/ EVAP	27.43	687.4	21.3	4.15	4.7	0.592		0.078	6.8	0.857	4.0	0.504
10	100	30	30 deg F Full Load no EVAP	27.43	672.9	31.2	4.15	7.9	0.995		0.078	11.6	1.464	6.0	0.756
11	101	30	30 deg F 75%l Load no EVAP	27.43	671.1	26.3	4.15	6.3	0.794		0.078	9.1	1.152	5.0	0.630
12	102	30	30 deg F 50%l Load no EVAP	27.43	681.9	21.1	4.15	4.6	0.580		0.078	6.8	0.852	4.0	0.504

Normalized ISCST3 Results for Screening Modeling (i.e., ug/m3 at 1 g/s/tur)

Scenario	GE Case No.	Ambient Temp (°F)	Case Description	1-Hour	3-Hour	8-Hour	24-Hour	Annual
1	112	110	110 deg F Full Load w/ EVAP	5.39472	5.16927	3.32251	1.71727	na
2	113	110	110 deg F 75%l Load w/ EVAP	6.10771	5.82130	3.70022	1.94537	na
3	114	110	110 deg F 50%l Load w/ EVAP	6.91372	6.54429	4.10908	2.18823	na
4	106	84	84 deg F Full Load w/ EVAP	5.39436	5.16891	3.32229	1.71715	na
5	107	84	84 deg F 75%l Load w/ EVAP	6.10733	5.82093	3.70000	1.94525	na
6	108	84	84 deg F 50%l Load w/ EVAP	6.91300	6.54360	4.10868	2.18801	na
7	103	59	59 deg F Full Load w/ EVAP	5.34873	5.13013	3.30025	1.70542	na
8	104	59	59 deg F 75%l Load w/ EVAP	6.06906	5.78889	3.68217	1.93566	na
9	105	59	59 deg F 50%l Load w/ EVAP	6.86882	6.50604	4.08805	2.17672	na
10	100	30	30 deg F Full Load no EVAP	5.45010	5.22673	3.35741	1.73599	na
11	101	30	30 deg F 75%l Load no EVAP	6.12008	5.83668	3.70987	1.95062	na
12	102	30	30 deg F 50%l Load no EVAP	6.92513	6.55790	4.11736	2.19281	na

ISCST3 Screening Results for Criteria Pollutants (ug/m^3) for Five GE LMS100 PATurbines

Scenario		Ambient Temp (°F)	Case Description	1-Hour NO_x	Annual NO_x	1-Hour SO_2	3-Hour SO_2		24-Hour SO_2		Annual SO_2		1-Hour CO		8-Hour CO	24-Hour PM10	Annual PM10
1	112	110	110 deg F Full Load w/ EVAP	26.8495	na	2.1066	2.0186		0.6706		na		39.0847		24.0716	6.4913	na
2	113	110	110 deg F 75%l Load w/ EVAP	23.8567	na	2.3851	2.2732		0.7597		na		35.0155		21.2134	6.1279	na
3	114	110	110 deg F 50%l Load w/ EVAP	19.6004	na	2.6998	2.5555		0.8545		na		29.1826		17.3444	5.5143	na
4	106	84	84 deg F Full Load w/ EVAP	26.8477	na	2.1065	2.0185		0.6705		na		39.0821		24.0700	6.4908	na
5	107	84	84 deg F 75%l Load w/ EVAP	23.8552	na	2.3849	2.2731		0.7596		na		35.0133		21.2121	6.1275	na

6	108	84	84 deg F 50%l Load w/ EVAP	19.5984	na	2.6995	2.5553		0.8544		na		29.1798		17.3427	5.5138	na
7	103	59	59 deg F Full Load w/ EVAP	27.2946	na	2.0887	2.0033		0.6660		na		40.0994		24.7420	6.4465	na
8	104	59	59 deg F 75%l Load w/ EVAP	24.0881	na	2.3700	2.2606		0.7559		na		35.5586		21.5738	6.0973	na
9	105	59	59 deg F 50%l Load w/ EVAP	20.3386	na	2.6823	2.5406		0.8500		na		29.4260		17.5132	5.4853	na
10	100	30	30 deg F Full Load no EVAP	27.1251	na	2.1283	2.0410		0.6779		na		39.8947		24.5762	6.5829	na
11	101	30	30 deg F 75%l Load no EVAP	24.2906	na	2.3899	2.2792		0.7617		na		35.2517		21.3689	6.1445	na
12	102	30	30 deg F 50%l Load no EVAP	20.0690	na	2.7043	2.5609		0.8563		na		29.5011		17.5400	5.5259	na
			Max Conc	27.2946		2.7043	2.5609	0.0000	0.8563				40.0994	0.0000	24.7420	6.5620	

Table 8.1B-2
Emission Rates and Stack Parameters for Modeling

	Base				Emission Rates, g/s				Emission Rates, lb/hr				SO2 1-hour		
	Stack Height, m	Stack Diam, m	Temp, deg K	Exhaust Velocity, m/s	NOx	SO2	CO	PM10	NOx	SO2	CO	PM10	Stack Diam, m	Temp, deg K	Exhaust Velocity, m/s
Averaging Period: One hour															
Turbine 1	27.43	4.1500	686.4	31.6	1.021	0.078	1.499	n/a	8.1	0.62	11.9	n/a			
Turbine 2	27.43	4.1500	686.4	31.6	1.021	0.078	1.499	n/a	8.1	0.62	11.9	n/a	4.1500	681.9	21.1
Turbine 3	27.43	4.1500	686.4	31.6	1.021	0.078	1.499	n/a	8.1	0.62	11.9	n/a	4.1500	681.9	21.1
Turbine 4	27.43	4.1500	686.4	31.6	1.021	0.078	1.499	n/a	8.1	0.62	11.9	n/a	4.1500	681.9	21.1
Turbine 5	27.43	4.1500	686.4	31.6	1.021	0.078	1.499	n/a	8.1	0.62	11.9	n/a	4.1500	681.9	21.1
Em Generator	16.25	0.2030	698.2	200.0	(1)	(1)	0.292	n/a	(1)	(1)	2.315	n/a	4.1500	681.9	21.1
Fire Pump	14.72	0.1270	665.4	76.7	4.333E-01	5.040E-04	(1)	n/a	3.439	0.004	(1)	n/a			
Cooling Tower (each cell)	11.92	6.7100	302.6	11.8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a			
													SO2 3-hour		
													Stack Diam, m	Temp, deg K	Exhaust Velocity, m/s
Averaging Period: Three hours															
Turbine 1	27.43	4.1500	681.9	21.1	n/a	0.078	n/a	n/a	n/a	0.62	n/a	n/a	4.1500	681.9	21.1
Turbine 2	27.43	4.1500	681.9	21.1	n/a	0.078	n/a	n/a	n/a	0.62	n/a	n/a	4.1500	681.9	21.1
Turbine 3	27.43	4.1500	681.9	21.1	n/a	0.078	n/a	n/a	n/a	0.62	n/a	n/a	4.1500	681.9	21.1
Turbine 4	27.43	4.1500	681.9	21.1	n/a	0.078	n/a	n/a	n/a	0.62	n/a	n/a	4.1500	681.9	21.1
Turbine 5	27.43	4.1500	681.9	21.1	n/a	0.078	n/a	n/a	n/a	0.62	n/a	n/a	4.1500	681.9	21.1
Em Generator	16.25	0.2030	698.2	200.0	n/a	(1)	n/a	n/a	n/a	(1)	n/a	n/a			
Fire Pump	14.72	0.1270	665.4	76.7	n/a	1.680E-04	n/a	n/a	n/a	1.33E-03	n/a	n/a			
Cooling Tower (each cell)	11.92	6.7100	302.6	11.8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a			
Averaging Period: Eight hours															
Turbine 1	27.43	4.1500	686.4	31.6	n/a	n/a	2.429	n/a	n/a	n/a	19.28	n/a			
Turbine 2	27.43	4.1500	686.4	31.6	n/a	n/a	2.429	n/a	n/a	n/a	19.28	n/a			
Turbine 3	27.43	4.1500	686.4	31.6	n/a	n/a	2.429	n/a	n/a	n/a	19.28	n/a			
Turbine 4	27.43	4.1500	686.4	31.6	n/a	n/a	2.429	n/a	n/a	n/a	19.28	n/a			
Turbine 5	27.43	4.1500	686.4	31.6	n/a	n/a	2.429	n/a	n/a	n/a	19.28	n/a			
Em Generator	16.25	0.2030	698.2	200.0	n/a	n/a	0.036	n/a	n/a	n/a	2.89E-01	n/a			
Fire Pump	14.72	0.1270	665.4	76.7	n/a	n/a	(1)	n/a	n/a	n/a	(1)	n/a			
Cooling Tower (each cell)	11.92	6.7100	302.6	11.8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a			
													SO2 24-hour		
													Stack Diam, m	Temp, deg K	Exhaust Velocity, m/s
Averaging Period: 24 hours															
Turbine 1	27.43	4.1500	672.9	31.2	n/a	0.078	n/a	0.756	n/a	0.62	n/a	6	4.1500	681.9	21.1
Turbine 2	27.43	4.1500	672.9	31.2	n/a	0.078	n/a	0.756	n/a	0.62	n/a	6	4.1500	681.9	21.1
Turbine 3	27.43	4.1500	672.9	31.2	n/a	0.078	n/a	0.756	n/a	0.62	n/a	6	4.1500	681.9	21.1
Turbine 4	27.43	4.1500	672.9	31.2	n/a	0.078	n/a	0.756	n/a	0.62	n/a	6	4.1500	681.9	21.1
Turbine 5	27.43	4.1500	672.9	31.2	n/a	0.078	n/a	0.756	n/a	0.62	n/a	6	4.1500	681.9	21.1
Em Generator	16.25	0.2030	698.2	200.0	n/a	(1)	n/a	(1)	n/a	(1)	n/a	(1)			
Fire Pump	14.72	0.1270	665.4	76.7	n/a	2.100E-05	n/a	3.124E-04	n/a	1.67E-04	n/a	2.48E-03			
Cooling Tower (each cell)	11.92	6.7100	302.6	11.8	n/a	n/a	n/a	1.119E-02	n/a	n/a	n/a	0.0888			
Averaging Period: Annual															
Turbine 1	27.43	4.1500	697.3	32.8	0.524	0.037	n/a	0.362	4.155	0.2968	n/a	2.8767			
Turbine 2	27.43	4.1500	697.3	32.8	0.524	0.037	n/a	0.362	4.155	0.2968	n/a	2.8767			
Turbine 3	27.43	4.1500	697.3	32.8	0.524	0.037	n/a	0.362	4.155	0.2968	n/a	2.8767			
Turbine 4	27.43	4.1500	697.3	32.8	0.524	0.037	n/a	0.362	4.155	0.2968	n/a	2.8767			
Turbine 5	27.43	4.1500	697.3	32.8	0.524	0.037	n/a	0.362	4.155	0.2968	n/a	2.8767			
Em Generator	16.25	0.2030	698.2	200.0	2.395E-02	2.520E-05	n/a	3.780E-04	1.90E-01	2.00E-04	n/a	3.00E-03			
Fire Pump	14.72	0.1270	665.4	76.7	2.570E-03	2.991E-06	n/a	5.040E-05	2.04E-02	2.37E-05	n/a	4.00E-04			
Cooling Tower (each cell)	11.92	6.7100	302.6	11.8	n/a	n/a	n/a	5.350E-03	n/a	n/a	n/a	0.04246			

Note: 1. Emergency generator and fire pump will not operate during the same 24-hour period.
Higher concentration from screening assessement used for each pollutant and averaging period.

Edison Mission Energy
Table of Building Heights

Table 8.1B-3

Item No.	Structure/Building Name and Description	Structure Plan Dimensions, feet	Structure Height, feet
1	Administration & Control Building with insulated standing seam metal roof with slope 1/2" per foot.	80' x 40'	21' eave
2	Maintenance/Warehouse Building with insulated standing seam metal roof with slope 1/2" per foot.	100' x 40'	21' eave
3	Compressor Building with insulated standing seam metal roof with slope 1/2" per foot.	90' x 60'	21' eave
4	Water Treatment Building with insulated standing seam metal roof with slope 1/2" per foot. (HOLD - THIS BUILDING MAY BE DELETED AND REPLACED WITH PAD AND SHED COVER.)	80' x 40'	21' eave
5	Cooling Tower Chemical Building with standing seam metal roof with slope 1/2" per foot.	35' x 22'	18' eave
6	Combustion Turbine (CT) - Inlet Air Filter. Highest part of CT	30' wide x 22' deep	48'
7	Exhaust Duct (up to Stack)	23' wide x 25' long on top, then tapers down toward the CTG exhaust.	38'
8	Exhaust Stack	13' - 6" ID	90'
9	Combustion Turbine VBV Silencer Stack	10' - 9" OD	68'
10	Cooling Tower	37' wide x 211' long	39' to top of stack, 27' fan deck
11	Demineralized Water Storage Tank, 100,000 gallon capacity	28' diameter	24' straight side height with a domed roof
12	Recycled Water Storage Tank, 150,000 gallon capacity. NOTE: WALNUT SITE, ONLY, WILL HAVE 2 OF THESE TANKS.	31' diameter	28' straight side height with a cone roof
13	Treated Water Storage Tank, 100,000 gallon capacity	28' diameter	24' straight side height with a domed roof

Walnut Energy Park
Stack Information

Stack Type	UTM-X (m)	UTM-Y (m)	Height (ft)	Height (m)	Diameter (ft)	Diameter (m)
Turbine Stacks						
CT1	412905.14	3763248.21	90	27.43	13.6	4.15
CT2	412856.20	3763272.18	90	27.43	13.6	4.15
CT3	412807.26	3763296.16	90	27.43	13.6	4.15
CT4	412758.32	3763320.13	90	27.43	13.6	4.15
CT5	412709.38	3763344.11	90	27.43	13.6	4.15
Cooling Tower Cells						
CoolT1	412621.41	3763397.28	39	11.89	22	6.71
CoolT2	412608.98	3763400.54	39	11.89	22	6.71
CoolT3	412596.56	3763403.80	39	11.89	22	6.71
CoolT4	412584.13	3763407.06	39	11.89	22	6.71
CoolT5	412571.71	3763410.32	39	11.89	22	6.71
Diesel Fire Pump Engine	412903.53	3763299.78	43.3	13.20	0.42	0.13
Diesel Generator	412906.80	3763306.61	53.3	16.25	0.67	0.20

Table 8.1B-4 (10 pages)

Walnut Energy Park
Storage Tank Information

Tank Type	Drawing Ref. No.	Tank Center UTM-X (m)	Tank Center UTM-Y (m)	Coordinates UTM-X (m)	Coordinates UTM-Y (m)	Height (ft)	Height (m)	Diameter (ft)	Diameter (m)
Treated Water Tank	34	412871.33	3763331.28	412871.33	3763335.55	24	7.32	28	8.53
				412870.50	3763335.46				
				412869.70	3763335.22				
				412868.96	3763334.83				
				412868.31	3763334.30				
				412867.78	3763333.65				
				412867.39	3763332.91				
				412867.15	3763332.11				
				412867.07	3763331.28				
				412867.15	3763330.45				
				412867.39	3763329.65				
				412867.78	3763328.91				
				412868.31	3763328.26				
				412868.96	3763327.73				
				412869.70	3763327.34				
				412870.50	3763327.10				
				412871.33	3763327.02				
				412872.16	3763327.10				
				412872.96	3763327.34				
				412873.70	3763327.73				
				412874.35	3763328.26				
				412874.88	3763328.91				
				412875.27	3763329.65				
				412875.51	3763330.45				
				412875.60	3763331.28				
				412875.51	3763332.11				
				412875.27	3763332.91				
				412874.88	3763333.65				

				412874.35	3763334.30					
				412873.70	3763334.83					
				412872.96	3763335.22					
				412872.16	3763335.46					
Recycled Water Tank	30	412885.14	3763326.62	412885.14	3763331.80	28	8.53	34	10.36	
				412884.13	3763331.70					
				412883.16	3763331.41					
				412882.26	3763330.93					
				412881.48	3763330.28					
				412880.83	3763329.50					
				412880.35	3763328.60					
				412880.06	3763327.63					
				412879.96	3763326.62					
				412880.06	3763325.61					
				412880.35	3763324.64					
				412880.83	3763323.74					
				412881.48	3763322.96					
				412882.26	3763322.31					
				412883.16	3763321.83					
				412884.13	3763321.54					
				412885.14	3763321.44					
				412886.15	3763321.54					
				412887.12	3763321.83					
				412888.02	3763322.31					
				412888.80	3763322.96					
				412889.45	3763323.74					
				412889.93	3763324.64					
				412890.22	3763325.61					
				412890.32	3763326.62					
				412890.22	3763327.63					
				412889.93	3763328.60					
				412889.45	3763329.50					
				412888.80	3763330.28					
				412888.02	3763330.93					
				412887.12	3763331.41					

				412886.15	3763331.70				
Demineralized Water Tank	36	412889.54	3763306.55	412889.54	3763313.56	28	8.53	24	7.32
				412888.17	3763313.43				
				412886.86	3763313.03				
				412885.65	3763312.38				
				412884.58	3763311.51				
				412883.71	3763310.45				
				412883.06	3763309.23				
				412882.67	3763307.92				
				412882.53	3763306.55				
				412882.67	3763305.18				
				412883.06	3763303.87				
				412883.71	3763302.66				
				412884.58	3763301.59				
				412885.65	3763300.72				
				412886.86	3763300.07				
				412888.17	3763299.68				
				412889.54	3763299.54				
				412890.91	3763299.68				
				412892.22	3763300.07				
				412893.44	3763300.72				
				412894.50	3763301.59				
				412895.37	3763302.66				
				412896.02	3763303.87				
				412896.42	3763305.18				
				412896.55	3763306.55				
				412896.42	3763307.92				
				412896.02	3763309.23				
				412895.37	3763310.45				
				412894.50	3763311.51				
				412893.44	3763312.38				
				412892.22	3763313.03				
				412890.91	3763313.43				
Recycled Chlorination Tank	26	412901.35	3763321.38	412901.35	3763326.56	34	10.36	24	7.32

				412900.34	3763326.46					
				412899.37	3763326.17					
				412898.47	3763325.69					
				412897.69	3763325.04					
				412897.04	3763324.26					
				412896.56	3763323.36					
				412896.27	3763322.39					
				412896.17	3763321.38					
				412896.27	3763320.37					
				412896.56	3763319.40					
				412897.04	3763318.50					
				412897.69	3763317.72					
				412898.47	3763317.07					
				412899.37	3763316.59					
				412900.34	3763316.30					
				412901.35	3763316.20					
				412902.36	3763316.30					
				412903.33	3763316.59					
				412904.23	3763317.07					
				412905.01	3763317.72					
				412905.66	3763318.50					
				412906.14	3763319.40					
				412906.43	3763320.37					
				412906.53	3763321.38					
				412906.43	3763322.39					
				412906.14	3763323.36					
				412905.66	3763324.26					
				412905.01	3763325.04					
				412904.23	3763325.69					
				412903.33	3763326.17					
				412902.36	3763326.46					
Fire Water Tank	35	412889.54	3763306.55	412889.54	3763313.56	46	14.02	24	7.32	
				412888.17	3763313.43					
				412886.86	3763313.03					
				412885.65	3763312.38					

				412884.58	3763311.51					
				412883.71	3763310.45					
				412883.06	3763309.23					
				412882.67	3763307.92					
				412882.53	3763306.55					
				412882.67	3763305.18					
				412883.06	3763303.87					
				412883.71	3763302.66					
				412884.58	3763301.59					
				412885.65	3763300.72					
				412886.86	3763300.07					
				412888.17	3763299.68					
				412889.54	3763299.54					
				412890.91	3763299.68					
				412892.22	3763300.07					
				412893.44	3763300.72					
				412894.50	3763301.59					
				412895.37	3763302.66					
				412896.02	3763303.87					
				412896.42	3763305.18					
				412896.55	3763306.55					
				412896.42	3763307.92					
				412896.02	3763309.23					
				412895.37	3763310.45					
				412894.50	3763311.51					
				412893.44	3763312.38					
				412892.22	3763313.03					
				412890.91	3763313.43					

Walnut Energy Park
Buildings & Structures

Building/Structure	Drawing Ref. No.	UTM-X (m)	UTM-Y (m)	Height (ft)	Height (m)
Water Treatment/Chemical Bldg	32	412873.87 412851.97 412857.34 412879.24	3763305.72 3763316.45 3763327.39 3763316.67	21	6.40
Maintenance/Wharehouse Combined	31 & 46	412845.84 412818.47 412823.83 412851.20	3763319.46 3763332.87 3763343.82 3763330.41	21	6.40
Admin/Control Bldg	47	412809.91 412788.01 412793.38 412815.28	3763336.72 3763347.45 3763358.40 3763347.67	21	6.40
Gas Compressor/Electrical Bldg	37	412648.09 412621.56 412626.20 412652.73	3763352.81 3763359.77 3763377.46 3763370.50	21	6.40
Cooling Tower Chemical Bldg	38	412606.52 412600.62 412601.78 412607.68	3763378.10 3763379.65 3763384.07 3763382.52	18	5.49
Cooling Tower - Overall Structure	29	412625.99 412563.87	3763389.46 3763405.75	27	8.23

	412567.12	3763418.14		
	412629.24	3763401.84		
Air Intake for Turbine #1	412899.67	3763274.27	48	14.63
	412891.48	3763278.38		
	412893.40	3763282.22		
	412901.60	3763278.12		
SCR for Turbine #1	412901.21	3763246.14	38	11.58
	412894.27	3763249.67		
	412887.71	3763253.95		
	412889.12	3763256.77		
	412897.42	3763255.84		
	412904.41	3763252.48		
	412906.09	3763250.21		
	412904.19	3763246.14		
Air Intake for Turbine #2	412850.73	3763298.25	48	14.63
	412842.54	3763302.35		
	412844.47	3763306.20		
	412852.66	3763302.10		
SCR for Turbine #2	412852.45	3763270.11	38	11.58
	412845.36	3763273.65		
	412838.86	3763278.07		
	412840.12	3763280.71		
	412848.59	3763279.77		
	412855.62	3763276.38		
	412857.16	3763274.18		
	412855.22	3763270.17		
Air Intake for Turbine #3	412801.79	3763322.22	48	14.63
	412793.60	3763326.33		
	412795.53	3763330.17		
	412803.72	3763326.07		

SCR for Turbine #3	412803.44	3763294.14	38	11.58
	412796.66	3763297.46		
	412789.95	3763302.01		
	412791.27	3763304.68		
	412799.74	3763303.77		
	412806.65	3763300.41		
	412808.25	3763298.15		
	412806.30	3763294.17		
Air Intake for Turbine #4	412752.85	3763346.20	48	14.63
	412744.66	3763350.30		
	412746.59	3763354.15		
	412754.78	3763350.05		
SCR for Turbine #4			38	11.58
	412754.53	3763318.04		
	412747.72	3763321.46		
	412740.94	3763326.04		
	412742.23	3763328.64		
	412750.80	3763327.73		
	412757.64	3763324.38		
	412759.30	3763322.15		
	412757.36	3763318.17		
Air Intake for Turbine #5	412703.91	3763370.18	48	14.63
	412695.72	3763374.28		
	412697.65	3763378.13		
	412705.84	3763374.02		
SCR for Turbine #5	412705.62	3763342.01	38	11.58
	412698.81	3763345.43		
	412691.97	3763350.04		
	412693.35	3763352.64		
	412701.86	3763351.70		
	412708.76	3763348.37		
	412710.36	3763346.15		

		412708.41	3763342.13		

South Coast Air Basin

County: Los Angeles

OZONE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 1-Hour Indicator	0.354	0.375	0.360	0.344	0.319	0.320	0.310	0.304	0.286	0.297	0.279	0.249	0.230	0.229	0.217	0.193	0.193	0.164	0.171	0.176
Peak 8-Hour Indicator	0.254	0.252	0.251	0.243	0.230	0.213	0.212	0.209	0.200	0.200	0.192	0.174	0.165	0.163	0.157	0.140	0.140	0.129	0.140	0.146
4th High 1-Hr. in 3 Yrs	0.360	0.360	0.350	0.350	0.340	0.330	0.330	0.310	0.300	0.300	0.280	0.250	0.223	0.209	0.200	0.188	0.188	0.169	0.169	0.180
Avg. of 4th High 8-Hr. in 3 Yrs	0.225	0.226	0.222	0.217	0.205	0.192	0.186	0.179	0.177	0.177	0.168	0.156	0.145	0.135	0.133	0.118	0.115	0.112	0.121	0.126
Maximum 1-Hr. Concentration	0.340	0.390	0.350	0.330	0.340	0.340	0.290	0.320	0.300	0.280	0.300	0.216	0.205	0.170	0.222	0.154	0.174	0.190	0.169	0.194
Max. 8-Hr. Concentration	0.226	0.288	0.251	0.210	0.258	0.235	0.177	0.183	0.218	0.185	0.208	0.158	0.150	0.130	0.171	0.108	0.146	0.134	0.144	0.152
Days Above State Standard	196	201	209	190	205	192	168	159	174	158	142	127	109	89	68	43	57	70	86	101
Days Above Nat. 1-Hr. Std.	153	154	162	147	165	140	120	111	129	102	102	79	55	27	35	6	12	17	36	47
Days Above Nat. 8-Hr. Std.	160	164	177	158	181	150	131	128	139	108	118	92	68	43	46	19	27	35	56	80

PM_{10} (ug/m3)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Max. 24-Hr. Concentration (State)					149	172	161	151	222	104	127	157	138	116	87	103	105	106	121	119
Max. 24-Hr. Concentration (Nat)					149	172	161	151	222	104	127	157	138	116	87	103	105	106	121	119
Annual Average (State)						63.8	54.9	54.9	48.7	47.4	45.3	48.6	45.4	46.1	37.8	56.3	40.0	44.2	37.7	44.4
Annual Average (Nat)					63.1	63.8	55.0	65.9	48.8	47.4	45.3	47.7	45.5	46.1	40.6	56.3	46.3	45.3	45.8	44.4
Calc Days Above State 24-Hr Std						249	187	183	146	155	145	143	153	149	67	213	92	119	71	124
Calc Days Above Nat 24-Hr Std					0	6	6	0	11	0	0	6	0	0	0	0	0	0	0	0

$PM_{2.5}$ (ug/m3)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Max. 24-Hr. Concentration (State)																85.6	92.5	104.0	80.2	121.2
Max. 24-Hr. Concentration (Nat)																85.6	92.5	94.7	72.4	121.2
98th Percentile of 24-Hr Conc.																53.2	63.0	69.4	57.9	61.3
Annual Average (State)																	24.0	24.8	24.0	20.3
Avg. of Qtrly. Means (Nat)																25.7	24.0	25.2	24.0	22.1

CARBON MONOXIDE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 8-Hr. Indicator	20.2	21.1	21.1	21.7	21.9	22.5	21.9	19.0	17.7	16.5	16.7	15.6	16.1	15.4	15.4	13.7	12.6	11.2	9.4	8.7
Max. 1-Hr. Concentration	29.0	33.0	27.0	26.0	32.0	31.0	24.0	30.0	28.0	21.0	24.9	16.8	22.5	19.2	17.0	19.0	13.5	11.7	15.8	12.2
Max. 8-Hr. Concentration	19.7	27.7	19.7	19.6	27.5	21.8	16.8	17.4	18.8	14.6	18.2	13.8	17.5	17.1	13.3	11.2	10.1	7.6	10.1	7.3
Days Above State 8-Hr. Std.	77	62	57	50	70	70	49	51	39	29	27	17	26	18	13	11	6	0	1	0
Days Above Nat. 8-Hr. Std.	63	53	49	40	63	67	41	41	34	19	19	14	19	13	10	7	3	0	1	0

NITROGEN DIOXIDE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 1-Hr. Indicator	0.324	0.317	0.303	0.311	0.335	0.322	0.324	0.312	0.311	0.285	0.241	0.229	0.242	0.237	0.202	0.180	0.168	0.166	0.162	0.157
Max. 1-Hr. Concentration	0.350	0.350	0.330	0.420	0.540	0.340	0.280	0.380	0.300	0.260	0.247	0.239	0.250	0.200	0.170	0.212	0.173	0.251	0.262	0.163
Max. Annual Average	0.057	0.060	0.061	0.055	0.061	0.057	0.055	0.055	0.051	0.050	0.050	0.046	0.042	0.043	0.043	0.051	0.044	0.041	0.040	0.035

SULFUR DIOXIDE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 1-Hr. Indicator	0.11	0.10	0.09	0.07	0.07	0.06	0.06	0.06	0.11	0.10	0.10	0.06	0.05	0.06	0.05	0.05	0.05	0.05	0.04	0.04
Max. Annual Average	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max. 24-Hr. Concentration	0.06	0.04	0.04	0.02	0.04	0.02	0.04	0.02	0.03	0.01	0.01	0.02	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.01

Table A-95

A portion of Los Angeles County lies within the Mojave Desert Air Basin.

South Coast Air Basin

County: Orange

OZONE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 1-Hour Indicator	0.297	0.295	0.274	0.267	0.246	0.235	0.227	0.219	0.205	0.197	0.189	0.163	0.156	0.137	0.141	0.131	0.131	0.113	0.117	0.124
Peak 8-Hour Indicator	0.196	0.195	0.180	0.174	0.163	0.159	0.154	0.145	0.139	0.133	0.134	0.120	0.112	0.101	0.101	0.094	0.095	0.094	0.091	0.096
4th High 1-Hr. in 3 Yrs	0.290	0.280	0.270	0.260	0.240	0.240	0.240	0.220	0.210	0.190	0.190	0.170	0.156	0.138	0.144	0.130	0.127	0.114	0.119	0.131
Avg. of 4th High 8-Hr. in 3 Yrs	0.163	0.166	0.157	0.152	0.142	0.141	0.138	0.127	0.120	0.114	0.117	0.107	0.100	0.088	0.088	0.084	0.084	0.080	0.080	0.086
Maximum 1-Hr. Concentration	0.320	0.340	0.250	0.240	0.290	0.260	0.210	0.250	0.220	0.190	0.252	0.160	0.150	0.134	0.182	0.116	0.137	0.125	0.136	0.165
Max. 8-Hr. Concentration	0.177	0.208	0.158	0.165	0.195	0.167	0.142	0.145	0.158	0.122	0.172	0.109	0.103	0.100	0.115	0.091	0.110	0.097	0.093	0.105
Days Above State Standard	107	101	101	81	96	81	80	71	63	59	46	39	27	13	22	8	14	12	9	19
Days Above Nat. 1-Hr. Std.	65	63	53	42	45	38	37	32	35	17	9	4	6	3	6	0	2	1	2	5
Days Above Nat. 8-Hr. Std.	75	66	62	54	50	44	39	36	35	25	15	8	9	3	6	1	6	4	1	10

PM_{10} (ug/m3)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Max. 24-Hr. Concentration (State)					88	88	158	146	88	115	106	172	101	91	81	122	126	93	80	96
Max. 24-Hr. Concentration (Nat)					132	138	158	146	88	115	106	172	101	91	81	122	126	93	80	96
Annual Average (State)						41.7		45.5	34.4	38.3	37.5	43.3	35.2	38.8	35.8	36.7	39.9	26.4	33.6	32.7
Annual Average (Nat)					46.0	46.9	48.1	45.9	40.0	38.3	37.5	43.5	35.2	38.8	35.8	36.7	39.6	26.5	33.5	32.8
Calc Days Above State 24-Hr Std						122		89	31	78	67	86	37	66	72	37	48	18	31	37
Calc Days Above Nat 24-Hr Std					0	0	6	0	0	0	0	7	0	0	0	0	0	0	0	0

$PM_{2.5}$ (ug/m3)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Max. 24-Hr. Concentration (State)																68.6	113.9	70.8	68.6	115.5
Max. 24-Hr. Concentration (Nat)																68.6	113.9	70.8	68.6	115.5
98th Percentile of 24-Hr Conc.																	66.3	45.6	48.1	51.8
Annual Average (State)																	14.7		18.6	
Avg. of Qtrly. Means (Nat)																	20.3	22.0	18.6	17.3

CARBON MONOXIDE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 8-Hr. Indicator	11.8	11.6	11.0	11.3	10.9	11.5	11.5	10.8	9.4	8.8	8.7	8.2	8.5	7.3	6.7	6.4	6.7	6.6	5.8	4.6
Max. 1-Hr. Concentration	21.0	22.0	20.0	21.0	20.0	24.0	19.0	21.0	21.0	15.0	16.1	12.7	12.9	11.9	15.0	11.4	13.8	10.7	10.2	8.4
Max. 8-Hr. Concentration	14.4	17.0	10.4	10.6	12.0	12.1	11.7	8.6	9.4	7.7	8.6	8.0	7.4	6.0	7.1	6.4	6.7	4.7	5.3	5.9
Days Above State 8-Hr. Std.	7	9	4	3	9	13	6	0	3	0	0	0	0	0	0	0	0	0	0	0
Days Above Nat. 8-Hr. Std.	5	7	4	2	7	12	5	0	0	0	0	0	0	0	0	0	0	0	0	0

NITROGEN DIOXIDE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 1-Hr. Indicator	0.266	0.252	0.236	0.240	0.238	0.241	0.235	0.231	0.221	0.220	0.201	0.196	0.188	0.171	0.141	0.143	0.149	0.150	0.124	0.129
Max. 1-Hr. Concentration	0.250	0.300	0.210	0.220	0.280	0.280	0.220	0.200	0.210	0.200	0.230	0.192	0.160	0.145	0.135	0.165	0.139	0.130	0.116	0.158
Max. Annual Average	0.046	0.043	0.045	0.042	0.046	0.047	0.047	0.045	0.039	0.039	0.041	0.039	0.035	0.033	0.034	0.035	0.029	0.027	0.024	0.028

SULFUR DIOXIDE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 1-Hr. Indicator	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.03	0.03	0.02	0.02	0.01	0.01	0.01	0.02	0.01	0.02	0.02	0.02
Max. Annual Average	0.01	0.01	0.01	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
Max. 24-Hr. Concentration	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.00	0.01	0.01	0.01	0.01

South Coast Air Basin

County: San Bernardino

OZONE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 1-Hour Indicator	0.328	0.330	0.321	0.304	0.284	0.277	0.273	0.265	0.266	0.252	0.252	0.232	0.233	0.222	0.224	0.211	0.213	0.172	0.172	0.178
Peak 8-Hour Indicator	0.232	0.232	0.238	0.227	0.211	0.204	0.202	0.198	0.200	0.200	0.187	0.186	0.175	0.168	0.182	0.179	0.178	0.144	0.144	0.144
4th High 1-Hr. in 3 Yrs	0.320	0.320	0.320	0.320	0.290	0.280	0.280	0.270	0.270	0.250	0.250	0.234	0.231	0.215	0.217	0.211	0.211	0.170	0.169	0.167
Avg. of 4th High 8-Hr. in 3 Yrs	0.210	0.211	0.211	0.200	0.195	0.188	0.185	0.182	0.180	0.177	0.171	0.165	0.161	0.148	0.154	0.147	0.146	0.129	0.128	0.131
Maximum 1-Hr. Concentration	0.340	0.340	0.310	0.290	0.350	0.320	0.330	0.290	0.280	0.270	0.265	0.256	0.239	0.205	0.244	0.174	0.184	0.184	0.161	0.176
Max. 8-Hr. Concentration	0.248	0.252	0.240	0.198	0.250	0.252	0.193	0.203	0.211	0.185	0.192	0.203	0.173	0.143	0.206	0.142	0.149	0.144	0.139	0.153
Days Above State Standard	197	184	179	179	193	192	161	160	176	170	158	135	132	122	100	98	101	99	94	106
Days Above Nat. 1-Hr. Std.	162	138	145	141	153	143	115	109	123	112	115	91	79	53	58	37	25	32	30	50
Days Above Nat. 8-Hr. Std.	178	166	167	163	174	169	145	143	164	157	142	110	110	93	88	87	75	79	85	86

PM_{10} (ug/m3)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Max. 24-Hr. Concentration (State)					287	271	475	163	649	143	147	178	136	208	114	183	124	166	102	149
Max. 24-Hr. Concentration (Nat)					289	271	475	163	649	143	147	178	136	208	114	183	124	166	102	149
Annual Average (State)						79.7	77.3	68.5	79.0	58.2	60.0	60.8	54.9	53.6	50.2	60.1	52.6	52.4	50.1	44.8
Annual Average (Nat)					81.3	79.7	77.3	68.5	79.0	58.3	59.9	60.8	54.9	53.6	50.2	65.8	52.6	52.2	50.1	44.9
Calc Days Above State 24-Hr Std						293	265	250	243	231	232	209	211	174	171	223	195	208	201	139
Calc Days Above Nat 24-Hr Std					19	18	19	6	12	0	0	21	0	6	0	6	0	6	0	0

$PM_{2.5}$ (ug/m3)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Max. 24-Hr. Concentration (State)																121.4	89.8	78.5	82.1	98.1
Max. 24-Hr. Concentration (Nat)																121.4	89.8	78.5	82.1	98.1
98th Percentile of 24-Hr Conc.																85.6	70.3	69.5	66.3	66.9
Annual Average (State)																		25.0	25.8	23.8
Avg. of Qtrly. Means (Nat)																25.7	25.9	26.5	25.8	23.8

CARBON MONOXIDE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 8-Hr. Indicator	6.2	5.8	7.2	7.1	7.5	7.8	7.7	7.4	6.7	6.0	5.5	6.4	6.3	6.1	5.1	4.9	4.9	4.1	3.5	3.6
Max. 1-Hr. Concentration	9.0	10.0	9.0	11.0	9.0	11.0	9.0	8.0	7.0	7.0	7.6	7.7	5.8	7.6	6.3	5.5	4.8	4.1	4.5	5.1
Max. 8-Hr. Concentration	5.6	6.3	6.7	6.7	7.6	8.1	6.6	7.0	5.9	6.0	6.4	6.3	4.5	5.9	4.7	4.1	4.1	3.3	3.2	4.5
Days Above State 8-Hr. Std.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Days Above Nat. 8-Hr. Std.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NITROGEN DIOXIDE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 1-Hr. Indicator	0.180	0.171	0.172	0.183	0.193	0.195	0.192	0.187	0.174	0.167	0.160	0.178	0.180	0.178	0.143	0.139	0.137	0.131	0.123	0.125
Max. 1-Hr. Concentration	0.200	0.180	0.240	0.200	0.210	0.200	0.200	0.210	0.140	0.160	0.177	0.199	0.163	0.153	0.154	0.149	0.143	0.129	0.122	0.117
Max. Annual Average	0.040	0.040	0.042	0.047	0.047	0.045	0.041	0.043	0.040	0.042	0.041	0.046	0.038	0.036	0.036	0.039	0.038	0.037	0.036	0.034

SULFUR DIOXIDE (ppm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Peak 1-Hr. Indicator	0.05	0.04	0.05	0.05	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02
Max. Annual Average	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
Max. 24-Hr. Concentration	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.00

A portion of San Bernardino County lies within the Mojave Desert Air Basin.

Table 8.1B-8

SCAQMD AIR QUALITY SIGNIFICANCE THRESHOLDS

Mass Daily Thresholds		
Pollutant	**Construction**	**Operation**
NOx	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
SOx	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs) and Odor Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Hazard Index ≥ 1.0 (project increment) Hazard Index ≥ 3.0 (facility-wide)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality for Criteria Pollutants [a]		
NO2 1-hour average annual average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.25 ppm (state) 0.053 ppm (federal)	
PM10 24-hour average annual geometric average annual arithmetic mean	10.4 $\mu g/m^3$ (recommended for construction) [b] 2.5 $\mu g/m^3$ (operation) 1.0 $\mu g/m^3$ 20 $\mu g/m^3$	
Sulfate 24-hour average	1 ug/m^3	
CO 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) 9.0 ppm (state/federal)	

[a] Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.

[b] Ambient air quality threshold based on SCAQMD Rule 403.

KEY: lbs/day = pounds per day ppm = parts per million ug/m^3 = microgram per cubic meter ≥ greater than or equal to

AQMD Preprocessed Meteorological Data

Table 8.1B-9

Station ID & Name			UTM (KM)		LAT/LONG	
Surface	Upper Air	City Name	E-W	N-S	Longitude	Latitude
53071	91919	ANAHEIM	415.0	3742.5	117:55:07	33:49:16
54097	99999	AZUSA	414.9	3777.4	117:55:23	34:08:09
54144	99999	BANNING	510.5	3754.5	116:53:11	33:55:58
51100	99999	BURBANK (AMS)	379.5	3783.0	118:18:27	34:10:58
51067	99999	CANOGA PARK	352.9	3786.0	118:35:48	34:12:23
53112	91919	COMPTON AP	385.5	3750.3	118:14:17	33:53:19
53126	91919	COSTA MESA (AMS)	413.8	3724.2	117:55:47	33:39:21
52075	91919	DOWNTOWN LA	386.9	3770.1	118:13:31	34:04:02
53128	91919	EL TORO	436.0	3720.9	117:41:25	33:37:39
54149	99999	FONTANA	455.4	3773.9	117:29:01	34:06:24
54146	99999	INDIO	572.3	3731.0	116:13:11	33:43:06
53012	91919	KING HARBOR	371.2	3744.4	118:23:30	33:50:00
51108	99999	LA CANADA	388.2	3786.1	118:12:49	34:12:42
53099	91919	LA HABRA	412.0	3754.0	117:57:07	33:55:28
51117	99999	LANCASTER	396.0	3839.5	118:08:08	34:41:38
52118	91919	LENNOX (HAW)	373.0	3755.0	118:22:26	33:55:46
53101	91919	LONG BEACH (AMS)	390.0	3743.0	118:11:19	33:49:24
53127	91919	LOS ALAMITOS	404.5	3739.8	118:01:54	33:47:45
52130	91919	LYNWOOD	388.0	3754.0	118:12:42	33:55:20
52104	91919	MALIBU	344.0	3766.9	118:41:23	34:01:59
51115	99999	NEWHALL (AMS)	355.5	3805.5	118:31:02	34:22:59
54167	99999	NORCO	446.8	3749.0	117:34:31	33:52:54
54145	99999	PALM SPRINGS	542.5	3742.5	116:32:27	33:49:25
51122	99999	PASADENA (AMS)	396.0	3778.5	118:07:41	34:08:38
53134	91919	PICO RIVERA	402.3	3764.1	118:03:29	34:00:53
54109	99999	POMONA	430.8	3769.6	117:44:60	34:03:60
54161	99999	REDLANDS	486.2	3769.4	117:09:00	34:04:00
51107	99999	RESEDA	359.0	3785.0	118:31:49	34:11:54
54139	99999	RIVERSIDE	464.8	3758.6	117:22:50	33:58:10
53137	91919	SANTA ANA CYN	431.0	3748.4	117:44:46	33:52:32
54147	99999	UPLAND	440.0	3773.1	117:39:02	34:05:55
52132	91919	VERNON	387.4	3762.5	118:13:10	33:59:55
54106	99999	WALNUT	420.0	3761.7	117:51:58	33:59:41
52158	91919	WEST LA	372.3	3768.6	118:23:01	34:03:08
53114	91919	WHITTIER (AMS)	405.3	3754.0	118:01:28	33:55:26

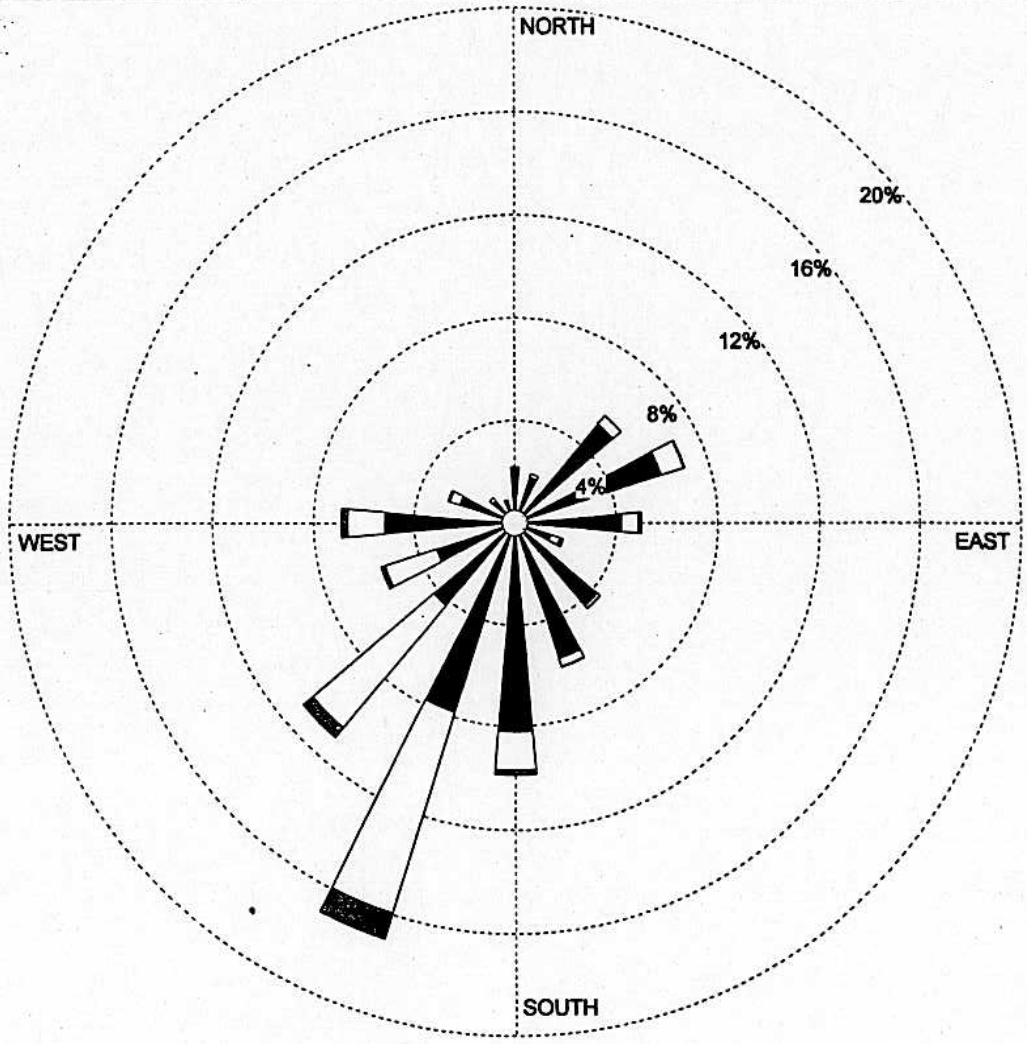
Surface Stations	Upper Air
51 BURBANK	91919 LAX (LOYOLA MARYMOUNT)
52 LAX	99999 ONTARIO (EL MONTE & ONTARIO)
53 LONG BEACH	
54 ONTARIO	

Annual and Quarterly Wind Roses and Statistical Data

(11 pages)

WIND ROSE PLOT:

DISPLAY:
Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
Annual	1981 Jan 1 - Dec 31 00:00 - 23:00	MODELER:	
	CALM WINDS: 10.67%	TOTAL COUNT: 8760 hrs.	
	AVG. WIND SPEED: 1.50 m/s	DATE: 7/27/2005	PROJECT NO.:

Station ID: 54106
Year: 1981
Date Range: Jan 1 - Dec 31
Time Range: 00:00 - 23:00

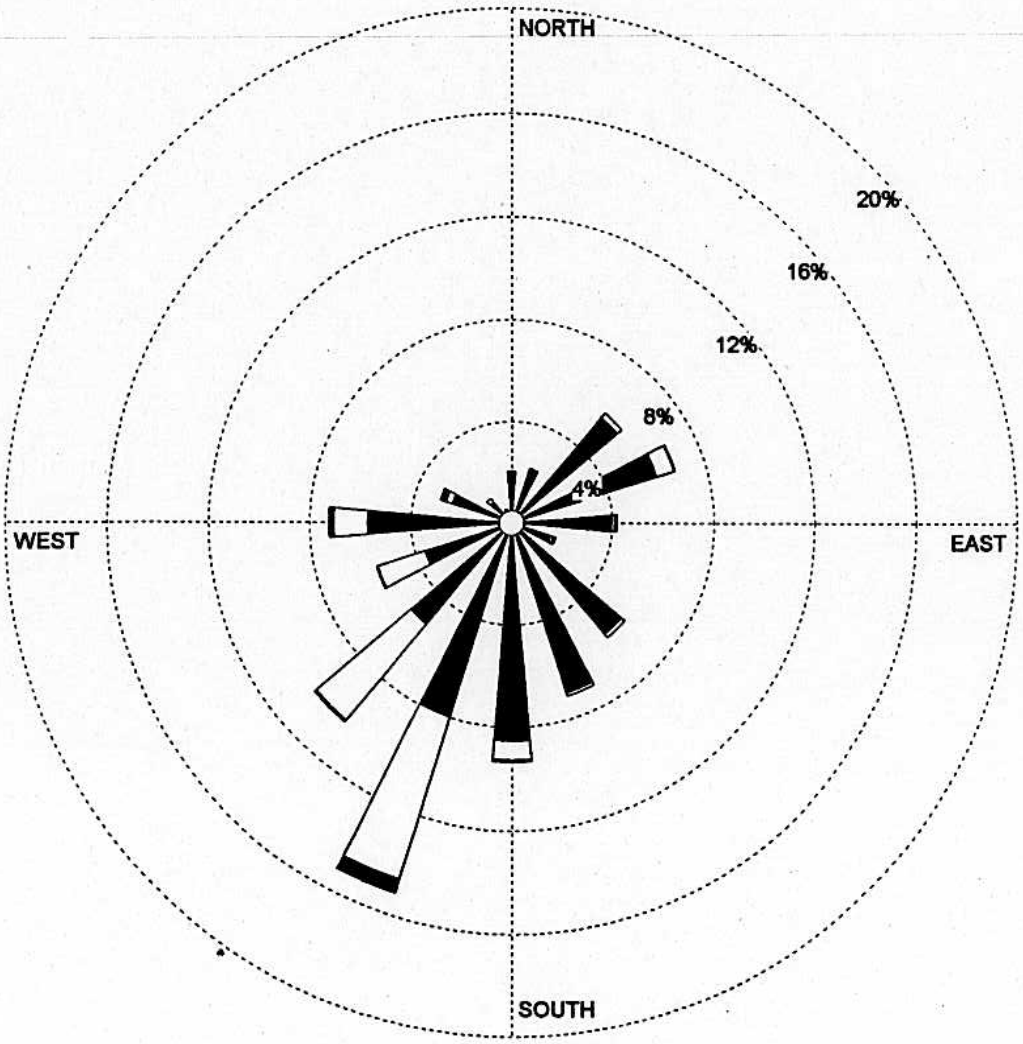
Run ID: Walnut

Frequency Distribution
(Normalized)

Wind Direction (Blowing From) / Wind Speed (m/s)

	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75-11.25	0.021233	0.000685	0.000000	0.000000	0.000000	0.000000	0.021918
11.25-33.75	0.018721	0.001370	0.000000	0.000000	0.000000	0.000000	0.020091
33.75-56.25	0.050571	0.004110	0.000000	0.000000	0.000000	0.000000	0.054680
56.25-78.75	0.060388	0.009247	0.000457	0.000000	0.000000	0.000000	0.070091
78.75-101.25	0.041895	0.006621	0.001142	0.000114	0.000000	0.000000	0.049772
101.25-123.75	0.014726	0.003881	0.001370	0.000000	0.000000	0.000000	0.019977
123.75-146.25	0.042237	0.001484	0.000114	0.000000	0.000000	0.000000	0.043836
146.25-168.75	0.055708	0.003311	0.000228	0.000000	0.000000	0.000000	0.059247
168.75-191.25	0.081963	0.014612	0.001484	0.000457	0.000000	0.000000	0.098516
191.25-213.75	0.077968	0.081164	0.010388	0.000114	0.000000	0.000000	0.169635
213.75-236.25	0.042237	0.063014	0.004795	0.000228	0.000000	0.000000	0.110274
236.25-258.75	0.032648	0.021461	0.001484	0.000228	0.000000	0.000000	0.055822
258.75-281.25	0.051712	0.014612	0.002397	0.000114	0.000000	0.000000	0.068836
281.25-303.75	0.022945	0.003995	0.000685	0.000228	0.000000	0.000000	0.027854
303.75-326.25	0.011530	0.001484	0.000114	0.000000	0.000000	0.000000	0.013128
326.25-348.75	0.009361	0.000228	0.000000	0.000000	0.000000	0.000000	0.009589
Total	0.635845	0.231279	0.024658	0.001484	0.000000	0.000000	0.893265

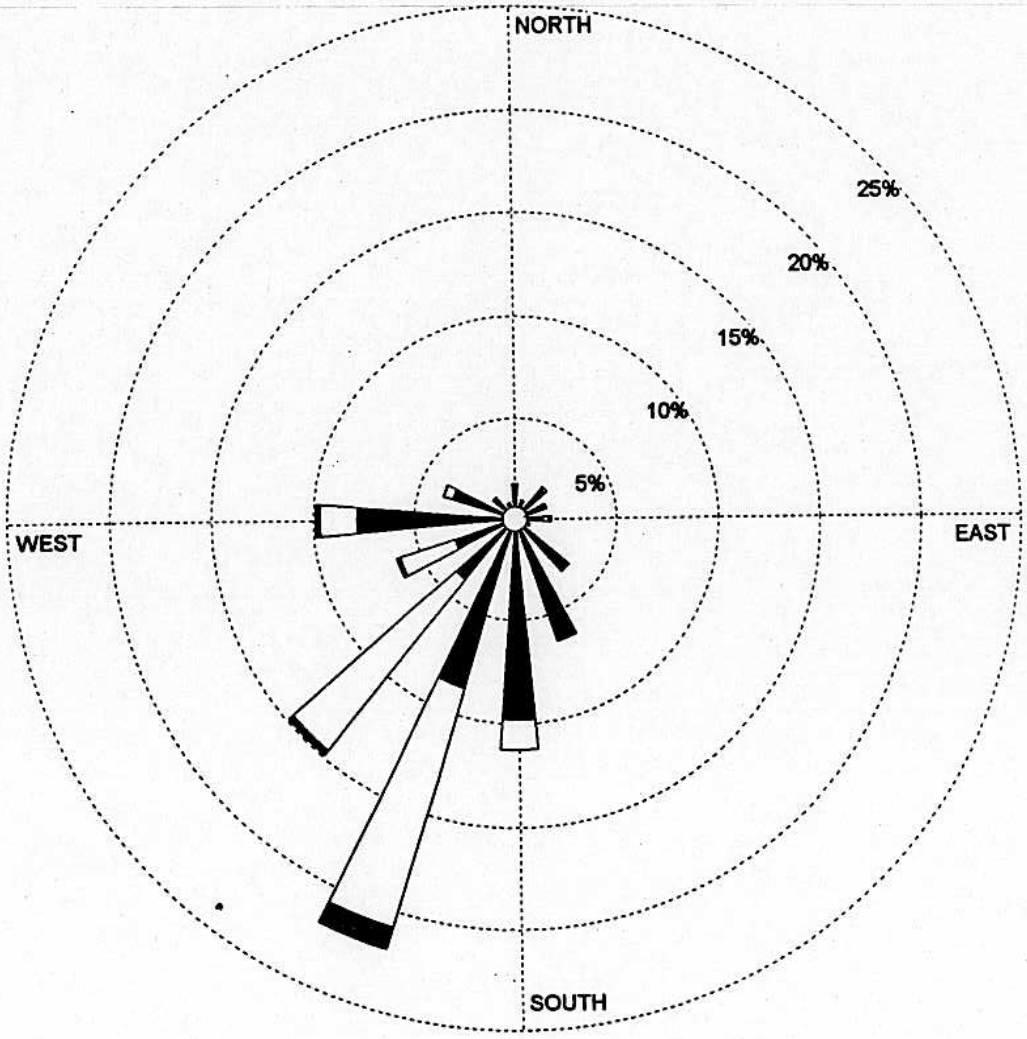
Frequency of Calm Winds: 10.67%
Average Wind Speed: 1.50 m/s



Fall

Fall Quarter Wind Rose
Riverside Meteorological Station

CH2MHill



Summer

Summer Quarter Wind Rose
Riverside Meteorological Station

CH2MHill

Station ID: 54106
Year: 1981
Date Range: Jan 1 - Dec 31
Time Range: 00:00 - 23:00

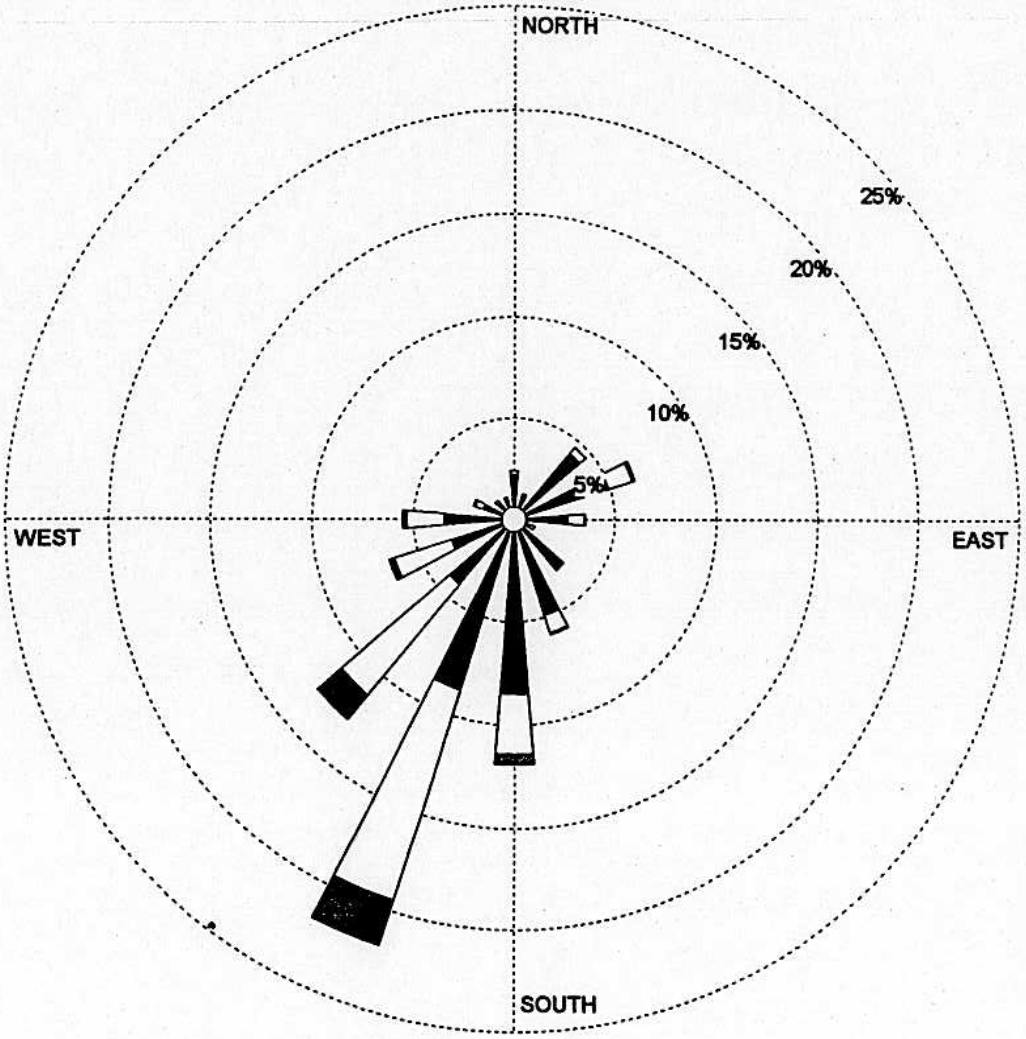
Run ID: Walnutr Site-Summer Qtr.

Frequency Distribution
(Normalized)

Wind Direction (Blowing From) / Wind Speed (m/s)

	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75-11.25	0.017663	0.000000	0.000000	0.000000	0.000000	0.000000	0.017663
11.25-33.75	0.009964	0.000000	0.000000	0.000000	0.000000	0.000000	0.009964
33.75-56.25	0.019475	0.001359	0.000000	0.000000	0.000000	0.000000	0.020833
56.25-78.75	0.015851	0.000453	0.000000	0.000000	0.000000	0.000000	0.016304
78.75-101.25	0.013587	0.002717	0.001359	0.000000	0.000000	0.000000	0.017663
101.25-123.75	0.007246	0.000453	0.000000	0.000000	0.000000	0.000000	0.007699
123.75-146.25	0.033967	0.000453	0.000000	0.000000	0.000000	0.000000	0.034420
146.25-168.75	0.062500	0.000906	0.000000	0.000000	0.000000	0.000000	0.063406
168.75-191.25	0.097826	0.014040	0.000000	0.000000	0.000000	0.000000	0.111866
191.25-213.75	0.086504	0.120924	0.011322	0.000000	0.000000	0.000000	0.218750
213.75-236.25	0.038949	0.106884	0.002717	0.000000	0.000000	0.000000	0.148551
236.25-258.75	0.031703	0.028533	0.001812	0.000000	0.000000	0.000000	0.062047
258.75-281.25	0.078351	0.018116	0.002264	0.000000	0.000000	0.000000	0.098732
281.25-303.75	0.032609	0.004529	0.000453	0.000000	0.000000	0.000000	0.037591
303.75-326.25	0.012681	0.001359	0.000453	0.000000	0.000000	0.000000	0.014493
326.25-348.75	0.008605	0.000000	0.000000	0.000000	0.000000	0.000000	0.008605
Total	0.567482	0.300725	0.020380	0.000000	0.000000	0.000000	0.888587

Frequency of Calm Winds: 11.14%
Average Wind Speed: 1.59 m/s



Spring

Spring Quarter Wind Rose
Riverside Meteorological Station

CH2MHill

Station ID: 54106
Year: 1981
Date Range: Jan 1 - Dec 31
Time Range: 00:00 - 23:00

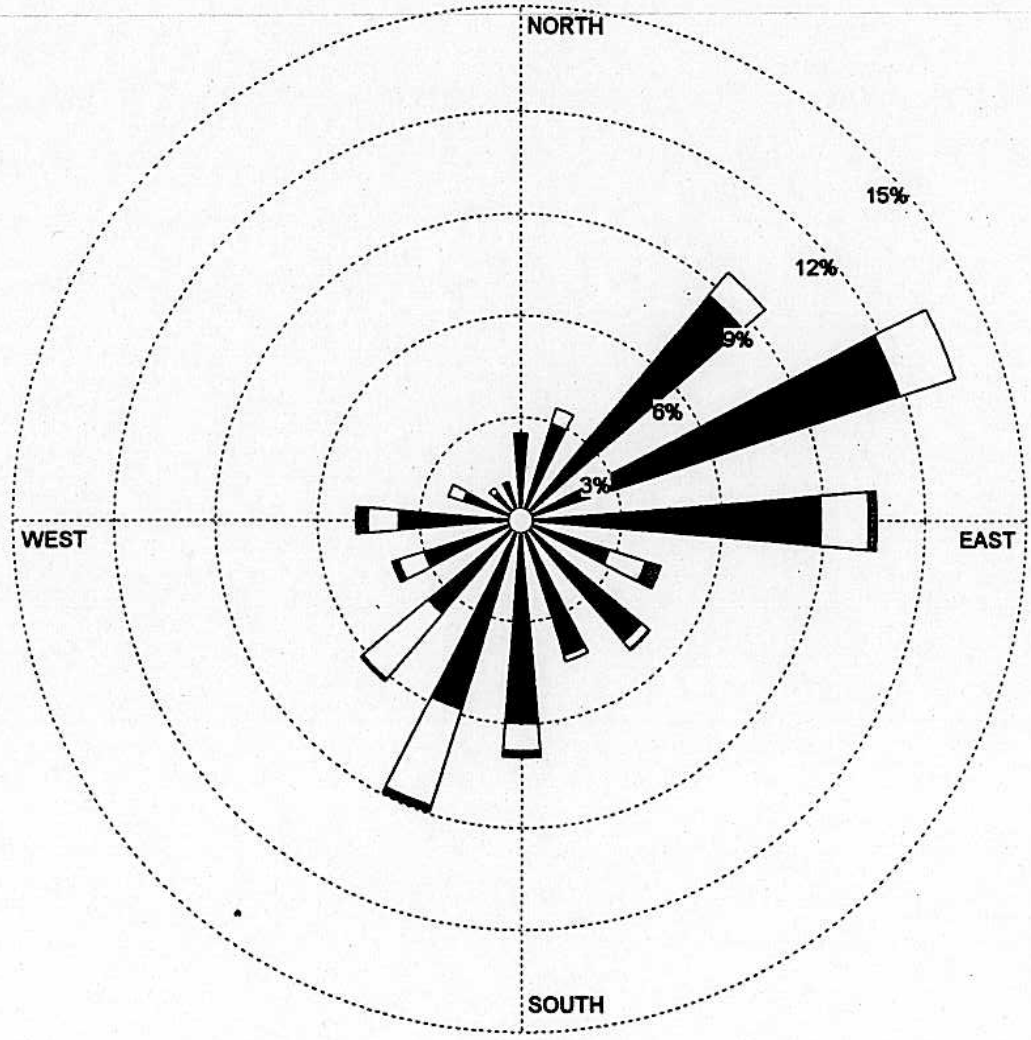
Run ID: Walnut Site-Sprint Qtr

Frequency Distribution
(Normalized)

Wind Direction (Blowing From) / Wind Speed (m/s)

	0.5 - 2.1	2.1 - 3.6	3.6 - 5.7	5.7 - 8.8	8.8 - 11.1	>= 11.1	Total
348.75-11.25	0.022192	0.001812	0.000000	0.000000	0.000000	0.000000	0.024004
11.25-33.75	0.012681	0.000906	0.000000	0.000000	0.000000	0.000000	0.013587
33.75-56.25	0.042572	0.004076	0.000000	0.000000	0.000000	0.000000	0.046649
56.25-78.75	0.048913	0.012228	0.001359	0.000000	0.000000	0.000000	0.062500
78.75-101.25	0.026721	0.008152	0.000453	0.000000	0.000000	0.000000	0.035326
101.25-123.75	0.008152	0.002717	0.000000	0.000000	0.000000	0.000000	0.010870
123.75-146.25	0.031703	0.000906	0.000000	0.000000	0.000000	0.000000	0.032609
146.25-168.75	0.048913	0.009058	0.000906	0.000000	0.000000	0.000000	0.058877
168.75-191.25	0.084692	0.028986	0.004529	0.000453	0.000000	0.000000	0.118659
191.25-213.75	0.086957	0.107337	0.023098	0.000000	0.000000	0.000000	0.217391
213.75-236.25	0.041667	0.070199	0.014493	0.000906	0.000000	0.000000	0.127264
236.25-258.75	0.032609	0.029438	0.001812	0.000906	0.000000	0.000000	0.064764
258.75-281.25	0.034873	0.018116	0.002264	0.000000	0.000000	0.000000	0.055254
281.25-303.75	0.016304	0.004076	0.000453	0.000453	0.000000	0.000000	0.021286
303.75-326.25	0.011775	0.000906	0.000000	0.000000	0.000000	0.000000	0.012681
326.25-348.75	0.011775	0.000000	0.000000	0.000000	0.000000	0.000000	0.011775
Total	0.562500	0.298913	0.049366	0.002717	0.000000	0.000000	0.913496

Frequency of Calm Winds: 8.65%
Average Wind Speed: 1.78 m/s



Winter

Winter Quarter Wind Rose
Riverside Meteorological Station

CH2MHill

Climatic Summaries for Pomona and City of Industry

(4 pages)

POMONA FAIRPLEX, CALIFORNIA (047050)

Period of Record Monthly Climate Summary

Period of Record : 12/1/1927 to 3/31/2005

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	65.8	67.8	70.0	74.0	77.5	83.1	90.7	90.7	88.4	81.1	73.3	66.8	77.4
Average Min. Temperature (F)	38.4	40.6	42.6	45.7	50.0	53.3	57.7	58.2	55.9	50.4	42.8	38.6	47.8
Average Total Precipitation (in.)	3.68	3.63	2.95	1.23	0.26	0.06	0.01	0.09	0.28	0.69	1.53	2.79	17.21
Average Total SnowFall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.
Max. Temp.: 99.1% Min. Temp.: 99% Precipitation: 99% Snowfall: 95.5% Snow Depth: 95.3%
Check Station Metadata or Metadata graphics for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu

POMONA FAIRPLEX, CALIFORNIA

NCDC 1971-2000 Monthly Normals

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Monthly
Mean Max. Temperature (F)	67.6	69.0	69.1	74.1	76.7	82.3	88.7	89.2	86.7	80.2	73.1	68.3	77.1
Highest Mean Max. Temperature (F)	75.0	77.1	77.1	80.7	86.0	90.4	93.2	93.6	94.2	86.8	80.0	74.1	94.2
Year Highest Occurred	1994	1991	1997	1987	1984	1981	1984	1998	1984	1999	1976	1980	1984
Lowest Mean Max. Temperature (F)	60.6	63.9	61.8	62.9	69.8	74.2	81.8	82.6	79.6	74.5	67.0	59.0	59.0
Year Lowest Occurred	1979	1998	1992	1975	1977	1982	1991	1992	1986	2000	1994	1971	1971
Mean Temperature (F)	54.6	56.3	56.9	60.5	64.1	68.7	73.8	74.2	72.4	66.4	59.3	54.7	63.5
Highest Mean Temperature (F)	59.8	63.1	62.0	65.0	70.5	74.8	78.7	77.5	78.3	70.4	64.6	59.2	78.7
Year Highest Occurred	1986	1991	1997	1987	1997	1981	1984	1998	1984	1990	1976	1977	1984
Lowest Mean Temperature (F)	50.2	52.1	52.0	52.2	58.8	63.8	67.6	69.7	66.2	62.9	52.6	48.8	48.8
Year Lowest Occurred	1973	1975	1973	1975	1977	1982	1987	1992	1986	1981	1994	1971	1971
Mean Min. Temperature (F)	41.5	43.5	44.6	46.9	51.5	55.1	58.8	59.2	58.0	52.6	45.4	41.0	49.8
Highest Mean Min. Temperature (F)	46.5	49.1	50.5	51.1	56.7	59.1	64.2	62.9	62.4	57.0	49.5	48.8	64.2
Year Highest Occurred	1980	1991	1978	1990	1997	1981	1984	1983	1984	1991	1997	1977	1984
Lowest Mean Min. Temperature (F)	36.5	39.3	39.5	41.5	47.8	51.4	52.4	54.9	52.7	48.7	38.1	36.7	36.5
Year Lowest Occurred	1989	1989	1977	1975	1977	1986	1987	1987	1986	1984	1994	1990	1989
Mean Precipitation (in.)	4.02	4.05	3.45	0.73	0.25	0.05	0.00	0.13	0.29	0.66	1.29	2.04	16.96
Highest Precipitation (in.)	13.79	16.14	11.87	3.87	3.44	0.96	0.10	2.40	2.86	3.22	4.75	6.78	16.14
Year Highest Occurred	1995	1980	1978	1983	1977	1993	1976	1977	1976	1987	1982	1971	1980
Lowest Precipitation (in.)	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
Year Lowest Occurred	1994	1994	1989	1994	1999	2000	2000	2000	1996	1999	1992	1986	1994
Heating Degree Days	325.	252.	249.	169.	101.	31.	3.	2.	11.	59.	198.	327.	1727.

:CITY OF INDUSTRY: Business>Climate

The climate of the City of Industry is normally pleasant and mild through the year with temperatures seldom varying more than 25 degrees between winter and summer. The mean temperature for the city is 77 degrees. Most rainfall comes during the winter with nearly 85 percent of the annual total occurring from November through March, while summers are practically without rain. The normal average rainfall is 14.68 inches. The sun shines about 75 percent of daytime hours at the city's Civic Center.

Table 3.1B-10

Modeling Inputs/Results for WCEP Construction Impacts (Combustion Sources Modeled as 41 Point Sources)

Short Term Impacts (24 hrs and less)					Long Term Impacts (annual)				
	NOx	CO	SOx	PM10		NOx	CO	SOx	PM10
Combustion (lbs/day)	78.72	46.73	10.67	5.32	Combustion (tons/yr)	3.21	1.80	0.45	0.24
					Combustion (days/yr)	312	312	312	312
Combustion (hrs/day)	12	12	12	12	Combustion (hrs/day)	12	12	12	12
Combustion (lbs/hr)	6.56	3.89	0.89	0.44	Combustion (lbs/hr)	1.71	0.96	0.24	0.13
Combustion (g/sec)	8.27E-01	4.91E-01	1.12E-01	5.59E-02	Combustion (g/sec)	2.16E-01	1.21E-01	3.03E-02	1.62E-02
Point Srcs (g/s/stack)	2.016E-02	1.197E-02	2.733E-03	1.362E-03	41	5.270E-03	2.955E-03	7.387E-04	3.940E-04
Construction Dust (lbs/day)				9.17	Construction Dust (tons/yr)				0.358
					Construction Dust (days/yr)				312
Construction Dust (hrs/day)				12	Construction Dust (hrs/day)				12
Construction Dust (lbs/hr)				0.76	Construction Dust (lbs/hr)				0.19
Construction Dust (g/sec)				9.63E-02	Construction Dust (g/sec)				2.41E-02
ISCST3 Inputs	**40580 m2**		10 acres						
Combustion (g/s/m2)	2.037E-05	1.209E-05	2.761E-06	1.377E-06	Combustion (g/s/m2)	5.324E-06	2.986E-06	7.464E-07	3.981E-07
Construction Dust (g/s/m2)				2.373E-06	Construction Dust (g/s/m2)				5.938E-07
ISCST3 Results (ug/m3)									
Combustion Only					Combustion Only				
1-hour Max	82.492	48.969	11.181	5.57490					
3-hour Max			6.866	3.42338					
8-hour Max		22.016		2.50640					
24-hour Max			1.932	0.96343	Annual	1.855		0.260	0.13870
All Particulate Sources					All Particulate Sources				
24-hour Max				22.78007	Annual				2.63790
1-hour NO2 w/ OLM	82.492	for Avg 8a-4p O3(ppm)		0.165	Annual NO2 w/ ARM	1.391	based on ARM Ratio of:		75%
Background					Background				
1-hour Max	297.0	12571.0	52.4						
3-hour Max			52.4						
8-hour Max		4989.0							
24-hour Max			23.5	164.0	Annual	67.9		8.0	58.1
Total + Background					Total + Background				
1-hour Max	379.5	12620	63.6						
3-hour Max			59.3						
8-hour Max		5011							
24-hour Max			25.4	186.8	Annual	69.3		8.3	60.7

Table 8.1B-11

Standards Comparison for Walnut Energy Project Construction Impacts									
Pollutant	Averaging Time	Impacts (ug/m3) Construction Only	Impacts (ug/m3) Construction+ Background	Standards (ug/m3) National	Standards (ug/m3) California	Construction Only % of Standards National	Construction Only % of Standards California	Construction+Background % of Standards National	Construction+Background % of Standards California
NOx	1-Hr	82.5	379.5	-	470	-	18%	-	81%
	Annual	1.4	69.3	100	-	1%	-	69%	-
CO	1-Hr	49	12620	40000	23000	0%	0%	32%	55%
	8-Hr	22	5011	10000	10000	0%	0%	50%	50%
SOx	1-Hr	11.2	63.6	-	655	-	2%	-	10%
	3-Hr	6.9	59.3	1300	-	1%	-	5%	-
	24-Hr	1.9	25.4	365	105	1%	2%	7%	24%
	Annual	0.3	8.3	80	-	0%	-	10%	-
PM10	24-Hr	22.8	186.8	150	50	15%	46%	125%	374%
	Annual	2.6	60.7	50	30	5%	9%	121%	202%

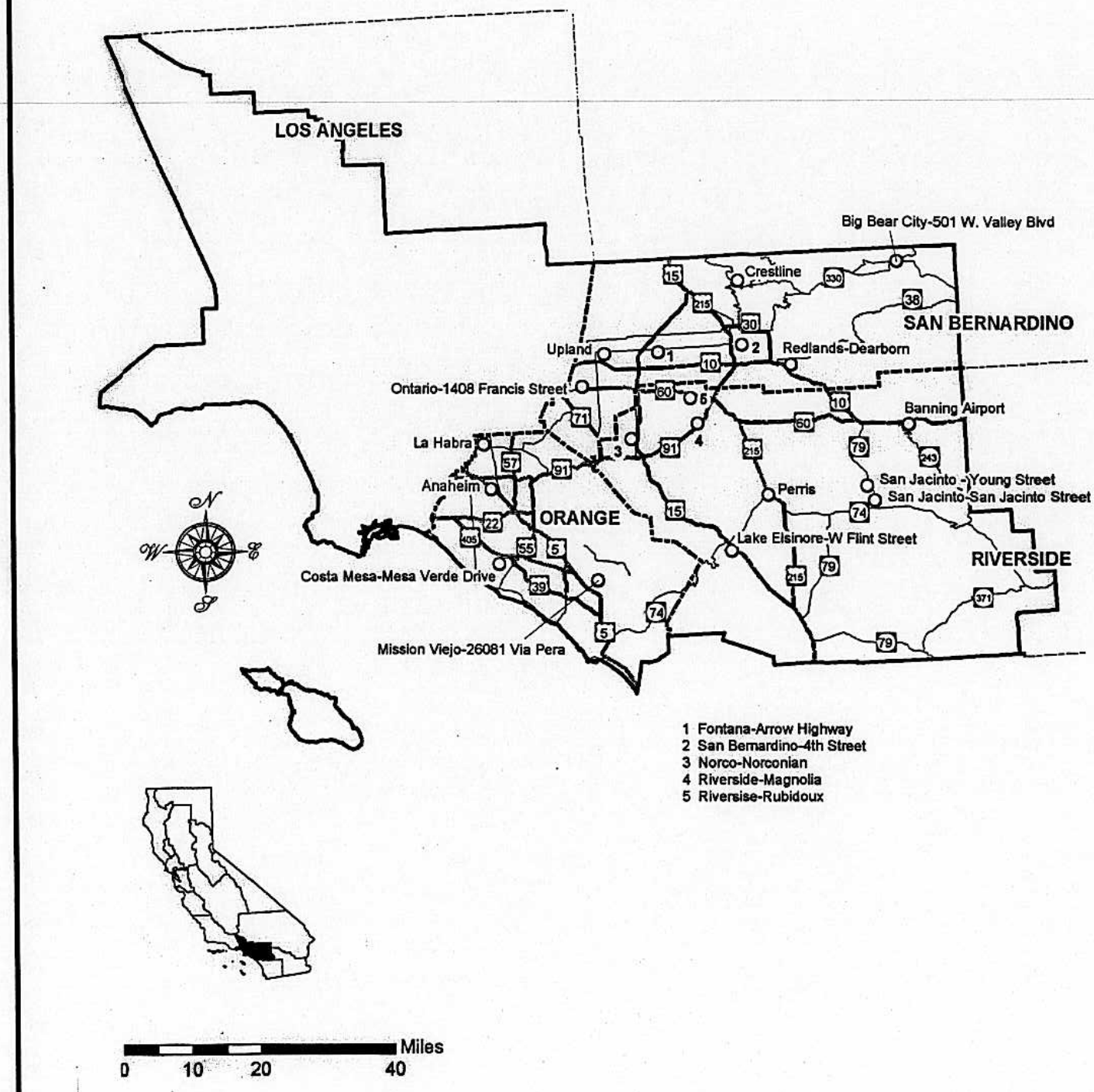


FIGURE 8.1-B1
SLAMS/NAMS Locations

CH2MHill

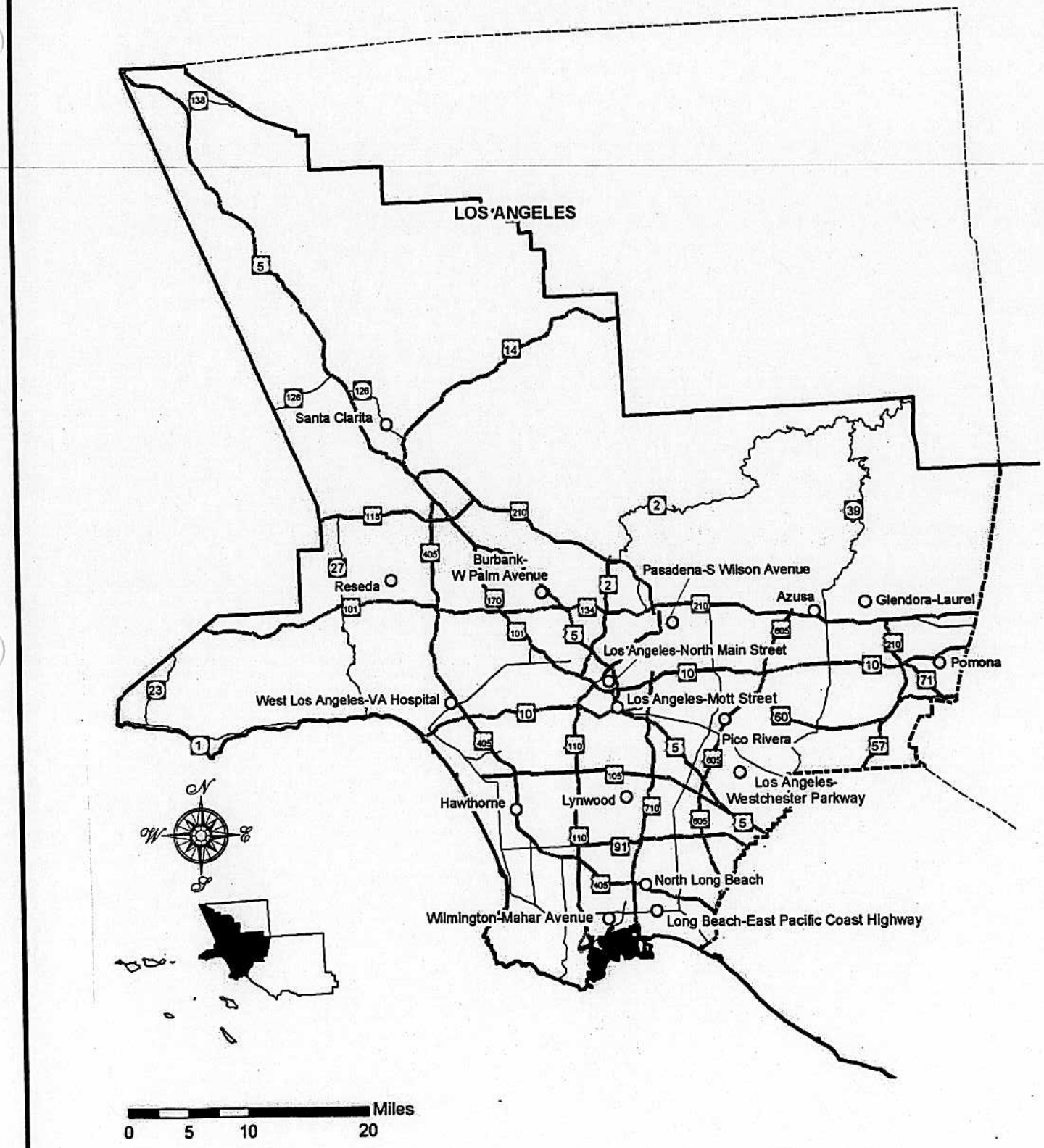


FIGURE 8.1-B2
SLAMS/NAMS Locations

CH2MHill

APPENDIX 8.1C

Protocol for Increments Analysis

Overview of Requirements for Increments Analysis

The federal Prevention of Significant Deterioration (PSD) program is intended to ensure that economic growth in areas with good air quality occurs without causing the deterioration of that air quality to unhealthful levels. The PSD program contains a number of requirements that apply to new or modified sources of air pollution that are located in clean air areas. In the South Coast Air Basin, the South Coast Air Quality Management District (SCAQMD) has not been delegated authority by the USEPA to administer the PSD program. These PSD program requirements, applied on a pollutant-specific basis, include conducting an increments analysis to demonstrate that no increments will be exceeded as a result of the proposed new or modified source.

The WCEP project is not expected to trigger the requirements of the PSD program. Therefore, no increment analysis is proposed, thus no protocol is required at this time.

APPENDIX 8.1D

Screening Health Risk Assessment

The screening health risk assessment was conducted in accordance with the procedures developed by the California Air Resources Board and the Office of Environmental Health Hazard Analysis. The latest version of the HARP model was used to characterize risks from the proposed facility.

The screening health risk assessment was carried out in three steps. First, emissions of toxic air pollutants from the project were calculated. These calculations are described in Section 8.1 and Appendix 8.1A. (Emissions as delineated in Table 8.1A-2B, which represent the 4000 operational scenario for modeling impacts were used in the HRA. This will yield an upper limit of related risks due to the higher emissions of toxics under this scenario.)

Next, the ISCST3 subroutine in the CARB/OEHHA Health Risk Assessment Program (HARP) model was used to predict the maximum concentration at each receptor due to the facility. The receptor network based on data derived from the facility ISCST3 modeling was used in HARP. Finally, HARP was used to evaluate acute, chronic and cancer risks through inhalation and non-inhalation pathways based upon the maximum predicted concentration at each receptor.

Trace amounts of total chromium are present in the local water supply which will be used in the cooling tower process. No chromium, in any form, will be added to the cooling tower water in the form of biocides, etc. The other assumptions used in running the HARP program were as follows:

- Emission rates for non-criteria pollutants are taken from AFC Section 8.1, and from Appendix 8.1A.
- Number of residents affected is based upon the updated 2000 population data for those census tracts or portions of census tracts which lie within the maximum impact receptor radius of the proposed facility.
- All receptors were treated as residential receptors, which allows for the assumption that the MIR, if assumed residential, will represent the highest risk and no other receptor will show risks higher than the MIR. This deletes the need for running worker risks. This scenario was discussed with SCAQMD staff, and the HARP risk run options as recommended by SCAQMD (Chico, 10-20-05) were utilized, i.e., for cancer-70 year and derived adjusted method, for chronic-70 year and derived OEHHA method, for acute-no options.
- Deposition velocity is taken to be 0.02 m/s, as recommended by ARB for controlled emission sources.
- Fraction of residents with gardens is taken to be 0.052 which is likely conservatively high for the urban area near the project site.

- Fraction of produce grown at home is taken to be 0.052, which is also likely to be conservatively high.

The HARP program is a tool that assists with the programmatic requirements of the Air Toxics Hot Spots Program, and it can be used for preparing health risk assessments for other related programs such as air toxic control measure development or facility permitting applications. HARP is a computer based risk assessment program which combines the tools of emission inventory database, facility prioritization, air dispersion modeling, and risk assessment analysis. Use of HARP promotes statewide consistency in the area of risk assessment, increases the efficiency of evaluating potential health impacts, and provides a cost effective tool for developing facility health risk assessments. HARP may be used on single sources, facilities with multiple sources, or multiple facilities in close proximity to each other.

The receptor grid used in HARP was a combination of the following:

1. All identified sensitive receptors within 2 miles (~3 km) of the site, and,

2. The highest 3 MIR locations for the 1-hour and annual averaging times as derived from the refined air quality modeling presented in Section 8.1. These receptors were identified for each of the following modeling scenarios; (1) combustion turbines, (2) cooling towers, (3) fire pump IC engine, and (4) the construction equipment. These receptors were input into the HARP model as additional sensitive receptors, which negated the need for a large grid analysis. Figure 8.1D-4 is a map showing the MIR location.

A complete list of the discrete sensitive receptors within 1 mile of the facility is included in Table 8.9-2. The following tables and figures are presented at the end of this appendix:

Table 8.1D-2 Census Tract Numbers, Areas, and Population Data

Table 8.1D-3 SCAQMD TAC Summary

Table 8.1D-4 Sensitive Receptor Listing

Table 8.1D-5 OEHHA/CARB Risk Assessment Health Values (30 pages)

Figure 8.1D-1 Census Tracts with 1, 2, and 3 mile Radius Markers

Figure 8.1D-2 Sensitive Receptor Map for 60Mile Radius Distance

Figure 8.1D-3 Census Tract Map with Various Radius Markers

The HARP program results for acute and chronic inhalation and chronic non-inhalation exposures, cancer burden and individual cancer risk (workplace and residential) for the cooling tower and the combustion sources are included in this Appendix. Separate calculations are shown for each type of exposure and risk, and the results of the calculations are summarized below.

The modeling results show that the maximum modeled cancer risk from WCEP (turbines and cooling tower) is expected to be 1.28 in one million. This risk is slightly above the one in one million level considered significant, but below the SCAQMD significance value or 10 per million with T-BACT. T-BACT for simple cycle combustion turbines is the use of clean fuels (natural gas) and the operation of a CO catalyst. These T-BACT technologies are

proposed for WCEP, and as such, the significant risk threshold for WCEP is 10 in a million. The chronic and acute non-cancer hazard indices are <0.0256 and <0.118, respectively. Both are well below the significant impact level of 1. The total cancer burden was calculated to be 0.00125, which is also well below 1.0, as well as being below the SCAQMD Rule 1401 significance level of 0.5. Detailed calculations and results for each significant receptor are included in the modeling results, which are being submitted electronically.

In addition, a HARP analysis was performed for the construction emissions (primarily exhaust emissions), the cooling tower, as well as the diesel fueled IC engine (fire pump). The results are as follows:

- Cooling Tower Cancer Risk = 3.71 E-09
- Cooling Tower Acute Hazard Index = 0.000000457
- Cooling Tower Chronic Hazard Index = 0.00000106
- Construction Cancer Risk = 3.79E-07
- Construction Acute Hazard Index = 0.0
- Construction Chronic Hazard Index = 0.0168
- IC Engine Cancer Risk = 9.69 E-07
- IC Engine Acute Hazard Index = 0.00526
- IC Engine Chronic Hazard Index = 0.00061

(IC engine risks are for the fire pump engine.)

Construction risks have been adjusted by a factor of 1/70 to account for the temporary exposure period of only one (1) year.

These results are also provided on the CD at the end of this Appendix.

Other Health Risk Studies Conducted in the Project Region

Identification of available health studies concerning the potentially affected populations within the project region are as follows:

1. *The 2005 California Almanac of Emissions and Air Quality*, California Air Resources Board, Planning and Technical Support Division, 2005.

   CARB presents a wide variety of air toxics data in the 2005 Almanac acquired from the statewide monitoring network. Data from the network is generally given for the years 1990-2004 for the top ten air toxics: acetaldehyde, benzene, 1-3 butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter. A summary of this data was presented in the AFC Public Health section (8.9). This data is not specifically targeted for the proposed power plant site, but rather to the state and specified air basin areas. CARB currently monitors approximately 63 toxic substances in the statewide network, with the nearest station being the Azusa monitoring site.

2. The *Multiple Air Toxics Exposure Studies (MATES I, II, and III)*

MATES I, conducted in the late 1980's only evaluated a small number of air toxic substances at only a small number of monitoring sites across the air basin. The results of MATES I became the driving force behind the larger scale MATES II program.

MATES II, the nation's most comprehensive study of toxic air pollution to date, found that:

- Diesel exhaust is responsible for about 70 percent of the total cancer risk from air pollution;
- Emissions from mobile sources -- including cars and trucks as well as ships, trains and planes -- account for about 90 percent of the cancer risk. Emissions from businesses and industry are responsible for the remaining 10 percent; and
- The highest cancer risk occurs in south Los Angeles County -- including the port area-- and along major freeways.

The goal of MATES III is to update toxic air pollution levels and toxic emission inventories, and then input those data into a computer model of air dispersion to determine the cancer, as well as non-cancer, health risk from air toxics across the air basin. The study also will investigate potential toxic "hot spots" in communities.

MATES III will monitor for 21 toxic air contaminants and four other substances at 10 sites across the Los Angeles Basin (see lists below). In addition, starting next month, AQMD will use moveable monitoring stations to sample at a dozen or more neighborhood sites near toxic emission sources or in areas where community members are concerned about health risks from air pollution. Such neighborhood sites could be near airports, railroads, warehouses, landfills, high-volume vehicle traffic or multiple commercial or industrial facilities. Sampling at each neighborhood site will last for up to two months.

In addition to the above studies conducted within the project region, the SCAQMD is currently implementing an air toxics program which integrates both federal and state air toxics mandates. The SCAQMD program is composed of four (4) basic elements, as follows:

- Preconstruction review of new and modified sources for potential health impacts (Regulation XIV).
- Implementation of the AB 2588 Air Toxics "Hot Spots" Program.
- Adoption and enforcement of source specific control measures to reduce air toxics emissions. This element relies upon the authority of state legislation (AB 1807), and federal legislation pursuant to the Clean Air Act, i.e., NESHAPs.
- Cooperative "toxics" air monitoring program with the State Air Resources Board.

Air monitoring data for calendar year 2004 shows the following for both gaseous and particulate toxic air contaminants.

TABLE 8.1D-1
Toxics Monitoring Data for SCAQMD for Calendar Year 2003-2004

Toxic Contaminant	Concentration, ppb	Cancer Risk, per million
1,3 Butadiene	.076	29
Benzene	.432	40
Carbon Tetrachloride*	.095	25
Formaldehyde	3.04	22
Acetaldehyde	1.53	7
Perchloroethylene	.063	3
Methylene Chloride	1.43	5
MTBE*	.41	.3
Chloroform	.048	1
Trichloroethylene	.039	.4
Hex. Chromium	.073 ng/m^3	11
PAHs (as BaP)	.027	.03
Nickel	12.5 ng/m^3	3
Lead	19.6 ng/m^3	.2

* 2003 data only

Table 8.1D-2 Census Tract Numbers, Areas, and Population Data

CENSUS FINDINGS

Map ID	Tract Number	Total Population	Population in Radius	Total Area(sq.mi.)	Area in Radius(sq.mi.)
T1	4046.00	1446	93.0	9.62	0.62
T2	4060.00	4955	1219.8	0.74	0.18
T3	4057.00	8530	3485.2	0.92	0.37
T4	4051.01	5532	958.1	0.44	0.08
T5	4054.00	4466	3296.3	0.51	0.38
T6	4061.01	2959	0.2	0.53	0.00
T7	4052.01	5102	5102.0	0.55	0.55
T8	4053.00	8892	8892.0	0.98	0.98
T9	4051.02	4881	4867.7	0.36	0.36
T10	4049.03	2927	2653.5	0.21	0.19
T11	4049.02	3793	2882.6	0.28	0.21
T12	4056.00	5134	5134.0	0.81	0.81
T13	4326.02	4561	620.0	0.42	0.06
T14	4055.00	6622	6622.0	0.71	0.71
T15	4052.02	4808	4808.0	0.38	0.38
T16	4062.00	5396	5396.0	0.74	0.74
T17	4061.02	5728	3313.7	0.63	0.37
T18	4048.01	6949	6949.0	0.54	0.54
T19	4036.00	6295	331.7	1.91	0.10
T20	4052.03	3367	3367.0	0.27	0.27
T21	4047.01	5975	5975.0	0.64	0.64
T22	4048.02	4569	4569.0	0.40	0.40
T23	4047.02	6307	6307.0	0.43	0.43
T24	4333.03	7447	7447.0	0.34	0.34
T25	4333.01	9992	4064.6	0.50	0.20
T26	4067.00	9036	9036.0	1.46	1.46
T27	4065.00	6645	6645.0	0.80	0.80
T28	4064.11	2140	2140.0	0.31	0.31
T29	4068.00	4740	4740.0	0.69	0.69
T30	4063.00	5117	5115.9	1.98	1.98
T31	4035.00	1547	347.2	1.87	0.42
T32	4048.03	1930	1930.0	0.20	0.20
T33	4064.12	2390	2390.0	0.47	0.47
T34	4334.03	5130	1282.7	0.28	0.07
T35	4047.03	3406	3406.0	0.56	0.56
T36	4333.02	1409	1226.3	0.35	0.31
T37	4070.01	5828	5828.0	0.42	0.42
T38	4069.00	8211	8211.0	0.76	0.76
T39	4339.01	5779	5779.0	0.28	0.28
T40	4034.05	1658	115.5	1.42	0.10
T41	4070.02	3870	3870.0	1.15	1.15
T42	4066.02	4910	4910.0	0.62	0.62
T43	4066.01	5045	5045.0	0.75	0.75
T44	4064.02	2051	2051.0	0.38	0.38
T45	4340.01	4727	4727.0	0.44	0.44
T46	4339.02	3980	3978.4	0.28	0.28
T47	4074.00	2050	2050.0	0.24	0.24
T48	4080.01	8165	8165.0	2.58	2.58
T49	4083.01	5628	5628.0	0.80	0.80
T50	4338.01	6263	2542.5	0.60	0.25
T51	4071.01	5277	5277.0	0.44	0.44
T52	4340.02	7561	7561.0	0.68	0.68
T53	4075.00	8070	8070.0	0.84	0.84
T54	4073.01	4727	4727.0	0.38	0.38
T55	4034.07	2016	2016.0	1.94	1.94
T56	4034.06	2773	2673.3	0.47	0.45
T57	4071.02	5621	5621.0	0.36	0.36
T58	4080.02	7575	7575.0	0.76	0.76

CENSUS FINDINGS

Map ID	Tract Number	Total Population	Population in Radius	Total Area(sq.mi.)	Area in Radius(sq. mi.)
T59	4083.02	3646	3646.0	1.23	1.23
T60	4079.00	6012	6012.0	0.58	0.58
T61	4082.02	2452	2452.0	4.05	4.05
T62	4338.02	2865	176.8	2.57	0.16
T63	4073.02	3440	3440.0	0.31	0.31
T64	4034.03	5376	1884.2	1.46	0.51
T65	4076.00	8513	8513.0	0.66	0.66
T66	4083.03	3948	3948.0	0.67	0.67
T67	4072.00	7519	7519.0	0.56	0.56
T68	4034.04	2589	2565.9	0.93	0.92
T69	4078.00	8402	8402.0	1.62	1.62
T70	4034.08	6855	6855.0	1.23	1.23
T71	4033.12	5011	695.5	2.65	0.37
T72	5003.00	2894	2038.2	3.05	2.15
T73	4084.02	5469	5469.0	4.73	4.73
T74	4081.33	5750	5750.0	0.42	0.42
T75	4077.02	6496	6496.0	0.77	0.77
T76	4081.34	2952	2952.0	0.34	0.34
T77	4081.32	10469	10469.0	0.65	0.65
T78	4034.01	5219	5219.0	0.87	0.87
T79	4084.01	4107	4107.0	0.44	0.44
T80	4034.02	3518	3518.0	0.68	0.68
T81	4081.35	4390	4390.0	0.45	0.45
T82	4033.03	2636	2635.1	1.73	1.73
T83	4077.01	5864	5864.0	0.42	0.42
T84	4081.01	8312	8312.0	0.70	0.70
T85	4085.01	3217	3217.0	0.34	0.34
T86	5015.01	2164	1957.4	2.55	2.31
T87	4081.02	8986	8986.0	0.76	0.76
T88	4082.11	5947	5947.0	3.05	3.05
T89	4085.02	7759	7759.0	1.31	1.31
T90	4086.01	7374	7374.0	0.84	0.84
T91	4082.12	4262	4262.0	1.10	1.10
T92	4033.22	3925	536.7	0.90	0.12
T93	4086.24	3285	3285.0	0.52	0.52
T94	4086.23	3117	3117.0	0.35	0.35
T95	4033.04	5474	5469.6	1.40	1.40
T96	5013.00	6797	907.5	0.77	0.10
T97	4086.25	4113	4113.0	0.83	0.83
T98	4085.03	6258	6258.0	1.73	1.73
T99	5016.00	6915	6915.0	3.83	3.83
T100	4086.28	5548	5548.0	1.06	1.06
T101	4086.26	5225	5225.0	1.00	1.00
T102	5015.03	4966	4966.0	0.31	0.31
T103	4087.21	8355	8355.0	0.52	0.52
T104	4087.04	3148	3148.0	0.43	0.43
T105	4087.05	5548	5548.0	0.75	0.75
T106	5014.00	4221	353.9	0.41	0.03
T107	4086.29	2860	2860.0	0.70	0.70
T108	4033.05	2299	1642.9	0.55	0.40
T109	4033.25	4684	27.2	6.24	0.04
T110	4087.06	1487	1487.0	0.50	0.50
T111	5015.04	3627	3477.9	0.29	0.28

CENSUS FINDINGS

Map ID	Tract Number	Total Population	Population in Radius	Total Area(sq.mi.)	Area in Radius(sq. mi.)
T112	4086.27	3201	3201.0	1.09	1.09
T113	5002.02	4451	4451.0	2.48	2.48
T114	4087.22	4380	4380.0	0.73	0.73
T115	4087.03	6898	6817.5	6.68	6.60
T116	5018.01	7428	3457.5	0.43	0.20
T117	5002.01	5950	5950.0	2.76	2.76
T118	5001.00	3343	3343.0	3.82	3.82
T119	5018.02	3255	3255.0	0.30	0.30
T120	5020.02	7033	1.2	0.77	0.00
T121	5017.00	3418	3418.0	0.53	0.53
T122	5019.00	3981	1724.8	0.54	0.23
T123	5033.01	3257	2570.0	0.41	0.33
T124	5034.02	3821	3821.0	0.62	0.62
T125	5033.02	6285	3.9	0.60	0.00
T126	5034.01	6269	6269.0	0.75	0.75
T127	5035.01	6274	464.9	0.59	0.04
T128	5035.02	3926	604.4	0.47	0.07
T129	5037.01	4603	368.3	0.46	0.04
T130	5037.02	4935	446.2	0.66	0.06
T131	0014.03	3272	3272.0	0.52	0.52
T132	0015.01	5747	5616.3	1.24	1.21
T133	0011.01	4296	4296.0	0.65	0.65
T134	0014.01	5604	5604.0	0.62	0.62
T135	0014.02	5195	5195.0	0.48	0.48
T136	0015.06	4319	2982.7	1.68	1.16
T137	0011.02	3087	3087.0	0.40	0.40
T138	0011.03	4460	4460.0	0.53	0.53
T139	0012.02	3367	3367.0	0.34	0.34
T140	0012.01	5371	5371.0	0.34	0.34
T141	0014.04	3767	2323.5	1.11	0.68
T142	0015.07	4290	852.3	0.73	0.14
T143	0013.04	3945	3185.0	0.48	0.38
T144	0013.01	6183	2587.8	0.73	0.30
T145	0015.03	5088	2.3	1.19	0.00
T146	0013.03	5750	2432.7	0.46	0.19

Table 8.1D-3 SCAQMD TAC Summary

South Coast Air Basin

Air Basin Summary

		Annual Average Concentrations and Health Risks													
TAC	Conc.*/Risk**	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Acetaldehyde	Annual Avg	2.46	3.00	2.46	2.67	2.30	0.97	2.08	1.77	1.54	1.63	1.26	1.47	1.41	1.47
	Health Risk	12	15	12	13	11	5	10	9	7	8	6	7	7	7
Benzene	Annual Avg	3.42	2.91	2.61	2.17	2.40	1.89	1.45	1.34	1.25	1.20	0.97	0.86	0.77	0.75
	Health Risk	317	269	242	201	222	175	134	124	116	111	90	80	71	69
1,3-Butadiene	Annual Avg	0.53	0.45	0.50	0.57	0.50	0.46	0.39	0.38	0.35	0.33	0.25	0.25	0.21	0.15
	Health Risk	200	170	187	212	187	173	146	142	133	123	94	94	79	55
Carbon Tetrachloride	Annual Avg	0.14	0.13		0.11		0.10	0.08		0.11		0.10	0.09	0.09	0.09
	Health Risk	36	35		28		27	21		30		25	23	24	25
Chromium, Hexavalent	Annual Avg			0.39	0.29	0.29	0.46	0.18	0.17	0.15	0.14	0.18		0.18	0.16
	Health Risk			59	43	43	69	27	25	22	22	27		27	24
para-Dichlorobenzene	Annual Avg		0.17	0.19	0.17	0.13	0.17	0.11	0.13			0.13	0.15	0.16	0.17
	Health Risk		11	13	11	8	11	7	9			9	10	11	11
Formaldehyde	Annual Avg	2.92	3.08	2.22	3.22	3.14	3.57	5.06	4.47	3.79	4.06	3.13	4.13	4.16	3.83
	Health Risk	22	23	16	24	23	26	37	33	28	30	23	30	31	28
Methylene Chloride	Annual Avg	1.86	1.51	0.90	1.23	1.10	1.28	0.95	1.14	0.85	0.92	0.83	0.63	0.57	0.59
	Health Risk	6	5	3	4	4	4	3	4	3	3	3	2	2	2
Perchloroethylene	Annual Avg	0.58	0.55	0.41	0.45	0.39	0.36	0.32	0.27	0.26		0.21	0.18	0.15	0.11
	Health Risk	23	22	16	18	16	15	13	11	10		8	7	6	4
Diesel PM***	Annual Avg	(3.6)					(2.7)					(2.4)			
	Health Risk	(1080)					(810)					(720)			
Average Basin Health Risk		616	550	548	554	514	505	398	357	349	297	285	253	258	225

* Concentrations for Hexavalent Chromium are expressed as ng/m³, and concentrations for Diesel PM are expressed as µg/m³. Concentrations for all other TACs are expressed as ppb.
** Health Risk represents the number of excess cancer cases per million people based on a lifetime (70-year) exposure to the annual average concentration. Total Health Risk represents only those compounds listed in this table and only those with data for the year. There may be other significant compounds for which monitoring and/or health risk information are not available.
*** The Diesel PM concentrations are estimates based on receptor modeling. Because data are not available for all years, Diesel PM is not included in the Average Basin Health Risk number.

Table 8.1D-4 Sensitive Receptor Listing

EME-WALNUT EC
BIXBY AVE
HACIENDA HEIGHTS, CA 91748

Distance Searched: 6.000 miles from subject property

RECEPTOR SUMMARY
An X indicates the presence of the receptor within the search radius.

Residential Population
Estimated population within search radius: 588287 persons.

Other Public Receptors

Type	Within Search Radius	Sites Total
Day Care Centers:	☒	121
Medical Centers:	☒	5
Nursing Homes:	☒	17
Schools:	☒	359
Hospitals:	☒	13
Colleges:	☒	13
Arena:	☐	
Prison:	☐	

Environmental Receptors

Type	Within Search Radius	Sites Total
Federal Land:	☐	

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site		EDR ID / Database
A1 West 1/2-1 mi 2641 Higher	Name: Address: City: State: Zip:	HACIENDA LA PUENTE HEAD START/STATE PS-GLENELDER Not Reported Not Reported CA Not Reported	DAY1040209 Daycare
A2 West 1/2-1 mi 2681 Higher	Name: ID: Site Type: Latitude: Longitude:	Glenelder Elementary School 242742 school 34.00700 -118.00000	GNS0186204 GNIS Schools
A3 West 1/2-1 mi 2722 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	GLENELDER ELEMENTARY 061632502043 16234 FOLGER ST. HACIENDA HEIGHTS, CA 91745 6269331440 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 05	PBS061632502043 Public Schools
A4 West 1/2-1 mi 3078 Higher	Name: Address: City: State: Zip:	UNITED CHRISTIAN EDUCATION CENTER Not Reported Not Reported CA Not Reported	DAY1040204 Daycare
A5 West 1/2-1 mi 3367 Higher	Schoolid: Address: County num: State: Zip5: Phone: Hi grde: Locale: School type: School level: Affiliation: Association:	K9300382 16152 GALE AVE 6037 CA 91745 626-336-3334 Grade 12 Urban fringe of Large City Alternative Combined Christian (no specific denomination) Association of Christian Schools International (ACSI)	PVTSCHK9300382 Private Schools Name: City: County: Fips: Zip4: Low grade: Gender:
			UNITED CHRISTIAN EDUCATION CTR HACIENDA HEIGH LOS ANGELES 6 Not Reported Prekindergarten Coed
B6 SSW 1/2-1 mi 3625 Higher	Name: ID: Site Type: Latitude: Longitude:	Glen A Wilson High School 1724407 school 33.99900 -117.90000	GNS0186094 GNIS Schools

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
B7 SW 1/2-1 mi 3974 Higher	Name: ID: Site Type: Latitude: Longitude:	Cedarlane Middle School 240394 school 33.99900 -118.00000	GNS0170192 GNIS Schools
B8 SSW 1/2-1 mi 4069 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	WILSON (GLEN A.) HIGH 061632502072 16455 WEDGEWORTH DR. HACIENDA HEIGHTS, CA 91745 6269344400 Urban Fringe of Large City Regular Elementary and Secondary Schools High 09 12	PBS061632502072 Public Schools
B9 SSW 1/2-1 mi 4074 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	CEDARLANE MIDDLE 061632502039 16333 CEDARLANE DR. HACIENDA HEIGHTS, CA 91745 6269331300 Urban Fringe of Large City Regular Elementary and Secondary Schools Middle 06 08	PBS061632502039 Public Schools
B10 SSW 1/2-1 mi 4090 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	BIXBY ELEMENTARY 061632502037 16446 WEDGEWORTH DR. HACIENDA HEIGHTS, CA 91745 6269331410 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 05	PBS061632502037 Public Schools
B11 SSW 1/2-1 mi 4157 Higher	Name: ID: Site Type: Latitude: Longitude:	Bixby Elementary School 239382 school 33.99700 -117.90000	GNS0163691 GNIS Schools
12 East 1/2-1 mi 4272 Higher	Name: ID: Site Type: Latitude: Longitude:	Rowland School (historical) 1669913 school 34.00800 -117.90000	GNS0222234 GNIS Schools

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site		EDR ID / Database
C13 SSE 1/2-1 mi 4776 Higher	Name: ID: Site Type: Latitude: Longitude:	Wedgeworth Elementary School 1732025 school 33.99600 -117.90000	GNS0239186 GNIS Schools
14 West 1/2-1 mi 4879 Lower	Schoolid: Name: Address: City: State: Telephone: Sector: Level: Control: Affiliation: Has Hospital?: Open to Pub?: Active?:	383084 HACIENDA LA PUENTE UNIFIED SCHOOL DIST-ADULT EDUC 15959 E GALE AVE CITY OF INDUSTRY CA Zip: 91716 6269331915 Less than 2-year public Less than 2 years (below associate) Public Public 2 Insititution is open to the public Active - institution active and not a new institution	COL383084 Colleges
D15 ENE 1/2-1 mi 4913 Higher	Name: ID: Site Type: Latitude: Longitude:	Hurley Elementary School 243750 school 34.01300 -117.90000	GNS0192732 GNIS Schools
C16 SSE 1/2-1 mi 4930 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	WEDGEWORTH ELEMENTARY 061632502070 16949 WEDGEWORTH HACIENDA HEIGHTS, CA 91745 6269331580 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 05	PBS061632502070 Public Schools
E17 NNW 1/2-1 mi 4986 Higher	Name: ID: Site Type: Latitude: Longitude:	Workman Elementary School 251813 school 34.02100 -117.90000	GNS0242192 GNIS Schools

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
E18 NNW 1/2-1 mi 5139 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	WORKMAN ELEMENTARY 061632502075 16000 WORKMAN ST. LA PUENTE, CA 91744 6269331600 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 05	PBS061632502075 Public Schools
D19 ENE 1/2-1 mi 5173 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	HURLEY ELEMENTARY 063375005202 535 S. LAURA AVE. LA PUENTE, CA 91744 9099652429 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 06	PBS063375005202 Public Schools
D20 ENE 1/2-1 mi 5245 Higher	Name: Address: City: State: Zip:	OPTIONS-STATE PRESCHOOL-HURLEY Not Reported Not Reported CA Not Reported	DAY1040177 Daycare
21 SSE 1-2 mi 5943 Higher	Name: Address: City: State: Zip:	SHEPHERD OF THE VALLEY PRESCHOOL & DAY CARE Not Reported Not Reported CA Not Reported	DAY1040298 Daycare
22 NNW 1-2 mi 6129 Higher	Name: ID: Site Type: Latitude: Longitude:	Hudson School 243715 school 34.02400 -118.00000	GNS0192396 GNIS Schools
23 WSW 1-2 mi 6436 Higher	Name: ID: Site Type: Latitude: Longitude:	Dibble School 241492 school 34.00200 -118.00000	GNS0177622 GNIS Schools

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site	EDR ID / Database

F24
NW
1-2 mi
6846
Lower

SRNH555395
Nursing Homes

Provnum: 555395
Street: 555 SOUTH EL ENCANTO ROAD
State: CA
Phone: 6263361274
Num Beds: 155
Occupied %: 68
Owner Type: Non profit - Other
Multi Nursing home ownership?: NO
Has Resident and Family Councils?: RESIDENT

Name: EL ENCANTO HEALTHCARE CENTER
City: CITY OF INDUSTRY
Zipcode: 91745
Last Insp: 20020130
Num Residents: 106
Description: Participating in Medicare and Medicaid
Within Hosp?: NO

25
ESE
1-2 mi
7005
Higher

GNS0222235
GNIS Schools

Name: Rowland School (historical)
ID: 1670009
Site Type: school
Latitude: 33.99800
Longitude: -117.90000

G26
NNW
1-2 mi
7101
Lower

PBS061632502049
Public Schools

Name: LA PUENTE HIGH
NCES ID: 061632502049
Address: 15615 E. NELSON AVE.
LA PUENTE, CA 91744
Telephone: 6269346700
Local Code: Urban Fringe of Large City
School Type: Regular Elementary and Secondary Schools
School Level: High
Lowest Grade: 09
Highest Grade: 12

27
East
1-2 mi
7271
Higher

COL114062
Colleges

Schoolid: 114062
Name: ELEGANTE BEAUTY COLLEGE
Address: 17337 E VALLEY BLVD
City: LA PUENTE
State: CA
Zip: 91744
Telephone: 6269652532
Sector: Less than 2-year private, for-profit
Level: Less than 2 years (below associate)
Control: Private, for-profit
Affiliation: Private, for-profit
Has Hospital?: 2
Open to Pub?: Insititution is open to the public
Active?: Active - institution active and not a new institution

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
G28 NNW 1-2 mi 7383 Lower	Name: ID: Site Type: Latitude: Longitude:	La Puente High School 244450 school 34.02700 -118.00000	GNS0197895 GNIS Schools
H29 SW 1-2 mi 7385 Higher	Name: Address: City: State: Zip:	HACIENDA LA PUENTE USD-SCHOOL AGE-MESA ROBLES Not Reported Not Reported CA Not Reported	DAY1040294 Daycare
H30 SW 1-2 mi 7505 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	MESA ROBLES ELEMENTARY 061632502056 16060 MESA ROBLES DR. HACIENDA HEIGHTS, CA 91745 6269331320 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 08	PBS061632502056 Public Schools
I31 SW 1-2 mi 7588 Higher	Schoolid: Address: County num: State: Zip5: Phone: Hi grde: Locale: School type: School level: Affiliation: Association:	A9500493 15938 HALLIBURTON RD. 6037 CA 91745 818-336-0682 Grade 12 Urban fringe of Large City Regular elementary or secondary Secondary Nonsectarian No Membership Association	PVTSCHA9500493 Private Schools Name: City: County: Fips: Zip4: Low grade: Gender:
32 NNW 1-2 mi 7672 Lower	Name: ID: Site Type: Latitude: Longitude:	Saint Joseph School 248654 school 34.02800 -118.00000	GNS0223230 GNIS Schools
H33 SW 1-2 mi 7779 Higher	Name: ID: Site Type: Latitude: Longitude:	Mesa Robles Elementary School 1724429 school 33.99200 -118.00000	GNS0206172 GNIS Schools

HACIENDA HEIGHTS
HACIENDA HEIGH
LOS ANGELES
6
Not Reported
Grade 7

Coed

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site		EDR ID / Database
I34 SW 1-2 mi 7829 Higher	Name: Address: City: State: Zip:	HACIENDA HEIGHTS CHRISTIAN PRESCHOOL Not Reported Not Reported CA Not Reported	DAY1040285 Daycare
F35 WNW 1-2 mi 7829 Lower	Name: ID: Site Type: Latitude: Longitude:	El Encanto Sanitarium 1660593 hospital 34.02000 -118.00000	GNS0180500 GNIS Hospitals
J36 WNW 1-2 mi 7850 Lower	Name: Address: City: State: Zip:	HACIENDA CHRISTIAN SCHOOL Not Reported Not Reported CA Not Reported	DAY1040179 Daycare
J37 WNW 1-2 mi 7859 Lower			PVTSCH00093266 Private Schools

Schoolid:	00093266	Name:	HACIENDA CHRISTIAN SCHOOL
Address:	15518 E GALE AV	City:	HACIENDA HEIGH
County num:	6037	County:	LOS ANGELES
State:	CA	Fips:	6
Zip5:	91745	Zip4:	Not Reported
Phone:	626-968-6811	Low grade:	Prekindergarten
Hi grde:	Grade 8		
Locale:	Urban fringe of Large City	Gender:	Coed
School type:	Regular elementary or secondary		
School level:	Elementary		
Affiliation:	Christian (no specific denomination)		
Association:	Association of Christian Schools International (ACSI)		

38 NNE 1-2 mi 7948 Higher	Name: ID: Site Type: Latitude: Longitude:	Workman High School 1724368 school 34.02900 -117.90000	GNS0242193 GNIS Schools

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
K39 North 1-2 mi 8279 Lower	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	SIERRA VISTA MIDDLE 061632502062 15801 SIERRA VISTA CT. LA PUENTE, CA 91744 6269331350 Urban Fringe of Large City Regular Elementary and Secondary Schools Middle 06 08	PBS061632502062 Public Schools
40 NW 1-2 mi 8354 Lower	Name: ID: Site Type: Latitude: Longitude:	Valley Vocational Center 250929 school 34.02300 -118.00000	GNS0237348 GNIS Schools
L41 NNE 1-2 mi 8439 Higher	Name: Address: City: State: Zip:	WING LANE ELEMENTARY Not Reported Not Reported CA Not Reported	DAY1040076 Daycare
L42 NNE 1-2 mi 8499 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	WING LANE ELEMENTARY 061632502073 16605 WING LANE VALINDA, CA 91744 6269331590 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 05	PBS061632502073 Public Schools
K43 North 1-2 mi 8551 Lower	Name: ID: Site Type: Latitude: Longitude:	Sierra Vista Middle School 249458 school 34.03100 -117.90000	GNS0227559 GNIS Schools
J44 West 1-2 mi 8567 Lower	Name: ID: Site Type: Latitude: Longitude:	Shadybend Elementary School 1732578 school 34.01100 -118.00000	GNS0226584 GNIS Schools

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site		EDR ID / Database
L45 NNE 1-2 mi 8643 Higher	Name: ID: Site Type: Latitude: Longitude:	Wing Lane Elementary School 251724 school 34.02800 -117.90000	GNS0241667 GNIS Schools
J46 West 1-2 mi 8704 Lower	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	SHADYBEND ELEMENTARY 061632502061 15430 SHADYBEND ST. HACIENDA HEIGHTS, CA 91745 6269331530 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 05	PBS061632502061 Public Schools
J47 West 1-2 mi 8712 Lower	Name: Address: City: State: Zip:	HACIENDA LA PUENTE/HEAD START-SHADYBEND SITE Not Reported Not Reported CA Not Reported	DAY1040187 Daycare
48 North 1-2 mi 8928 Lower	Name: Address: City: State: Zip:	HACIENDA LA PUENTE PRESCHOOL (DEL VALLE) Not Reported Not Reported CA Not Reported	DAY1040037 Daycare
K49 North 1-2 mi 8988 Lower	Name: ID: Site Type: Latitude: Longitude:	Del Valle School 241403 school 34.03300 -117.90000	GNS0177038 GNIS Schools
M50 WSW 1-2 mi 9123 Higher			PVTSCHK9300381 Private Schools

Schoolid:	K9300381	Name:	HOLY TRINITY LUTHERAN PRE-SCH
Address:	15710 NEWTON STREET	City:	HACIENDA HEIGH
County num:	6037	County:	LOS ANGELES
State:	CA	Fips:	6
Zip5:	91745	Zip4:	Not Reported
Phone:	626-961-2070	Low grade:	Prekindergarten
Hi grde:	Kindergarten		
Locale:	Urban fringe of Large City	Gender:	Coed
School type:	Early Childhood Program/Day Care Center		
School level:	Elementary		
Affiliation:	Lutheran Church - Missouri Synod		
Association:	National Association for the Education of Young Children (NAEYC)		

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site		EDR ID / Database
N51 ENE 1-2 mi 9203 Higher	Name: ID: Site Type: Latitude: Longitude:	Northam Elementary School 246659 school 34.01400 -117.90000	GNS0211440 GNIS Schools
M52 WSW 1-2 mi 9211 Higher	Name: Address: City: State: Zip:	HOLY TRINITY LUTHERAN CHURCH PRESCHOOL Not Reported Not Reported CA Not Reported	DAY1040266 Daycare
N53 ENE 1-2 mi 9214 Higher	Name: Address: City: State: Zip:	OPTIONS-STATE PRESCHOOL-NORTHAM Not Reported Not Reported CA Not Reported	DAY1040172 Daycare
O54 NW 1-2 mi 9295 Lower	Name: Address: City: State: Zip:	MONTESSORI WORLD Not Reported Not Reported CA Not Reported	DAY1040070 Daycare
N55 East 1-2 mi 9361 Higher	Name: Address: City: State: Zip:	OPTIONS-HEAD START-NORTHAM Not Reported Not Reported CA Not Reported	DAY1040185 Daycare
P56 WSW 1-2 mi 9526 Higher	Name: Address: City: State: Zip:	HACIENDA LA PUENTE/HEAD START-KWIS SITE Not Reported Not Reported CA Not Reported	DAY1040252 Daycare
O57 NW 1-2 mi 9528 Lower			PVTSCHA9900537 Private Schools

Schoolid:	A9900537	Name:	MONTESSORI WORLD
Address:	15243 NELSON AVE.	City:	LA PUENTE
County num:	6037	County:	LOS ANGELES
State:	CA	Fips:	6
Zip5:	91744	Zip4:	Not Reported
Phone:	626-369-4335	Low grade:	Kindergarten
Hi grde:	Grade 5		
Locale:	Urban fringe of Large City	Gender:	Coed
School type:	Regular elementary or secondary		
School level:	Elementary		
Affiliation:	Nonsectarian		
Association:	American Montessori Society (AMS)		

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site			EDR ID / Database
58 SW 1-2 mi 9535 Higher	Schoolid: Name: Address: City: State: Telephone: Sector: Level: Control: Affiliation: Has Hospital?: Open to Pub?: Active?:	415631 DYNASTY INSTITUTE INC 2373 S HACIENDA BLVD HACIENDA HEIGHTS CA 6268550455 Less than 2-year private, for-profit Less than 2 years (below associate) Private, for-profit Private, for-profit 2 Insititution is open to the public Active - institution active and not a new institution	Zip: 91745	COL415631 Colleges
M59 WSW 1-2 mi 9640 Higher	Name: Address: City: State: Zip:	ST. MATTHEW METHODIST COOPERATIVE NURSERY SCHOOL Not Reported Not Reported CA Not Reported		DAY1040264 Daycare
P60 WSW 1-2 mi 9648 Higher	Name: ID: Site Type: Latitude: Longitude:	Kwis Elementary School 244376 school 34.00100 -118.00000		GNS0197724 GNIS Schools
M61 WSW 1-2 mi 9743 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	NEWTON MIDDLE 061632502058 15616 NEWTON AVE. HACIENDA HEIGHTS, CA 91745 6269331330 Urban Fringe of Large City Regular Elementary and Secondary Schools Middle 06 08		PBS061632502058 Public Schools
M62 WSW 1-2 mi 9814 Higher	Name: ID: Site Type: Latitude: Longitude:	Newton Middle School 246527 school 33.99800 -118.00000		GNS0210444 GNIS Schools
Q63 SSW 1-2 mi 9916 Higher	Name: Address: City: State: Zip:	UNITED MOLOKAN CHRISTIAN ASSOC.PRESCHOOL Not Reported Not Reported CA Not Reported		DAY1040343 Daycare

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site	EDR ID / Database

M64
WSW
1-2 mi
9927
Higher

PVTSCHA9300166
Private Schools

Schoolid:	A9300166	Name:	COMMUNITY CHRISTIAN SCHOOL
Address:	15716 TETLEY STREET	City:	HACIENDA HEIGH
County num:	6037	County:	LOS ANGELES
State:	CA	Fips:	6
Zip5:	91745	Zip4:	Not Reported
Phone:	626-333-7784	Low grade:	Kindergarten
Hi grde:	Grade 12		
Locale:	Urban fringe of Large City	Gender:	Coed
School type:	Regular elementary or secondary		
School level:	Combined		
Affiliation:	Christian (no specific denomination)		
Association:	Association of Christian Schools International (ACSI)		

R65
NE
1-2 mi
10034
Higher

PVTSCH00070839
Private Schools

Schoolid:	00070839	Name:	ST LOUIS OF FRANCE SCHOOL
Address:	13901 E TEMPLE AVE	City:	LA PUENTE
County num:	6037	County:	LOS ANGELES
State:	CA	Fips:	6
Zip5:	91746	Zip4:	2099
Phone:	626-918-6210	Low grade:	Kindergarten
Hi grde:	Grade 8		
Locale:	Urban fringe of Large City	Gender:	Coed
School type:	Regular elementary or secondary		
School level:	Elementary		
Affiliation:	Roman Catholic		
Association:	National Catholic Educational Association (NCEA)		

S66
West
1-2 mi
10123
Higher

GNS0202235
GNIS Schools

Name:	Los Altos High School
ID:	245137
Site Type:	school
Latitude:	34.00800
Longitude:	-118.00000

T67
ENE
1-2 mi
10198
Higher

PBS063375005214
Public Schools

Name:	VILLACORTA ELEMENTARY
NCES ID:	063375005214
Address:	17840 VILLACORTA ST. LA PUENTE, CA 91744
Telephone:	9099642385
Local Code:	Urban Fringe of Large City
School Type:	Regular Elementary and Secondary Schools
School Level:	Primary
Lowest Grade:	Kindergarten
Highest Grade:	06

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
S68 West 1-2 mi 10227 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	LOS ALTOS HIGH 061632502053 15325 E. LOS ROBLES AVE. HACIENDA HEIGHTS, CA 91745 6269345400 Urban Fringe of Large City Regular Elementary and Secondary Schools High 09 12	PBS061632502053 Public Schools
T69 ENE 1-2 mi 10325 Higher	Name: ID: Site Type: Latitude: Longitude:	Villacorta Elementary School 251050 school 34.01700 -117.90000	GNS0237937 GNIS Schools
R70 NE 1-2 mi 10397 Higher	Schoolid: Address: County num: State: Zip5: Phone: Hi grde: Locale: School type: School level: Affiliation: Association:	BB945586 3801 TEMPLE 6037 CA 91768 909-869-2284 Kindergarten Urban fringe of Large City Early Childhood Program/Day Care Center Elementary Nonsectarian National Association for the Education of Young Children (NAEYC)	PVTSCHBB945586 Private Schools Name: City: County: Fips: Zip4: Low grade: Gender:
Q71 SSW 1-2 mi 10421 Higher	Name: ID: Site Type: Latitude: Longitude:	Grazide Elementary School 242972 school 33.98400 -118.00000	GNS0187583 GNIS Schools
72 North 1-2 mi 10433 Lower	Name: Address: City: State: Zip:	NOOR MONTESSORI CHILD CARE CENTER Not Reported Not Reported CA Not Reported	DAY1040006 Daycare
U73 NNW 1-2 mi 10463 Lower	Name: Address: City: State: Zip:	HACIENDA LA PUENTE USD SPARKS ELEM. SCH. RM. K-2 Not Reported Not Reported CA Not Reported	DAY1040024 Daycare

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
V74 WNW 1-2 mi 10484 Lower	Name: Address: City: State: Zip:	NOOR MONTESSORI CHILD CARE CENTER Not Reported Not Reported CA Not Reported	DAY1040161 Daycare
Q75 SSW 1-2 mi 10506 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	GRAZIDE ELEMENTARY 061632502046 2850 LEOPOLD AVE. HACIENDA HEIGHTS, CA 91745 6269331450 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 05	PBS061632502046 Public Schools
76 NE 1-2 mi 10523 Higher	Name: ID: Site Type: Latitude: Longitude:	Grandview School 242903 school 34.03200 -117.90000	GNS0187108 GNIS Schools
R77 NE 1-2 mi 10531 Higher	Name: ID: Site Type: Latitude: Longitude:	Saint Martin Academy 248674 school 34.02600 -117.90000	GNS0223336 GNIS Schools
U78 NNW 2-4 mi 10785 Lower	Name: ID: Site Type: Latitude: Longitude:	Sparks Elementary School 1724470 school 34.03500 -118.00000	GNS0230072 GNIS Schools
V79 West 2-4 mi 10798 Lower	Name: ID: Site Type: Latitude: Longitude:	Hillgrove School 243473 school 34.01300 -118.00000	GNS0190850 GNIS Schools
W80 ENE 2-4 mi 10832 Higher	Name: ID: Site Type: Latitude: Longitude:	Giano Intermediate School 242690 school 34.01400 -117.90000	GNS0185809 GNIS Schools

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
81 WNW 2-4 mi 10963 Lower	Name: Address: City: State: Zip:	HACIENDA HEIGHTS PRESCHOOL & KINDERGARTEN Not Reported Not Reported CA Not Reported	DAY1040130 Daycare
V82 West 2-4 mi 10988 Lower	Name: Address: City: State: Zip:	HILLGROVE CENTER-SCHOOL AGE PROGRAM Not Reported Not Reported CA Not Reported	DAY1040174 Daycare
S83 West 2-4 mi 10990 Higher	Name: Address: City: State: Zip:	MONTESSORI CHILD DEVELOPMENT CENTER Not Reported Not Reported CA Not Reported	DAY1040202 Daycare
U84 NNW 2-4 mi 11134 Lower	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	SPARKS MIDDLE 061632502064 15100 GIORDANO ST. LA PUENTE, CA 91744 6269331360 Urban Fringe of Large City Regular Elementary and Secondary Schools Middle 06 08	PBS061632502064 Public Schools
X85 NNE 2-4 mi 11236 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	VALINDA SCHOOL OF ACADEMICS 061632502068 1030 INDIAN SUMMER VALINDA, CA 91744 6269331570 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 07	PBS061632502068 Public Schools
U86 NNW 2-4 mi 11258 Lower	Name: ID: Site Type: Latitude: Longitude:	Sparks Middle School 1724471 school 34.03700 -118.00000	GNS0230073 GNIS Schools

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
87 East 2-4 mi 11262 Higher	Name: ID: Site Type: Latitude: Longitude:	Yorbita Elementary School 251872 school 34.00900 -117.90000	GNS0242536 GNIS Schools
W88 ENE 2-4 mi 11285 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	GIANO INTERMEDIATE 063375005200 3223 S. GIANO ST. LA PUENTE, CA 91744 6269652461 Urban Fringe of Large City Regular Elementary and Secondary Schools Middle 07 08	PBS063375005200 Public Schools
U89 NNW 2-4 mi 11291 Lower	Name: ID: Site Type: Latitude: Longitude:	Sparks Schools 249792 school 34.03700 -118.00000	GNS0230074 GNIS Schools
X90 NNE 2-4 mi 11492 Higher	Name: ID: Site Type: Latitude: Longitude:	Valinda Elementary School 250897 school 34.03800 -117.90000	GNS0237198 GNIS Schools
Y91 NW 2-4 mi 11666 Lower	Name: ID: Site Type: Latitude: Longitude:	Nelson School 246473 school 34.03400 -118.00000	GNS0210102 GNIS Schools
92 NW 2-4 mi 11776 Lower	Schoolid: Name: Address: City: State: Telephone: Sector: Level: Control: Affiliation: Has Hospital?: Open to Pub?: Active?:	116156 INSTITUTO EVANGELICO 14864 VALLEY BLVD LA PUENTE CA 8183301908 4-year private, not-for-profit Four or more years Private, nonprofit Private, not for-profit, religious affiliated 2 Insititution is open to the public Active - institution active and not a new institution	Zip: 91746	COL116156 Colleges

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
Y93 NW 2-4 mi 11789 Lower	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	NELSON ELEMENTARY 061632502057 330 N. CALIFORNIA AVE. LA PUENTE, CA 91744 6269331510 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 05	PBS061632502057 Public Schools
Z94 North 2-4 mi 11861 Lower	Name: ID: Site Type: Latitude: Longitude:	Puente Hills High School 242141 school 34.04100 -117.90000	GNS0218233 GNIS Schools
95 SW 2-4 mi 11877 Higher	Name: Address: City: State: Zip:	CONGREGATIONAL CHURCH NURSERY SCHOOL Not Reported Not Reported CA Not Reported	DAY1040334 Daycare
X96 NNE 2-4 mi 11911 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	MERLINDA ELEMENTARY 064200006881 1120 VALINDA AVE. WEST COVINA, CA 91790 6269311720 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 05	PBS064200006881 Public Schools
AA97 WSW 2-4 mi 12012 Higher			PVTSCHAB910671 Private Schools

Schoolid:	AB910671	Name:	ST MARKS LUTHERAN ELEM
Address:	2323 LAS LOMITAS	City:	HACIENDA HEIGH
County num:	6037	County:	LOS ANGELES
State:	CA	Fips:	6
Zip5:	91745	Zip4:	Not Reported
Phone:	626-968-0428	Low grade:	Prekindergarten
Hi grde:	Grade 8		
Locale:	Urban fringe of Large City	Gender:	Coed
School type:	Regular elementary or secondary		
School level:	Elementary		
Affiliation:	Evangelical Lutheran Church in America		
Association:	Evangelical Lutheran Education Association (ELEA),National Association for the Education of Young Children (NAEYC)		

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
AB98 NNW 2-4 mi 12297 Lower	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	TEMPLE ACADEMY 061632502067 635 CALIFORNIA AVE. LA PUENTE, CA 91744 6269331560 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 05	PBS061632502067 Public Schools
AA99 WSW 2-4 mi 12321 Higher	Name: Address: City: State: Zip:	ST MARK'S PRE SCHOOL Not Reported Not Reported CA Not Reported	DAY1040271 Daycare
Z100 North 2-4 mi 12361 Lower	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	FAIRGROVE ACADEMY (K-8) 061632507159 15540 FAIRGROVE AVE. LA PUENTE, CA 91744 6269331380 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 08	PBS061632507159 Public Schools
AB101 NNW 2-4 mi 12446 Lower	Name: ID: Site Type: Latitude: Longitude:	Temple Elementary School 250330 school 34.03800 -118.00000	GNS0233702 GNIS Schools
AC102 SW 2-4 mi 12483 Higher	Name: ID: Site Type: Latitude: Longitude:	Los Altos Elementary School 245139 school 33.98800 -118.00000	GNS0202234 GNIS Schools

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site	EDR ID Database
AC103 SW 2-4 mi 12736 Higher	Name: LOS ALTOS ELEMENTARY NCES ID: 061632502052 Address: 15565 LOS ALTOS DR. HACIENDA HEIGHTS, CA 91745 Telephone: 6269331480 Local Code: Urban Fringe of Large City School Type: Regular Elementary and Secondary Schools School Level: Primary Lowest Grade: Kindergarten Highest Grade: 05	PBS061632502052 Public Schools
AD104 NW 2-4 mi 12840 Lower	Schoolid: BB000024 Address: 14709 E NELSON AVE County num: 6037 State: CA Zip5: Not Reported Phone: 626-330-1003 Hi grde: Grade 12 Locale: Urban fringe of Large City School type: Regular elementary or secondary School level: Combined Affiliation: Other Association: No Membership Association Name: CALVARY CHRISTIAN SCHOOL City: LA PUENTA County: LOS ANGELES Fips: 6 Zip4: Not Reported Low grade: Grade 1 Gender: Coed	PVTSCHBB000024 Private Schools
AE105 NNW 2-4 mi 13172 Lower	Name: AMAR CHILDREN'S CENTER Address: Not Reported City: Not Reported State: CA Zip: Not Reported	DAY1039968 Daycare
AE106 NNW 2-4 mi 13358 Lower	Name: Amar School ID: 238575 Site Type: school Latitude: 34.04300 Longitude: -118.00000	GNS0158409 GNIS Schools
AF107 WNW 2-4 mi 13364 Higher	Name: PALM ELEMENTARY NCES ID: 061632502060 Address: 14740 E. PALM AVE. HACIENDA HEIGHTS, CA 91745 Telephone: 6269331520 Local Code: Urban Fringe of Large City School Type: Regular Elementary and Secondary Schools School Level: Primary Lowest Grade: Kindergarten Highest Grade: 05	PBS061632502060 Public Schools

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
AF108 WNW 2-4 mi 13423 Higher	Name: Address: City: State: Zip:	HACIENDA LA PUENTE HEAD START/STATE PS-PALM Not Reported Not Reported CA Not Reported	DAY1040162 Daycare
109 West 2-4 mi 13506 Higher	Name: ID: Site Type: Latitude: Longitude:	Los Robles Elementary School 245197 school 34.01000 -118.00000	GNS0202436 GNIS Schools
AF110 West 2-4 mi 13557 Higher	Name: ID: Site Type: Latitude: Longitude:	Palm Elementary School 247139 school 34.01500 -118.00000	GNS0213884 GNIS Schools
AE111 NNW 2-4 mi 13588 Lower	Name: Address: City: State: Zip:	HACIENDA LA PUENTE PRESCHOOL (CALIFORNIA COTTAGE) Not Reported Not Reported CA Not Reported	DAY1039959 Daycare
AD112 NW 2-4 mi 13713 Lower			PVTSCH01898769 Private Schools

Schoolid:	01898769	Name:	SUNSET CHRISTIAN SCHOOL
Address:	400 NORTH SUNSET AVENUE	City:	LA PUENTE
County num:	6037	County:	LOS ANGELES
State:	CA	Fips:	6
Zip5:	91744	Zip4:	Not Reported
Phone:	626-336-1206	Low grade:	Prekindergarten
Hi grde:	Grade 8		
Locale:	Urban fringe of Large City	Gender:	Coed
School type:	Regular elementary or secondary		
School level:	Elementary		
Affiliation:	Other		
Association:	Association of Christian Schools International (ACSI)		

AG113 SW 2-4 mi 13803 Higher	Name: ID: Site Type: Latitude: Longitude:	Los Molinos School 245175 school 33.98300 -118.00000	GNS0202395 GNIS Schools

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
AG114 SW 2-4 mi 13871 Higher	Name: ID: Site Type: Latitude: Longitude:	Los Molinos Elementary School 1724425 school 33.98300 -118.00000	GNS0202391 GNIS Schools
AH115 East 2-4 mi 13888 Higher	Name: ID: Site Type: Latitude: Longitude:	La Seda Elementary School 244457 school 34.01300 -117.90000	GNS0197912 GNIS Schools
AE116 NNW 2-4 mi 13909 Lower	Name: ID: Site Type: Latitude: Longitude:	California Elementary School 240027 school 34.04500 -118.00000	GNS0168026 GNIS Schools
AG117 SW 2-4 mi 13919 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	LOS MOLINOS ELEMENTARY 061632502054 3112 LAS MARIAS DR. HACIENDA HEIGHTS, CA 91745 6269331490 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 05	PBS061632502054 Public Schools
AH118 East 2-4 mi 14041 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	LA SEDA ELEMENTARY 063375005206 341 S. LA SEDA ROAD LA PUENTE, CA 91744 9099653496 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 06	PBS063375005206 Public Schools
AH119 East 2-4 mi 14056 Higher	Name: Address: City: State: Zip:	OPTIONS-STATE PRESCHOOL-LA SEDA Not Reported Not Reported CA Not Reported	DAY1040181 Daycare
AI120 ESE 2-4 mi 14240 Higher	Name: Address: City: State: Zip:	OPTIONS-SURROUND CARE-JELLICK Not Reported Not Reported CA Not Reported	DAY1040302 Daycare

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site		EDR ID / Database
AJ121 SE 2-4 mi 14259 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	ROWLAND ELEMENTARY 063375005211 2036 S. FULLERTON ROAD ROWLAND HEIGHTS, CA 91748 9099643441 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 06	PBS063375005211 Public Schools
AI122 ESE 2-4 mi 14293 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	JELLICK ELEMENTARY 063375005203 1400 S. JELLICK AVE. ROWLAND HEIGHTS, CA 91748 9099641275 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 06	PBS063375005203 Public Schools
AJ123 SE 2-4 mi 14340 Higher	Name: Address: City: State: Zip:	OPTIONS-SURROUND CARE-ROWLAND Not Reported Not Reported CA Not Reported	DAY1040355 Daycare
AI124 ESE 2-4 mi 14438 Higher	Name: ID: Site Type: Latitude: Longitude:	Jellick Elementary School 1763242 school 33.99200 -117.90000	GNS0194479 GNIS Schools
AJ125 SE 2-4 mi 14541 Higher	Name: ID: Site Type: Latitude: Longitude:	Rowland Elementary School 248436 school 33.98300 -117.90000	GNS0222231 GNIS Schools
126 North 2-4 mi 14747 Higher	Name: ID: Site Type: Latitude: Longitude:	Baldwin School 238933 school 34.04900 -117.90000	GNS0160487 GNIS Schools

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
AK127 East 2-4 mi 14984 Higher	Name: ID: Site Type: Latitude: Longitude:	Rorimer Elementary School 1763251 school 34.00600 -117.90000	GNS0221804 GNIS Schools
AK128 East 2-4 mi 15129 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	RORIMER ELEMENTARY 063375005210 18750 E. RORIMER ST. LA PUENTE, CA 91744 9099653333 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 06	PBS063375005210 Public Schools
AK129 East 2-4 mi 15192 Higher	Name: Address: City: State: Zip:	OPTIONS-STATE PRESCHOOL-RORIMER Not Reported Not Reported CA Not Reported	DAY1040213 Daycare
AL130 NNW 2-4 mi 15228 Lower	Name: ID: Site Type: Latitude: Longitude:	Sunset Elementary School 250133 school 34.04500 -118.00000	GNS0232390 GNIS Schools
AM131 West 2-4 mi 15547 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	ORANGE GROVE MIDDLE 061632502059 14505 ORANGE GROVE HACIENDA HEIGHTS, CA 91745 6269331340 Urban Fringe of Large City Regular Elementary and Secondary Schools Middle 06 08	PBS061632502059 Public Schools
AL132 NNW 2-4 mi 15645 Lower	Name: ID: Site Type: Latitude: Longitude:	Lassalette Elementary School 244634 school 34.04400 -118.00000	GNS0198999 GNIS Schools

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site	EDR ID / Database
AN133 NNW 2-4 mi 15715 Lower	Name: LASSALETTE ELEMENTARY NCES ID: 061632502051 Address: 14333 LASSALETTE ST. LA PUENTE, CA 91744 Telephone: 6269331470 Local Code: Urban Fringe of Large City School Type: Regular Elementary and Secondary Schools School Level: Primary Lowest Grade: Kindergarten Highest Grade: 08	PBS061632502051 Public Schools
AN134 NNW 2-4 mi 15742 Lower	Name: HACIENDA LA PUENTE PRESCHOOL (LASSALETTE) Address: Not Reported City: Not Reported State: CA Zip: Not Reported	DAY1039956 Daycare
AM135 West 2-4 mi 15800 Higher	Name: Orange Grove Middle School ID: 246940 Site Type: school Latitude: 34.01100 Longitude: -118.00000	GNS0212951 GNIS Schools
136 SE 2-4 mi 16269 Higher	Schoolid: BB980115 Address: 2628 S FULLERTON RD County num: 6037 State: CA Zip5: 91748 Phone: 626-810-6761 Hi grde: Grade 5 Locale: Urban fringe of Large City School type: Elementary or secondary with a Special Program Emphasis School level: Elementary Affiliation: Pentecostal Association: No Membership Association Name: FULLERTON CHRISTIAN SCHOOL City: ROWLAND HEIGHT County: LOS ANGELES Fips: 6 Zip4: Not Reported Low grade: Kindergarten Gender: Coed	PVTSCHBB980115 Private Schools
AO137 WNW 2-4 mi 16291 Lower	Name: Latin America Bible Institute ID: 244646 Site Type: school Latitude: 34.03100 Longitude: -118.00000	GNS0199085 GNIS Schools
AP138 SE 2-4 mi 16452 Higher	Name: OPTIONS-SURROUND CARE-FARJARDO Address: Not Reported City: Not Reported State: CA Zip: Not Reported	DAY1040370 Daycare

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site				EDR ID / Database
AQ139 ESE 2-4 mi 16554 Higher					PVTSCHBB000071 Private Schools
	Schoolid:	BB000071	Name:	OXFORD SCHOOL	
	Address:	18760 E COLIMA ROAD	City:	ROWLAND HEIGHT	
	County num:	6037	County:	LOS ANGELES	
	State:	CA	Fips:	6	
	Zip5:	Not Reported	Zip4:	Not Reported	
	Phone:	626-964-9588	Low grade:	Grade 1	
	Hi grde:	Grade 12			
	Locale:	Urban fringe of Large City	Gender:	Coed	
	School type:	Elementary or secondary with a Special Program Emphasis			
	School level:	Combined			
	Affiliation:	Nonsectarian			
	Association:	Other Special Emphasis Association(s)			
AO140 WNW 2-4 mi 16574 Lower	Name:	Valley Contiuation High School			GNS0237264 GNIS Schools
	ID:	1732021			
	Site Type:	school			
	Latitude:	34.03100			
	Longitude:	-118.00000			
AQ141 ESE 2-4 mi 16589 Higher	Name:	MONTESSORI SCHOOL OF ROWLAND HEIGHTS			DAY1040324 Daycare
	Address:	Not Reported			
	City:	Not Reported			
	State:	CA			
	Zip:	Not Reported			
AQ142 ESE 2-4 mi 16639 Higher	Name:	FIRST CHRISTIAN CHURCH OF ROWLAND HEIGHTS			DAY1040340 Daycare
	Address:	Not Reported			
	City:	Not Reported			
	State:	CA			
	Zip:	Not Reported			
143 ENE 2-4 mi 16716 Higher	Name:	OPTIONS SURROUND CARE-OSWALT			DAY1040121 Daycare
	Address:	Not Reported			
	City:	Not Reported			
	State:	CA			
	Zip:	Not Reported			
AR144 East 2-4 mi 16732 Higher	Name:	Nogales High School			GNS0210691 GNIS Schools
	ID:	246572			
	Site Type:	school			
	Latitude:	34.00900			
	Longitude:	-117.90000			
AS145 ENE 2-4 mi 16734 Higher	Name:	LA PETITE ACADEMY			DAY1040082 Daycare
	Address:	Not Reported			
	City:	Not Reported			
	State:	CA			
	Zip:	Not Reported			

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site	EDR ID / Database
146 North 2-4 mi 16765 Lower	Name: SAN JOSE-EDISON CHARTER NCES ID: 064200007533 Address: 1500 FRANCISQUITO WEST COVINA, CA 91791 Telephone: 6269186575 Local Code: Urban Fringe of Large City School Type: Regular Elementary and Secondary Schools School Level: Other Lowest Grade: Kindergarten Highest Grade: 12	PBS064200007533 Public Schools
147 NNW 2-4 mi 16766 Lower	Name: Tonopah School ID: 250537 Site Type: school Latitude: 34.05200 Longitude: -118.00000	GNS0234938 GNIS Schools
AP148 SE 2-4 mi 16809 Higher	Name: Farjardo Elementary School ID: 242170 Site Type: school Latitude: 33.97900 Longitude: -117.90000	GNS0182281 GNIS Schools
AT149 North 2-4 mi 16828 Higher	Name: CALIFORNIA AFTERSCHOOL PROGRAM Address: Not Reported City: Not Reported State: CA Zip: Not Reported	DAY1039874 Daycare
AS150 ENE 2-4 mi 16914 Higher	Schoolid: K9500097 Address: 800 FRANCESCA DR. County num: 6037 State: CA Zip5: 91789 Phone: 626-913-6084 Hi grde: Kindergarten Locale: Urban fringe of Large City School type: Early Childhood Program/Day Care Center School level: Elementary Affiliation: Nonsectarian Association: No Membership Association Name: LA PETITE ACADEMY City: WALNUT County: LOS ANGELES Fips: 6 Zip4: Not Reported Low grade: Prekindergarten Gender: Coed	PVTSCHK9500097 Private Schools
AU151 ESE 2-4 mi 16978 Higher	Name: Alvarado Intermediate School ID: 238567 Site Type: school Latitude: 33.98400 Longitude: -117.90000	GNS0158353 GNIS Schools

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site		EDR ID / Database
AU152 ESE 2-4 mi 17035 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	ALVARADO INTERMEDIATE 063375005197 1901 S. DESIRE AVE. ROWLAND HEIGHTS, CA 91748 6269642358 Urban Fringe of Large City Regular Elementary and Secondary Schools Middle 07 08	PBS063375005197 Public Schools
AT153 North 2-4 mi 17067 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	CALIFORNIA ELEMENTARY 064200006874 1125 BAINBRIDGE WEST COVINA, CA 91790 6269394800 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 05	PBS064200006874 Public Schools
AO154 WNW 2-4 mi 17267 Lower	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	VALLEY ALTERNATIVE HIGH (CONT. 061632502069 14162 E. LOMITAS AVE. LA PUENTE, CA 91746 6269331184 Urban Fringe of Large City Other High 09 12	PBS061632502069 Public Schools
155 NW 2-4 mi 17287 Lower	Name: ID: Site Type: Latitude: Longitude:	Hacienda La Puenta Adult Education School 251626 school 34.04400 -118.00000	GNS0188518 GNIS Schools
AT156 North 2-4 mi 17317 Higher	Name: ID: Site Type: Latitude: Longitude:	California Elementary School 240028 school 34.05600 -117.90000	GNS0168027 GNIS Schools
AV157 North 2-4 mi 17319 Higher	Name: Address: City: State: Zip:	KINDER-CARE LEARNING CENTERS, INC. Not Reported Not Reported CA Not Reported	DAY1039862 Daycare

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site	EDR ID Database

AW158
East
2-4 mi
17374
Higher

Name: NOGALES HIGH
NCES ID: 063375005207
Address: 401 S. NOGALES ST.
LA PUENTE, CA 91744
Telephone: 6269653437
Local Code: Urban Fringe of Large City
School Type: Regular Elementary and Secondary Schools
School Level: High
Lowest Grade: 09
Highest Grade: 12

PBS063375005207
Public Schools

AW159
East
2-4 mi
17397
Higher

Schoolid: K9300419
Address: 3443 NOGALES ST
County num: 6037
State: CA
Zip5: 91792
Phone: 626-965-9611
Hi grde: Kindergarten
Locale: Urban fringe of Large City
School type: Alternative
School level: Elementary
Affiliation: Nonsectarian
Association: National Association for the Education of Young Children (NAEYC)

Name: KINDER CARE LEARNING CTR
City: WEST COVINA
County: LOS ANGELES
Fips: 6
Zip4: Not Reported
Low grade: Kindergarten
Gender: Coed

PVTSCHK9300419
Private Schools

AW160
East
2-4 mi
17427
Higher

Name: KINDER CARE-LEARNING CENTERS, INC.
Address: Not Reported
City: Not Reported
State: CA
Zip: Not Reported

DAY1040173
Daycare

AV161
North
2-4 mi
17492
Higher

Schoolid: K9300418
Address: 830 W MERCED
County num: 6037
State: CA
Zip5: 91790
Phone: 626-918-5608
Hi grde: Kindergarten
Locale: Urban fringe of Large City
School type: Early Childhood Program/Day Care Center
School level: Elementary
Affiliation: Nonsectarian
Association: National Association for the Education of Young Children (NAEYC)

Name: KINDER CARE LEARNING CENTER
City: WEST COVINA
County: LOS ANGELES
Fips: 6
Zip4: Not Reported
Low grade: Kindergarten
Gender: Coed

PVTSCHK9300418
Private Schools

AX162
NNE
2-4 mi
17557
Higher

Name: MONTESSORI ACADEMY OF WEST COVINA
Address: Not Reported
City: Not Reported
State: CA
Zip: Not Reported

DAY1039879
Daycare

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
AY163 NNW 2-4 mi 17599 Lower	Name: Address: City: State: Zip:	BASSETT HEAD START/ERWIN Not Reported Not Reported CA Not Reported	DAY1039899 Daycare
AZ164 NNE 2-4 mi 17698 Higher	Name: ID: Site Type: Latitude: Longitude:	San Jose School 248875 school 34.05000 -117.90000	GNS0224422 GNIS Schools
AR165 East 2-4 mi 17777 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	RINCON INTERMEDIATE 063375005209 2800 E. HOLLINGWORTH ST. WEST COVINA, CA 91792 6269651696 Urban Fringe of Large City Regular Elementary and Secondary Schools Middle 07 08	PBS063375005209 Public Schools
AY166 NNW 2-4 mi 17874 Lower	Name: ID: Site Type: Latitude: Longitude:	Thomas E Erwin Elementary School 242053 school 34.05200 -118.00000	GNS0234177 GNIS Schools
AZ167 NNE 2-4 mi 17921 Higher	Name: ID: Site Type: Latitude: Longitude:	South Hills Academy 249734 school 34.05000 -117.90000	GNS0229734 GNIS Schools
BA168 NNW 2-4 mi 17952 Lower	Name: ID: Site Type: Latitude: Longitude:	Arnar High School 238717 school 34.05400 -118.00000	GNS0159349 GNIS Schools

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site				EDR ID Database
AZ169 NNE 2-4 mi 18080 Higher	Schoolid:	00079864	Name:	SOUTH HILLS ACADEMY	PVTSCH00079864 Private Schools
	Address:	1600 E FRANCISQUITO	City:	WEST COVINA	
	County num:	6037	County:	LOS ANGELES	
	State:	CA	Fips:	6	
	Zip5:	91791	Zip4:	Not Reported	
	Phone:	626-919-2000	Low grade:	Prekindergarten	
	Hi grde:	Grade 8			
	Locale:	Urban fringe of Large City	Gender:	Coed	
	School type:	Regular elementary or secondary			
	School level:	Elementary			
	Affiliation:	Christian (no specific denomination)			
	Association:	Association of Christian Schools International (ACSI)			
BB170 East 2-4 mi 18084 Higher	Name:	Rincoln Intermediate School			GNS0220698 GNIS Schools
	ID:	1763248			
	Site Type:	school			
	Latitude:	34.00600			
	Longitude:	-117.90000			
BC171 North 2-4 mi 18089 Higher	Name:	COMMUNITY PRESBYTERIAN DAY CARE CENTER			DAY1039850 Daycare
	Address:	Not Reported			
	City:	Not Reported			
	State:	CA			
	Zip:	Not Reported			
AX172 NNE 2-4 mi 18139 Higher	Name:	Merlinda Elementary School			GNS0206101 GNIS Schools
	ID:	245786			
	Site Type:	school			
	Latitude:	34.05600			
	Longitude:	-117.90000			
BD173 NW 2-4 mi 18161 Lower	Name:	Saint Louis School			GNS0223292 GNIS Schools
	ID:	254189			
	Site Type:	school			
	Latitude:	34.04900			
	Longitude:	-118.00000			
BC174 North 2-4 mi 18217 Higher	Name:	Coronadod Continuation High School			GNS0174004 GNIS Schools
	ID:	240935			
	Site Type:	school			
	Latitude:	34.05700			
	Longitude:	-117.90000			

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site		EDR ID / Database
AY175 NNW 2-4 mi 18220 Lower	Name: ID: Site Type: Latitude: Longitude:	Nueva Vista Continuation High School 1731982 school 34.05200 -118.00000	GNS0211595 GNIS Schools
BC176 North 2-4 mi 18253 Higher			PVTSCHBB945668 Private Schools
	Schoolid: Address: County num: State: Zip5: Phone: Hi grde: Locale: School type: School level: Affiliation: Association:	BB945668 540 E VINE AVENUE 6037 CA 91790 626-918-9526 Kindergarten Urban fringe of Large City Early Childhood Program/Day Care Center Elementary Christian (no specific denomination) No Membership Association	Name: City: County: Fips: Zip4: Low grade: Gender:	COMMUNITY PRESBYTERIAN DAY CAR WEST COVINA LOS ANGELES 6 Not Reported Prekindergarten Coed
177 ESE 2-4 mi 18286 Higher	Name: Address: City: State: Zip:	BELL MEMORIAL UNITED METHODIST CHURCH Not Reported Not Reported CA Not Reported	DAY1040333 Daycare
BE178 NW 2-4 mi 18405 Lower	Name: ID: Site Type: Latitude: Longitude:	Don Julian Elementary School 241558 school 34.03800 -118.00000	GNS0178185 GNIS Schools
179 ESE 2-4 mi 18528 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	SANTANA HIGH (CONT.) 063375005212 1006 OTTERBEIN ST. ROWLAND HEIGHTS, CA 91748 6269655971 Urban Fringe of Large City Other High 08 12	PBS063375005212 Public Schools

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
BD180 NNW 2-4 mi 18660 Lower	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	NUEVA VISTA CONTINUATION HIGH 060411000375 755 ARDILLA AVE. LA PUENTE, CA 91746 6269312827 Urban Fringe of Large City Other High 10 12	PBS060411000375 Public Schools
BF181 North 2-4 mi 18705 Higher	Name: Address: City: State: Zip:	WESCOVE AFTER SCHOOL PROGRAM RM#18 Not Reported Not Reported CA Not Reported	DAY1039827 Daycare
BG182 NNW 2-4 mi 18721 Lower	Name: Address: City: State: Zip:	MT. CALVARY FAITH LUTHERAN PRESCHOOL & CHILD CARE Not Reported Not Reported CA Not Reported	DAY1039843 Daycare
BE183 NW 2-4 mi 18748 Lower	Name: Address: City: State: Zip:	BASSSETT HEAD START/DON JULIAN Not Reported Not Reported CA Not Reported	DAY1039995 Daycare
BF184 North 2-4 mi 18807 Higher	Name: ID: Site Type: Latitude: Longitude:	Wescove Elementary School 251307 school 34.06000 -117.90000	GNS0239329 GNIS Schools
BD185 NNW 2-4 mi 18859 Lower	Name: ID: Site Type: Latitude: Longitude:	Bassett Senior High School 239037 school 34.05200 -118.00000	GNS0161082 GNIS Schools

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site		EDR ID / Database
BF186 North 2-4 mi 18884 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	WESCOVE ELEMENTARY 064200006885 1010 W. VINE WEST COVINA, CA 91790 6269394870 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 05	PBS064200006885 Public Schools
BA187 NNW 2-4 mi 18989 Lower	Name: ID: Site Type: Latitude: Longitude:	Edgewood Academy 241838 school 34.05600 -118.00000	GNS0180183 GNIS Schools
BH188 NNE 2-4 mi 18995 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	MERCED ELEMENTARY 064200006880 1545 E. MERCED ST. WEST COVINA, CA 91791 6269311700 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 05	PBS064200006880 Public Schools
BG189 NNW 2-4 mi 18999 Lower			PVTSCHK9300417 Private Schools

Schoolid:	K9300417	Name:	MT CALVARY FAITH LUTH PRESCH
Address:	2110 W FRANCISQUITO AV	City:	WEST COVINA
County num:	6037	County:	LOS ANGELES
State:	CA	Fips:	6
Zip5:	91790	Zip4:	Not Reported
Phone:	626-962-1899	Low grade:	Prekindergarten
Hi grde:	Grade 10		
Locale:	Urban fringe of Large City	Gender:	Coed
School type:	Alternative		
School level:	Combined		
Affiliation:	Evangelical Lutheran Church in America		
Association:	Evangelical Lutheran Education Association (ELEA)		

BI190 SE 2-4 mi 19030 Higher	Name: ID: Site Type: Latitude: Longitude:	Blandford Elementary School 239472 school 33.97200 -117.90000	GNS0164182 GNIS Schools

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
BI191 SE 2-4 mi 19059 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	BLANDFORD ELEMENTARY 063375005198 2601 BLANDFORD DR. ROWLAND HEIGHTS, CA 91748 6269653410 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 06	PBS063375005198 Public Schools
BB192 East 2-4 mi 19099 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	HOLLINGWORTH ELEMENTARY 063375005201 3003 E. HOLLINGWORTH ST. WEST COVINA, CA 91792 9095983661 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 06	PBS063375005201 Public Schools
BI193 SE 2-4 mi 19116 Higher	Name: Address: City: State: Zip:	OPTIONS SURROUND CARE-BLANDFORD Not Reported Not Reported CA Not Reported	DAY1040409 Daycare
BH194 NNE 2-4 mi 19150 Higher	Name: ID: Site Type: Latitude: Longitude:	Merced Elementary School 245780 school 34.05400 -117.90000	GNS0206038 GNIS Schools
BJ195 ESE 2-4 mi 19405 Higher	Name: Address: City: State: Zip:	FIRST BAPTIST PRE SCHOOL Not Reported Not Reported CA Not Reported	DAY1040330 Daycare

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
BK196 North 2-4 mi 19449 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	EDGEWOOD MIDDLE 064200009463 1625 W. DURNESS WEST COVINA, CA 91790 6269394900 Urban Fringe of Large City Regular Elementary and Secondary Schools Middle 06 08	PBS064200009463 Public Schools
BL197 East 2-4 mi 19507 Higher	Name: ID: Site Type: Latitude: Longitude:	Hollingsworth Elementary School 243543 school 34.00800 -117.90000	GNS0191304 GNIS Schools
BL198 East 2-4 mi 19548 Higher	Name: Address: City: State: Zip:	OPTIONS-SURROUND CARE-HOLLINGWORTH SCHOOL AGE Not Reported Not Reported CA Not Reported	DAY1040208 Daycare
BK199 North 2-4 mi 19592 Higher	Name: ID: Site Type: Latitude: Longitude:	Orangewood Elementary School 246946 school 34.06100 -118.00000	GNS0212978 GNIS Schools
BH200 NNE 2-4 mi 19595 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	HOLLENCREST MIDDLE 064200004607 1717 E. MERCED AVE. WEST COVINA, CA 91790 6269311760 Urban Fringe of Large City Regular Elementary and Secondary Schools Middle 06 08	PBS064200004607 Public Schools
BM201 North 2-4 mi 19603 Higher	Name: ID: Site Type:	QUEEN OF THE VALLEY HOSPITAL 6365 Hospital	HOS1001718 AHA Hospitals
BN202 ESE 2-4 mi 19608 Higher	Name: Address: City: State: Zip:	OPTIONS SURROUND CARE-KILLIAN Not Reported Not Reported CA Not Reported	DAY1040361 Daycare

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
BM203 North 2-4 mi 19756 Higher	Name: ID: Address: City: Zip: State: Telephone:	CITRUS VALLEY MEDICAL CENTER-VQ CAMPUS 050369 1115 S SUNSET AVE WEST COVINA 91790 CA 6269624011	HOSP000540 Medical Centers
BM204 North 2-4 mi 19756 Higher	Provnum: Street: State: Phone: Num Beds: Occupied %: Owner Type: Multi Nursing home ownership?: YES Has Resident and Family Councils?: RESIDENT	555556 1115 S SUNSET AVE CA 6268142447 23 74 Non profit - Corporation	SRNH555556 Nursing Homes Name: CITRUS VALLEY MEDICAL CENTER QV CAMPUS City: WEST COVINA Zipcode: 91790 Last Insp: 20010813 Num Residents: 17 Description: Participating in Medicare and Medicaid Within Hosp?: YES
205 NNW 2-4 mi 19802 Lower	Name: ID: Site Type: Latitude: Longitude:	Tri-City Academy 250608 school 34.06000 -118.00000	GNS0235343 GNIS Schools
BN206 ESE 2-4 mi 19809 Higher	Name: ID: Site Type: Latitude: Longitude:	Killian Elementary School 1763264 school 33.98100 -117.90000	GNS0197155 GNIS Schools
BK207 North 2-4 mi 19833 Higher	Name: ID: Site Type: Latitude: Longitude:	Edgewood Middle School 241837 school 34.06200 -118.00000	GNS0180184 GNIS Schools
BO208 NNW 2-4 mi 19938 Lower	Name: Address: City: State: Zip:	WILLOWOOD SCHOOL Not Reported Not Reported CA Not Reported	DAY1039815 Daycare

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
209 NNW 2-4 mi 19956 Lower	Name: ID: Site Type: Latitude: Longitude:	Sunkist Elementary School 250098 school 34.05600 -118.00000	GNS0232246 GNIS Schools
BJ210 ESE 2-4 mi 20163 Higher	Name: Address: City: State: Zip:	LOVING CARE CHRISTIAN PRESCHOOL Not Reported Not Reported CA Not Reported	DAY1040329 Daycare
BM211 North 2-4 mi 20215 Higher	Name: ID: Site Type: Latitude: Longitude:	Queen of the Valley Hospital 1724351 hospital 34.06400 -117.90000	GNS0218576 GNIS Hospitals
BP212 NNE 2-4 mi 20217 Higher	Name: Address: City: State: Zip:	CAMERON CHRISTIAN PRESCHOOL&SONSHINE CO. DAY CAM Not Reported Not Reported CA Not Reported	DAY1039817 Daycare
BN213 ESE 2-4 mi 20351 Higher	Name: ID: Site Type: Latitude: Longitude:	John A Rowland High School 248435 school 33.98200 -117.90000	GNS0194742 GNIS Schools
BO214 NNW 2-4 mi 20420 Higher	Name: ID: Site Type: Latitude: Longitude:	Willowood School 251667 school 34.06200 -118.00000	GNS0241357 GNIS Schools
BQ215 North 2-4 mi 20505 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	CORONADO ALTERNATIVE 064200006876 1717 W. MERCED AVE. WEST COVINA, CA 91790 6269311810 Urban Fringe of Large City Other Other Kindergarten 12	PBS064200006876 Public Schools

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation	Site		EDR ID Database
BQ216 North 2-4 mi 20505 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	ORANGEWOOD ELEMENTARY 064200006883 1717 W. MERCED AVE. WEST COVINA, CA 91790 6269394820 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 05	PBS064200006883 Public Schools
BP217 NNE 2-4 mi 20528 Higher	Name: Address: City: State: Zip:	SAN GABRIEL VALLEY YWCA CHILD CARE CENTER Not Reported Not Reported CA Not Reported	DAY1039818 Daycare
BR218 North 2-4 mi 20572 Higher	Name: Address: City: State: Zip:	BELAIRE LITTLE PEOPLE SCHOOL Not Reported Not Reported CA Not Reported	DAY1039794 Daycare
BP219 NNE 2-4 mi 20619 Higher	Name: NCES ID: Address: Telephone: Local Code: School Type: School Level: Lowest Grade: Highest Grade:	CAMERON ELEMENTARY 064200006875 1225 E. CAMERON AVE. WEST COVINA, CA 91790 6269311740 Urban Fringe of Large City Regular Elementary and Secondary Schools Primary Kindergarten 05	PBS064200006875 Public Schools
BP220 NNE 2-4 mi 20667 Higher	Name: ID: Site Type: Latitude: Longitude:	Cameron Elementary School 240070 school 34.06100 -117.90000	GNS0168280 GNIS Schools

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site				EDR ID / Database
BS221 WNW 2-4 mi 20714 Lower					PVTSCHA9302073 Private Schools
	Schoolid:	A9302073	Name:	CREATIVE CORNERS PRESCH & KDGN	
	Address:	13628 E LOMITAS AVE	City:	LA PUENTE	
	County num:	6037	County:	LOS ANGELES	
	State:	CA	Fips:	6	
	Zip5:	91746	Zip4:	Not Reported	
	Phone:	626-330-3725	Low grade:	Prekindergarten	
	Hi grde:	Grade 1			
	Locale:	Urban fringe of Large City	Gender:	Coed	
	School type:	Regular elementary or secondary			
	School level:	Elementary			
	Affiliation:	Nonsectarian			
	Association:	No Membership Association			
BS222 WNW 2-4 mi 20777 Lower	Name: Address: City: State: Zip:	CREATIVE CORNERS PRESCHOOL Not Reported Not Reported CA Not Reported			DAY1039991 Daycare
BT223 North 2-4 mi 20916 Higher	Name: ID: Site Type: Latitude: Longitude:	Sunset School 250134 school 34.06600 -117.90000			GNS0232447 GNIS Schools
BU224 NE 2-4 mi 20943 Higher	Name: Address: City: State: Zip:	STRAIGHT WAY SCHOOL, THE Not Reported Not Reported CA Not Reported			DAY1039884 Daycare
225 NW 2-4 mi 20995 Lower	Name: ID: Site Type: Latitude: Longitude:	Bassett School 239038 school 34.05300 -118.00000			GNS0161081 GNIS Schools
BQ226 North 4-6 mi 21141 Higher	Name: Address: City: State: Zip:	TEMPLE SHALOM PRESCHOOL Not Reported Not Reported CA Not Reported			DAY1039772 Daycare
BV227 NNW 4-6 mi 21179 Lower	Name: ID: Site Type:	TERRACE PLAZA MEDICAL CENTER 5922 Hospital			HOS1001716 AHA Hospitals

Table 8.1D-5 OEHHA/CARB Risk Assessment Health Values (30 pages)

Table 1
CONSOLIDATED TABLE OF OEHHA/ARB APPROVED RISK ASSESSMENT HEALTH VALUES ®

Chemical	Chemical▼ Abstract Number	Noncancer Effects						Cancer Risk					
		Acute Inhalation ($\mu g/m^3$)	Date◆ Value Reviewed [Added]	Chronic Inhalation ($\mu g/m^3$)	Date◆ Value Reviewed [Added]	Chronic Oral (mg/kg/d)	Date◆ Value Reviewed [Added]	Inhalation‡ Unit Risk $(\mu g/m^3)^{-1}$	Inhalation‡ Cancer Potency Factor $(mg/kg\text{-}d)^{-1}$	Date◆ Value Reviewed [Added]	Oral Slope Factor $(mg/kg\text{-}d)^{-1}$	Date◆ Value Reviewed [Added]	M◆ W A F
ACETALDEHYDE	75-07-0			9.0E+00	5/93			2.7E-06	1.0E-02	4/99 [5/93]			1
ACETAMIDE	60-35-5							2.0E-05	7.0E-02	4/99			1
ACROLEIN	107-02-8	1.9E-01	4/99	6.0E-02	1/01								1
ACRYLAMIDE	79-06-1			7.0E-01	1/91			1.3E-03	4.5E+00	4/99 [7/90]			1
ACRYLIC ACID	79-10-7	6.0E+03	4/99	1.0E+00 RfC	1996								1
ACRYLONITRILE	107-13-1			5.0E+00	12/01			2.9E-04	1.0E+00	4/99 [1/91]			1
ALLYL CHLORIDE	107-05-1			1.0E+00 RfC	1996			6.0E-06	2.1E-02	4/99			1
2-AMINOANTHRAQUINONE	117-79-3							9.4E-06	3.3E-02	4/99			1
AMMONIA	7664-41-7	3.2E+03	4/99	2.0E+02	2/00								1
ANILINE	62-53-3			1.0E+00 RfC	1996			1.6E-06	5.7E-03	4/99			1
Antimony Compounds	*7440-36-0*			*2.0E-01 RfC*	*1996*								*1*
ANTIMONY TRIOXIDE	1309-64-4			2.0E-01 RfC	1996								1
ARSENIC AND COMPOUNDS (INORGANIC) TAC	7440-38-2 1016 [1015]	1.9E-01 AveP	4/99	3.0E-02	1/01	3.0E-04	10/00	3.3E-03 TAC	1.2E+01	7/90	1.5E+00	10/00	1
ARSINE	7784-42-1	1.6E+02	4/99	5.0E-02 RfC	1996								1
ASBESTOS TAC ¤	1332-21-4							1.9E-04 TAC¤	2.2E+02	3/86			333.33
BENZENE TAC	71-43-2	1.3E+03 AveP	4/99	6.0E+01	2/00			2.9E-05 TAC	1.0E-01	1/85			1
BENZIDINE (AND ITS SALTS) *values also apply to:*	92-87-5			1.0E+01	1/91			1.4E-01	5.0E+02	4/99 [1/91]			1
Benzidine based dyes	*1020*			*1.0E+01*	*1/91*			*1.4E-01*	*5.0E+02*	*4/99 [1/91]*			*1*
Direct Black 38	*1937-37-7*			*1.0E+01*	*1/91*			*1.4E-01*	*5.0E+02*	*4/99 [1/91]*			*1*
Direct Blue 6	*2602-46-2*			*1.0E+01*	*1/91*			*1.4E-01*	*5.0E+02*	*4/99 [1/91]*			*1*
Direct Brown 95 (technical grade)	*16071-86-6*			*1.0E+01*	*1/91*			*1.4E-01*	*5.0E+02*	*4/99 [1/91]*			*1*
BENZYL CHLORIDE	100-44-7	2.4E+02	4/99	1.2E+01	1/92			4.9E-05	1.7E-01	4/99			1
BERYLLIUM AND COMPOUNDS	7440-41-7 [1021]			7.0E-03	12/01	2.0E-03	12/01	2.4E-03	8.4E+00	4/99 [7/90]			1
BIS(2-CHLOROETHYL)ETHER (Dichloroethyl ether)	111-44-4							7.1E-04	2.5E+00	4/99			1
BIS(CHLOROMETHYL)ETHER	542-88-1							1.3E-02	4.6E+01	4/99 [1/91]			1

Table last updated: April 25, 2005

Table 1
CONSOLIDATED TABLE OF OEHHA/ARB APPROVED RISK ASSESSMENT HEALTH VALUES ⊕

Chemical	Chemical▼ Abstract Number	Noncancer Effects						Cancer Risk					
		Acute Inhalation (µg/m³)	Date◆ Value Reviewed [Added]	Chronic Inhalation (µg/m³)	Date◆ Value Reviewed [Added]	Chronic Oral (mg/kg/d)	Date◆ Value Reviewed [Added]	Inhalation‡ Unit Risk (µg/m³)⁻¹	Inhalation‡ Cancer Potency Factor (mg/kg-d)⁻¹	Date◆ Value Reviewed [Added]	Oral Slope Factor (mg/kg-d)⁻¹	Date◆ Value Reviewed [Added]	M◆ W A F
BROMINE AND COMPOUNDS	7726-95-6 [1040]			1.7E+00	1/92								1
BROMINE PENTAFLUORIDE	7789-30-2			1.7E+00	1/92								1
HYDROGEN BROMIDE	10035-10-6			2.4E+01	1/92								1
POTASSIUM BROMATE	7758-01-2			*1.7E+00*	*1/92*			1.4E-04	4.9E-01	4/99 [10/93]			1
1,3-BUTADIENE[TAC]	106-99-0			2.0E+01	1/01			1.7E-04 TAC	6.0E-01	7/92			1
CADMIUM AND COMPOUNDS[TAC]	7440-43-9 [1045]			2.0E-02	1/01	5.0E-04	10/00	4.2E-03 TAC	1.5E+01	1/87			1
CARBON DISULFIDE	75-15-0	6.2E+03 AveP	4/99	8.0E+02	5/02								1
CARBON MONOXIDE	630-08-0	2.3E+04	4/99										1
CARBON TETRACHLORIDE[TAC] (Tetrachloromethane)	56-23-5	1.9E+03 AveP	4/99	4.0E+01	1/01			4.2E-05 TAC	1.5E-01	9/87			1
CHLORINATED PARAFFINS	108171-26-2							2.5E-05	8.9E-02	4/99			1
CHLORINE	7782-50-5	2.1E+02	4/99	2.0E-01	2/00								1
CHLORINE DIOXIDE	10049-04-4			6.0E-01	1/01								1
4-CHLORO-O-PHENYLENEDIAMINE	95-83-0							4.6E-06	1.6E-02	4/99			1
2-CHLOROACETOPHENONE	532-27-4			3.0E-02 RfC	1996								1
CHLOROBENZENE	108-90-7			1.0E+03	1/01								1
CHLORODIFLUOROMETHANE ... (see Fluorocarbons)													
CHLOROFORM[TAC]	67-66-3	1.5E+02 AveP	4/99	3.0E+02	4/00			5.3E-06 TAC	1.9E-02	12/90			1
Chlorophenols	*1060*												*I*
2-CHLOROPHENOL	95-57-8			1.8E+01	1/91								1
PENTACHLOROPHENOL	87-86-5			2.0E-01	1/92			5.1E-06	1.8E-02	4/99			1
TETRACHLOROPHENOLS	25167-83-3			8.8E+01	1/92								1
2,3,4,6-Tetrachlorophenol	*58-90-2*			*8.8E+01*	*1/92*								*I*
2,4,6-TRICHLOROPHENOL	88-06-2							2.0E-05	7.0E-02	4/99 [1/91]			1
CHLOROPICRIN	76-06-2	2.9E+01	4/99	4.0E-01	12/01								1
CHLOROPRENE	126-99-8			1.0E+00	1/92								1
p-CHLORO-o-TOLUIDINE	95-69-2							7.7E-05	2.7E-01	4/99			1
CHROMIUM 6+[TAC] *values also apply to:*	18540-29-9			2.0E-01	1/01	2.0E-02	10/00	1.5E-01 TAC	5.1E+02	1/86	Ø		1
Barium chromate	*10294-40-3*			*2.0E-01*	*1/01*	*2.0E-02*	*10/00*	*1.5E-01 TAC*	*5.1E+02*	*1/86*	Ø		*0.2053*
Calcium chromate	*13765-19-0*			*2.0E-01*	*1/01*	*2.0E-02*	*10/00*	*1.5E-01 TAC*	*5.1E+02*	*1/86*	Ø		*0.3332*

Table last updated: April 25, 2005

Table 1

CONSOLIDATED TABLE OF OEHHA/ARB APPROVED RISK ASSESSMENT HEALTH VALUES®

Chemical	Chemical▼ Abstract Number	Noncancer Effects						Cancer Risk					
		Acute Inhalation ($\mu g/m^3$)	Date◆ Value Reviewed [Added]	Chronic Inhalation ($\mu g/m^3$)	Date◆ Value Reviewed [Added]	Chronic Oral (mg/kg/d)	Date◆ Value Reviewed [Added]	Inhalation‡ Unit Risk $(\mu g/m^3)^{-1}$	Inhalation‡ Cancer Potency Factor $(mg/kg\text{-}d)^{-1}$	Date◆ Value Reviewed [Added]	Oral Slope Factor $(mg/kg\text{-}d)^{-1}$	Date◆ Value Reviewed [Added]	M◆ W A F
Lead chromate	*7758-97-6*			*2.0E-01*	*1/01*	*2.0E-02*	*10/00*	*1.5E-01 TAC*	*5.1E+02*	*1/86*	Ø		*0.1609*
Sodium dichromate	*10588-01-9*			*2.0E-01*	*1/01*	*2.0E-02*	*10/00*	*1.5E-01 TAC*	*5.1E+02*	*1/86*	Ø		*0.397*
Strontium chromate	*7789-06-2*			*2.0E-01*	*1/01*	*2.0E-02*	*10/00*	*1.5E-01 TAC*	*5.1E+02*	*1/86*	Ø		*0.2554*
CHROMIUM TRIOXIDE (as chromic acid mist)	1333-82-0			2.0E-03	1/01	2.0E-02	10/00	1.5E-01 TAC	5.1E+02	1/86	Ø		0.52
COPPER AND COMPOUNDS	7440-50-8 [1067]	1.0E+02	4/99	2.4E+00	1/92								1
p-CRESIDINE	120-71-8							4.3E-05	1.5E-01	4/99			1
CRESOLS (mixtures of)	1319-77-3			6.0E+02	1/01								1
m-CRESOL	108-39-4			6.0E+02	1/01								1
o-CRESOL	95-48-7			6.0E+02	1/01								1
p-CRESOL	106-44-5			6.0E+02	1/01								1
CUPFERRON	135-20-6							6.3E-05	2.2E-01	4/99			1
Cyanide Compounds (inorganic)	*57-12-5 1073*	*3.4E+02*	*4/99*	*9.0E+00*	*4/00*								*1*
HYDROGEN CYANIDE (Hydrocyanic acid)	74-90-8	3.4E+02	4/99	9.0E+00	4/00								1
2,4-DIAMINOANISOLE	615-05-4							6.6E-06	2.3E-02	4/99			1
2,4-DIAMINOTOLUENE	95-80-7							1.1E-03	4.0E+00	4/99			1
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8			2.0E-01	1/92			2.0E-03	7.0E+00	4/99 [1/92]			1
p-DICHLOROBENZENE	106-46-7			8.0E+02	1/01			1.1E-05	4.0E-02	4/99 [1/91]			1
3,3-DICHLOROBENZIDINE	91-94-1							3.4E-04	1.2E+00	4/99 [1/91]			1
1,1,-DICHLOROETHANE (Ethylidene dichloride)	75-34-3							1.6E-06	5.7E-03	4/99			1
1,1-DICHLOROETHYLENE ... (see Vinylidene Chloride)													
DI(2-ETHYLHEXYL)PHTHALATE (DEHP)	117-81-7			7.0E+01	1/91			2.4E-06	8.4E-03	4/99 [1/92]	8.4E-03	10/00	1
DIESEL EXHAUST ... (see Particulate Emissions from Diesel-Fueled Engines)													
DIETHANOLAMINE	111-42-2			3.0E+00	12/01								1
p-DIMETHYLAMINOAZOBENZENE	60-11-7							1.3E-03	4.6E+00	4/99			1
N,N-DIMETHYL FORMAMIDE	68-12-2			8.0E+01	1/01								1
2,4-DINITROTOLUENE	121-14-2							8.9E-05	3.1E-01	4/99			1
1,4-DIOXANE+ (1,4-Diethylene dioxide)	123-91-1	3.0E+03	4/99	3.0E+03	4/00			7.7E-06	2.7E-02	4/99 [1/91]			1

Table last updated: April 25, 2005

Table 1
CONSOLIDATED TABLE OF OEHHA/ARB APPROVED RISK ASSESSMENT HEALTH VALUES[●]

Chemical	Chemical[▼] Abstract Number	Noncancer Effects						Cancer Risk					
		Acute Inhalation ($\mu g/m^3$)	Date[◆] Value Reviewed [Added]	Chronic Inhalation ($\mu g/m^3$)	Date[◆] Value Reviewed [Added]	Chronic Oral (mg/kg/d)	Date[◆] Value Reviewed [Added]	Inhalation[Ŧ] Unit Risk $(\mu g/m^3)^{-1}$	Inhalation[Ŧ] Cancer Potency Factor $(mg/kg\text{-}d)^{-1}$	Date[◆] Value Reviewed [Added]	Oral Slope Factor $(mg/kg\text{-}d)^{-1}$	Date[◆] Value Reviewed [Added]	M[✦] W A F
EPICHLOROHYDRIN (1-Chloro-2,3-epoxypropane)	106-89-8	1.3E+03	4/99	3.0E+00	1/01			2.3E-05	8.0E-02	4/99 [1/92]			1
1,2-EPOXYBUTANE	106-88-7			2.0E+01	1/01								1
ETHYL ACRYLATE	140-88-5			4.8E+01	1/92								1
ETHYL BENZENE	100-41-4			2.0E+03	2/00								1
ETHYL CHLORIDE (Chloroethane)	75-00-3			3.0E+04	4/00								1
ETHYLENE DIBROMIDE[TAC] (1,2-Dibromoethane)	106-93-4			8.0E-01	12/01			7.1E-05 TAC	2.5E-01	7/85			1
ETHYLENE DICHLORIDE[TAC] (1,2-Dichloroethane)	107-06-2			4.0E+02	1/01			2.1E-05 TAC	7.2E-02	9/85			1
ETHYLENE GLYCOL	107-21-1			4.0E+02	4/00								1
ETHYLENE GLYCOL BUTYL ETHER ... (see Glycol ethers)													
ETHYLENE OXIDE[TAC] (1,2-Epoxyethane)	75-21-8			3.0E+01	1/01			8.8E-05 TAC	3.1E-01	11/87			1
ETHYLENE THIOUREA	96-45-7							1.3E-05	4.5E-02	4/99			1
Fluorides	1101	*2.4E+02*	*4/99*	1.3E+01	8/03	4.0E-02	8/03						*1*
HYDROGEN FLUORIDE (Hydrofluoric acid)	7664-39-3	2.4E+02	4/99	1.4E+01	8/03	4.0E-02	8/03						1
FLUOROCARBONS (chlorinated) *values also apply to:*	1104 [1105]			7.0E+02	1/91								1
Chlorinated fluorocarbon (CFC-113)	*76-13-1*			*7.0E+02*	*1/91*								*1*
CHLORODIFLUOROMETHANE (Freon 22)	75-45-6			5.0E+04 RfC	1996								1
Dichlorofluoromethane (Freon 12)	*75-43-4*			*7.0E+02*	*1/91*								*1*
Trichlorofluoromethane (Freon 11)	*75-69-4*			*7.0E+02*	*1/91*								*1*
Fluorocarbons (brominated)	*1103*			*7.0E+02*	*1/91*								*1*
FORMALDEHYDE[TAC]	50-00-0	9.4E+01	4/99	3.0E+00	2/00			6.0E-06 TAC	2.1E-02	3/92			1
GASOLINE VAPORS	1110			2.1E+03	1/91								1
GLUTARALDEHYDE	111-30-8			8.0E-02	1/01								1
GLYCOL ETHERS	1115												1
ETHYLENE GLYCOL BUTYL ETHER – EGBE	111-76-2	1.4E+04	4/99	2.0E+01	1/92								1
ETHYLENE GLYCOL ETHYL ETHER – EGEE	110-80-5	3.7E+02 AveP	4/99[1/92]	7.0E+01	2/00								1
ETHYLENE GLYCOL ETHYL ETHER ACETATE – EGEEA	111-15-9	1.4E+02 AveP	4/99	3.0E+02	2/00								1

Table last updated: April 25, 2005

Table 1
CONSOLIDATED TABLE OF OEHHA/ARB APPROVED RISK ASSESSMENT HEALTH VALUES®

Chemical	Chemical▼ Abstract Number	Noncancer Effects						Cancer Risk					
		Acute Inhalation ($\mu g/m^3$)	Date◆ Value Reviewed [Added]	Chronic Inhalation ($\mu g/m^3$)	Date◆ Value Reviewed [Added]	Chronic Oral (mg/kg/d)	Date◆ Value Reviewed [Added]	Inhalation‡ Unit Risk $(\mu g/m^3)^{-1}$	Inhalation‡ Cancer Potency Factor $(mg/kg\text{-}d)^{-1}$	Date◆ Value Reviewed [Added]	Oral Slope Factor $(mg/kg\text{-}d)^{-1}$	Date◆ Value Reviewed [Added]	M◆ W A F
ETHYLENE GLYCOL METHYL ETHER – EGME	109-86-4	9.3E+01 AveP	4/99	6.0E+01	2/00								1
ETHYLENE GLYCOL METHYL ETHER ACETATE – EGMEA	110-49-6			9.0E+01	2/00								1
HEXACHLOROBENZENE	118-74-1			2.8E+00	7/90			5.1E-04	1.8E+00	4/99 [1/91]			1
HEXACHLOROCYCLOHEXANES (mixed or technical grade)	608-73-1 1120			1.0E+00	1/91	3.0E-04	1/91	1.1E-03	4.0E+00	4/99 [1/91]	4.0E+00	10/00 [1/92]	1
alpha-HEXACHLOROCYCLOHEXANE	319-84-6			1.0E+00	1/91	3.0E-04	1/91	1.1E-03	4.0E+00	4/99 [1/91]	4.0E+00	10/00 [1/92]	1
beta- HEXACHLOROCYCLOHEXANE	319-85-7			1.0E+00	1/91	3.0E-04	1/91	1.1E-03	4.0E+00	4/99 [1/91]	4.0E+00	10/00 [1/92]	1
gamma-HEXACHLOROCYCLOHEXANE (Lindane)	58-89-9			1.0E+00	1/91	3.0E-04	1/91	3.1E-04	1.1E+00	4/99	1.1E+00	10/00	1
HEXACHLOROCYCLOPENTADIENE	77-47-4			2.4E-01	1/91								1
n-HEXANE	110-54-3			7.0E+03	4/00								1
HYDRAZINE	302-01-2			2.0E-01	1/01			4.9E-03	1.7E+01	4/99 [7/90]			1
HYDROCHLORIC ACID (Hydrogen chloride)	7647-01-0	2.1E+03	4/99	9.0E+00	2/00								1
HYDROGEN BROMIDE ... (see Bromine & Compounds)													
HYDROGEN CYANIDE ... (see Cyanide & Compounds)													
HYDROGEN FLUORIDE ... (see Fluorides & Compounds)													
HYDROGEN SELENIDE ... (see Selenium & Compounds)													1
HYDROGEN SULFIDE	7783-06-4	4.2E+01	4/99[7/90]	1.0E+01	4/00								
ISOPHORONE	78-59-1			2.0E+03	12/01								1
ISOPROPYL ALCOHOL (Isopropanol)	67-63-0	3.2E+03	4/99	7.0E+03	2/00								
LEAD AND COMPOUNDS[TAC]* (inorganic)	7439-92-1 1128 [1130]							1.2E-05 TAC	4.2E-02	4/97	8.5E-03	10/00	1
values also apply to:													
Lead acetate	*301-04-2*							*1.2E-05 TAC*	*4.2E-02*	*4/97*	*8.5E-03*	*10/00*	*0.637*
Lead phosphate	*7446-27-7*							*1.2E-05 TAC*	*4.2E-02*	*4/97*	*8.5E-03*	*10/00*	*0.7659*
Lead subacetate	*1335-32-6*							*1.2E-05 TAC*	*4.2E-02*	*4/97*	*8.5E-03*	*10/00*	*0.7696*
LINDANE ... (see gamma-Hexachlorocyclohexane)													
MALEIC ANHYDRIDE	108-31-6			7.0E-01	12/01								1

Table last updated: April 25, 2005

Table 1
CONSOLIDATED TABLE OF OEHHA/ARB APPROVED RISK ASSESSMENT HEALTH VALUES ®

Chemical	Chemical▼ Abstract Number	Noncancer Effects						Cancer Risk					
		Acute Inhalation ($\mu g/m^3$)	Date◆ Value Reviewed [Added]	Chronic Inhalation ($\mu g/m^3$)	Date◆ Value Reviewed [Added]	Chronic Oral (mg/kg/d)	Date◆ Value Reviewed [Added]	Inhalation▼ Unit Risk $(\mu g/m^3)^{-1}$	Inhalation▼ Cancer Potency Factor $(mg/kg\text{-}d)^{-1}$	Date◆ Value Reviewed [Added]	Oral Slope Factor $(mg/kg\text{-}d)^{-1}$	Date◆ Value Reviewed [Added]	M◆ W A F
MANGANESE AND COMPOUNDS	7439-96-5 [1132]			2.0E-01	4/00								1
MERCURY AND COMPOUNDS (INORGANIC)	7439-97-6 [1133]	1.8E+00	4/99	9.0E-02	2/00	3.0E-04	10/00 [1/92]						1
Mercuric chloride	*7487-94-7*	*1.8E+00*	*4/99*	*9.0E-02*	*2/00*	*3.0E-04*	*10/00 [1/92]*						*1*
MERCURY AND COMPOUNDS (ORGANIC) *values also apply to:*	N/A												1
METHYL MERCURY	593-74-8			1.0E+00	1/91								1
METHANOL	67-56-1	2.8E+04	4/99	4.0E+03	4/00								1
METHYL BROMIDE (Bromomethane)	74-83-9	3.9E+03	4/99	5.0E+00	2/00								1
METHYL tertiary-BUTYL ETHER	1634-04-4			8.0E+03	2/00			2.6E-07	1.8E-03	11/99			1
METHYL CHLOROFORM (1,1,1-Trichloroethane)	71-55-6	6.8E+04	4/99	1.0E+03	2/00								1
METHYL ETHYL KETONE (2-Butanone)	78-93-3	1.3E+04	4/99	1.0E+03 RfC	1996								1
METHYL ISOCYANATE	624-83-9			1.0E+00	12/01								1
METHYL MERCURY ... (see Mercury & Compounds)													
METHYL METHACRYLATE	80-62-6			9.8E+02	1/92								1
4,4'-METHYLENE BIS (2-CHLOROANILINE) (MOCA)	101-14-4							4.3E-04	1.5E+00	4/99			1
METHYLENE CHLORIDE TAC (Dichloromethane)	75-09-2	1.4E+04	4/99	4.0E+02	2/00			1.0E-06 TAC	3.5E-03	7/89			1
4,4'-METHYLENE DIANILINE (AND ITS DICHLORIDE)	101-77-9			2.0E+01	12/01			4.6E-04	1.6E+00	4/99	1.6E+00	10/00	1
METHYLENE DIPHENYL ISOCYANATE	101-68-8			7.0E-01	1/01								1
MICHLER'S KETONE (4,4'-Bis(dimethylamino)benzophenone)	90-94-8							2.5E-04	8.6E-01	4/99			1
MINERAL FIBERS (<1% FREE SILICA)	N/A			2.4E+01	1/92								1
Ceram ic fibers (man-made)	*1056*			*2.4E+01*	*1/92*								*1*
Glasswool (man-made fibers)	*1111*			*2.4E+01*	*1/92*								*1*
Mineral fibers (fine: man-made)	*1136*			*2.4E+01*	*1/92*								*1*
Rockwool (man-made fibers)	*1168*			*2.4E+01*	*1/92*								*1*
Slagwool (man-made fibers)	*1181*			*2.4E+01*	*1/92*								*1*
N-NITROSODI-n-BUTYLAMINE	924-16-3							3.1E-03	1.1E+01	4/99 [1/92]			1
N-NITROSODI-n-PROPYLAMINE	621-64-7							2.0E-03	7.0E+00	4/99 [1/91]			1
N-NITROSODIETHYLAMINE	55-18-5							1.0E-02	3.6E+01	4/99 [1/91]			1

Table last updated: April 25, 2005

Table 1
CONSOLIDATED TABLE OF OEHHA/ARB APPROVED RISK ASSESSMENT HEALTH VALUES ®

Chemical	Chemical▼ Abstract Number	Noncancer Effects						Cancer Risk					
		Acute Inhalation ($\mu g/m^3$)	Date◆ Value Reviewed [Added]	Chronic Inhalation ($\mu g/m^3$)	Date◆ Value Reviewed [Added]	Chronic Oral (mg/kg/d)	Date◆ Value Reviewed [Added]	Inhalation‡ Unit Risk $(\mu g/m^3)^{-1}$	Inhalation‡ Cancer Potency Factor $(mg/kg\text{-}d)^{-1}$	Date◆ Value Reviewed [Added]	Oral Slope Factor $(mg/kg\text{-}d)^{-1}$	Date◆ Value Reviewed [Added]	M◆ W A F
N-NITROSODIMETHYLAMINE	62-75-9							4.6E-03	1.6E+01	4/99 [1/91]			1
N-NITROSODIPHENYLAMINE	86-30-6							2.6E-06	9.0E-03	4/99			1
N-NITROSO-N-METHYLETHYLAMINE	10595-95-6							6.3E-03	2.2E+01	4/99 [7/90]			1
N-NITROSOMORPHOLINE	59-89-2							1.9E-03	6.7E+00	4/99 [7/92]			1
N-NITROSOPIPERIDINE	100-75-4							2.7E-03	9.4E+00	4/99 [7/92]			1
N-NITROSOPYRROLIDINE	930-55-2							6.0E-04	2.1E+00	4/99 [7/90]			1
NAPHTHALENE ... (see Polycyclic aromatic hydrocarbons)													
NICKEL AND COMPOUNDS[TAC] *values also apply to:*	7440-02-0 [1145]	6.0E+00	4/99	5.0E-02	2/00	5.0E-02	10/00	2.6E-04 TAC	9.1E-01	8/91			1
Nickel acetate	*373-02-4*	*6.0E+00*	*4/99*	*5.0E-02*	*2/00*	*5.0E-02*	*10/00*	*2.6E-04 TAC*	*9.1E-01*	*8/91*			*0.3321*
Nickel carbonate	*3333-67-3*	*6.0E+00*	*4/99*	*5.0E-02*	*2/00*	*5.0E-02*	*10/00*	*2.6E-04 TAC*	*9.1E-01*	*8/91*			*0.4945*
Nickel carbonyl	*13463-39-3*	*6.0E+00*	*4/99*	*5.0E-02*	*2/00*	*5.0E-02*	*10/00*	*2.6E-04 TAC*	*9.1E-01*	*8/91*			*0.3438*
Nickel hydroxide	*12054-48-7*	*6.0E+00*	*4/99*	*5.0E-02*	*2/00*	*5.0E-02*	*10/00*	*2.6E-04 TAC*	*9.1E-01*	*8/91*			*0.6332*
Nickelocene	*1271-28-9*	*6.0E+00*	*4/99*	*5.0E-02*	*2/00*	*5.0E-02*	*10/00*	*2.6E-04 TAC*	*9.1E-01*	*8/91*			*0.4937*
NICKEL OXIDE	1313-99-1	6.0E+00	4/99	1.0E-01	2/00	5.0E-02	10/00	2.6E-04 TAC	9.1E-01	8/91			0.7859
Nickel refinery dust from the pyrometallurgical process	*1146*	*6.0E+00*	*4/99*	*5.0E-02*	*2/00*	*5.0E-02*	*10/00*	*2.6E-04 TAC*	*9.1E-01*	*8/91*			*1*
Nickel subsulfide	*12035-72-2*	*6.0E+00*	*4/99*	*5.0E-02*	*2/00*	*5.0E-02*	*10/00*	*2.6E-04 TAC*	*9.1E-01*	*8/91*			*0.2443*
NITRIC ACID	7697-37-2	8.6E+01	4/99										1
NITROBENZENE	98-95-3			1.7E+00	1/91								1
NITROGEN DIOXIDE	10102-44-0	4.7E+02	4/99[1/92]	4.7E+02	1/92								1
2-NITROPROPANE	79-46-9			2.0E+01	1/92								1
p-NITROSODIPHENYLAMINE	156-10-5							6.3E-06	2.2E-02	4/99			1
OZONE	10028-15-6	1.8E+02	4/99[1/92]	1.8E+02	1/92								1
PARTICULATE EMISSIONS FROM DIESEL-FUELED ENGINES[TAC] ■	9901			5.0E+00 TAC	8/98			3.0E-04 TAC	1.1E+00	8/98			1
PENTACHLOROPHENOL ... (see Chlorophenols)													
PERCHLOROETHYLENE[TAC] (Tetrachloroethylene)	127-18-4	2.0E+04	4/99	3.5E+01 TAC	10/91			5.9E-06 TAC	2.1E-02	10/91			1
PHENOL	108-95-2	5.8E+03	4/99	2.0E+02	4/00								1

Table last updated: April 25, 2005

Table 1
CONSOLIDATED TABLE OF OEHHA/ARB APPROVED RISK ASSESSMENT HEALTH VALUES ®

Chemical	Chemical▼ Abstract Number	Noncancer Effects						Cancer Risk					
		Acute Inhalation ($\mu g/m^3$)	Date◆ Value Reviewed [Added]	Chronic Inhalation ($\mu g/m^3$)	Date◆ Value Reviewed [Added]	Chronic Oral (mg/kg/d)	Date◆ Value Reviewed [Added]	Inhalation‡ Unit Risk $(\mu g/m^3)^{-1}$	Inhalation‡ Cancer Potency Factor $(mg/kg\text{-}d)^{-1}$	Date◆ Value Reviewed [Added]	Oral Slope Factor $(mg/kg\text{-}d)^{-1}$	Date◆ Value Reviewed [Added]	M◆ W A F
PHOSGENE	75-44-5	4.0E+00	4/99										1
PHOSPHINE	7803-51-2			8.0E-01	9/02								1
PHOSPHORIC ACID	7664-38-2			7.0E+00	2/00								1
PHOSPHORUS (WHITE)	7723-14-0			7.0E-02	1/91								1
PHTHALIC ANHYDRIDE	85-44-9			2.0E+01	1/01								1
PCB (POLYCHLORINATED BIPHENYLS) (unspeciated mixture) [lowest risk]*	1336-36-3			1.2E+00	1/91	2.0E-05 R/D	1996	2.0E-05	7.0E-02	4/99	7.0E-02	10/00	1
PCB (POLYCHLORINATED BIPHENYLS) (unspeciated mixture) [low risk]*	1336-36-3			1.2E+00	1/91	2.0E-05 R/D	1996	1.1E-04	4.0E-01*		4.0E-01*		1
PCB (POLYCHLORINATED BIPHENYLS) (unspeciated mixture) [high risk]*	1336-36-3			1.2E+00	1/91	2.0E-05 R/D	1996	5.7E-04	2.0E+00	4/99	2.0E+00	10/00	1
PCB (POLYCHLORINATED BIPHENYLS (speciated) ▣													
3,3',4,4'-TETRACHLOROBIPHENYL (PCB 77)	32598-13-3			4.0E-01	8/03	1.0E-04	8/03	3.8E-03	1.3E+01	8/03	1.3E+01	8/03	1
3,4,4',5-TETRACHLOROBIPHENYL (PCB 81)	70362-50-4			4.0E-01	8/03	1.0E-04	8/03	3.8E-03	1.3E+01	8/03	1.3E+01	8/03	1
2,3,3',4,4'-PENTACHLOROBIPHENYL (PCB 105)	32598-14-4			4.0E-01	8/03	1.0E-04	8/03	3.8E-03	1.3E+01	8/03	1.3E+01	8/03	1
2,3,4,4',5-PENTACHLOROBIPHENYL (PCB 114)	74472-37-0			8.0E-02	8/03	2.0E-05	8/03	1.9E-02	6.5E+01	8/03	6.5E+01	8/03	1
2,3',4,4',5-PENTACHLOROBIPHENYL (PCB 118)	31508-00-6			4.0E-01	8/03	1.0E-04	8/03	3.8E-03	1.3E+01	8/03	1.3E+01	8/03	1
2,3',4,4',5'-PENTACHLOROBIPHENYL (PCB 123)	65510-44-3			4.0E-01	8/03	1.0E-04	8/03	3.8E-03	1.3E+01	8/03	1.3E+01	8/03	1
3,3',4,4',5-PENTACHLOROBIPHENYL (PCB 126)	57465-28-8			4.0E-04	8/03	1.0E-07	8/03	3.8E+00	1.3E+04	8/03	1.3E+04	8/03	1
2,3,3',4,4',5-HEXACHLOROBIPHENYL (PCB 156)	38380-08-4			8.0E-02	8/03	2.0E-05	8/03	1.9E-02	6.5E+01	8/03	6.5E+01	8/03	1
2,3,3',4,4',5'-HEXACHLOROBIPHENYL (PCB 157)	69782-90-7			8.0E-02	8/03	2.0E-05	8/03	1.9E-02	6.5E+01	8/03	6.5E+01	8/03	1
2,3',4,4',5,5'-HEXACHLOROBIPHENYL (PCB 167)	52663-72-6			4.0E+00	8/03	1.0E-03	8/03	3.8E-04	1.3E+00	8/03	1.3E+00	8/03	1
3,3',4,4',5,5'-HEXACHLOROBIPHENYL (PCB 169)	32774-16-6			4.0E-03	8/03	1.0E-06	8/03	3.8E-01	1.3E+03	8/03	1.3E+03	8/03	1
2,3,3',4,4',5,5'-HEPTACHLOROBIPHENYL (PCB 189)	39635-31-9			4.0E-01	8/03	1.0E-04	8/03	3.8E-03	1.3E+01	8/03	1.3E+01	8/03	1

Table last updated: April 25, 2005

Table 1
CONSOLIDATED TABLE OF OEHHA/ARB APPROVED RISK ASSESSMENT HEALTH VALUES ©

Chemical	Chemical▼ Abstract Number	Noncancer Effects						Cancer Risk					
		Acute Inhalation ($\mu g/m^3$)	Date◆ Value Reviewed [Added]	Chronic Inhalation ($\mu g/m^3$)	Date◆ Value Reviewed [Added]	Chronic Oral (mg/kg/d)	Date◆ Value Reviewed [Added]	Inhalation‡ Unit Risk $(\mu g/m^3)^{-1}$	Inhalation‡ Cancer Potency Factor $(mg/kg-d)^{-1}$	Date◆ Value Reviewed [Added]	Oral Slope Factor $(mg/kg-d)^{-1}$	Date◆ Value Reviewed [Added]	M◆ W A F
POLYCHLORINATED DIBENZO-*P*-DIOXINS (PCDD) (Treated as 2,3,7,8-TCDD for HRA)[TAC●]	1085 1086			4.0E-05	2/00	1.0E-08	10/00	3.8E+01 TAC	1.3E+05	8/86	1.3E+05 TAC	8/86	1
2,3,7,8-TETRACHLORODIBENZO-*P*-DIOXIN[TAC]	1746-01-6			4.0E-05	2/00	1.0E-08	10/00	3.8E+01 TAC	1.3E+05	8/86	1.3E+05 TAC	8/86	1
1,2,3,7,8-PENTACHLORODIBENZO-*P*-DIOXIN	40321-76-4			4.0E-05	8/03	1.0E-08	8/03	3.8E+01	1.3E+05	8/03	1.3E+05	8/03	1
1,2,3,4,7,8-HEXACHLORODIBENZO-*P*-DIOXIN	39227-28-6			4.0E-04	2/00	1.0E-07	10/00	3.8E+00	1.3E+04	4/99	1.3E+04	10/00	1
1,2,3,6,7,8-HEXACHLORODIBENZO-*P*-DIOXIN	57653-85-7			4.0E-04	2/00	1.0E-07	10/00	3.8E+00	1.3E+04	4/99	1.3E+04	10/00	1
1,2,3,7,8,9-HEXACHLORODIBENZO-*P*-DIOXIN	19408-74-3			4.0E-04	2/00	1.0E-07	10/00	3.8E+00	1.3E+04	4/99	1.3E+04	10/00	1
1,2,3,4,6,7,8-HEPTACHLORODIBENZO-*P*-DIOXIN	35822-46-9			4.0E-03	2/00	1.0E-06	10/00	3.8E-01	1.3E+03	4/99	1.3E+03	10/00	1
1,2,3,4,6,7,8,9-OCTACHLORODIBENZO-*P*-DIOXIN	3268-87-9			4.0E-01	8/03	1.0E-04	8/03	3.8E-03	1.3E+01	8/03	1.3E+01	8/03	1
POLYCHLORINATED DIBENZOFURANS (PCDF)[TAC●] (Treated as 2,3,7,8-TCDD for HRA)	1080			4.0E-05	2/00	1.0E-08	10/00	3.8E+01 TAC	1.3E+05	8/86	1.3E+05 TAC	8/86	1
2,3,7,8-TETRACHLORODIBENZOFURAN	5120-73-19			4.0E-04	2/00	1.0E-07	10/00	3.8E+00	1.3E+04	4/99	1.3E+04	10/00	1
1,2,3,7,8-PENTACHLORODIBENZOFURAN	57117-41-6			8.0E-04	2/00	2.0E-07	10/00	1.9E+00	6.5E+03	4/99	6.5E+03	10/00	1
2,3,4,7,8-PENTACHLORODIBENZOFURAN	57117-31-4			8.0E-05	2/00	2.0E-08	10/00	1.9E+01	6.5E+04	4/99	6.5E+04	10/00	1
1,2,3,4,7,8-HEXACHLORODIBENZOFURAN	70648-26-9			4.0E-04	2/00	1.0E-07	10/00	3.8E+00	1.3E+04	4/99	1.3E+04	10/00	1
1,2,3,6,7,8-HEXACHLORODIBENZOFURAN	57117-44-9			4.0E-04	2/00	1.0E-07	10/00	3.8E+00	1.3E+04	4/99	1.3E+04	10/00	1
1,2,3,7,8,9-HEXACHLORODIBENZOFURAN	72918-21-9			4.0E-04	2/00	1.0E-07	10/00	3.8E+00	1.3E+04	4/99	1.3E+04	10/00	1
2,3,4,6,7,8-HEXACHLORODIBENZOFURAN	60851-34-5			4.0E-04	2/00	1.0E-07	10/00	3.8E+00	1.3E+04	4/99	1.3E+04	10/00	1
1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN	67562-39-4			4.0E-03	2/00	1.0E-06	10/00	3.8E-01	1.3E+03	4/99	1.3E+03	10/00	1
1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN	55673-89-7			4.0E-03	2/00	1.0E-06	10/00	3.8E-01	1.3E+03	4/99	1.3E+03	10/00	1
1,2,3,4,6,7,8,9-OCTACHLORODIBENZOFURAN	39001-02-0			4.0E-01	8/03	1.0E-04	8/03	3.8E-03	1.3E+01	8/03	1.3E+01	8/03	1

Table last updated: April 25, 2005

Table 1

CONSOLIDATED TABLE OF OEHHA/ARB APPROVED RISK ASSESSMENT HEALTH VALUES ®

Chemical	Chemical▼ Abstract Number	Noncancer Effects						Cancer Risk					
		Acute Inhalation ($\mu g/m^3$)	Date◆ Value Reviewed [Added]	Chronic Inhalation ($\mu g/m^3$)	Date◆ Value Reviewed [Added]	Chronic Oral (mg/kg/d)	Date◆ Value Reviewed [Added]	Inhalation‡ Unit Risk $(\mu g/m^3)^{-1}$	Inhalation‡ Cancer Potency Factor $(mg/kg\text{-}d)^{-1}$	Date◆ Value Reviewed [Added]	Oral Slope Factor $(mg/kg\text{-}d)^{-1}$	Date◆ Value Reviewed [Added]	M◆ W A F
POLYCYCLIC AROMATIC HYDROCARBON (PAH) [Treated as B(a)P for HRA] ◆	1150 1151							1.1E-03	3.9E+00	4/99 [4/94]	1.2E+01	10/00 [4/94]	1
BENZ(A)ANTHRACENE◆	56-55-3							1.1E-04	3.9E-01	4/99 [4/94]	1.2E+00	10/00 [4/94]	1
BENZO(A)PYRENE◆	50-32-8							1.1E-03	3.9E+00	4/99 [4/94]	1.2E+01	10/00 [4/94]	1
BENZO(B)FLUORANTHENE◆	205-99-2							1.1E-04	3.9E-01	4/99 [4/94]	1.2E+00	10/00 [4/94]	1
BENZO(J)FLUORANTHENE◆	205-82-3							1.1E-04	3.9E-01	4/99 [4/94]	1.2E+00	10/00 [4/94]	1
BENZO(K)FLUORANTHENE◆	207-08-9							1.1E-04	3.9E-01	4/99 [4/94]	1.2E+00	10/00 [4/94]	1
CHRYSENE◆	218-01-9							1.1E-05	3.9E-02	4/99 [4/94]	1.2E-01	10/00 [4/94]	1
DIBENZ(A,H)ACRIDINE◆	226-36-8							1.1E-04	3.9E-01	4/99 [4/94]	1.2E+00	10/00 [4/94]	1
DIBENZ(A,H)ANTHRACENE◆	53-70-3							1.2E-03	4.1E+00	4/99 [4/94]	4.1E+00	10/00 [4/94]	1
DIBENZ(A,J)ACRIDINE◆	224-42-0							1.1E-04	3.9E-01	4/99 [4/94]	1.2E+00	10/00 [4/94]	1
DIBENZO(A,E)PYRENE◆	192-65-4							1.1E-03	3.9E+00	4/99 [4/94]	1.2E+01	10/00 [4/94]	1
DIBENZO(A,H)PYRENE◆	189-64-0							1.1E-02	3.9E+01	4/99 [4/94]	1.2E+02	10/00 [4/94]	1
DIBENZO(A,I)PYRENE◆	189-55-9							1.1E-02	3.9E+01	4/99 [4/94]	1.2E+02	10/00 [4/94]	1
DIBENZO(A,L)PYRENE◆	191-30-0							1.1E-02	3.9E+01	4/99 [4/94]	1.2E+02	10/00 [4/94]	1
7H-DIBENZO(C,G)CARBAZOLE◆	194-59-2							1.1E-03	3.9E+00	4/99 [4/94]	1.2E+01	10/00 [4/94]	1
7,12-DIMETHYLBENZ(A)ANTHRACENE◆	57-97-6							7.1E-02	2.5E+02	4/99 [4/94]	2.5E+02	10/00 [4/94]	1
1,6-DINITROPYRENE◆	42397-64-8							1.1E-02	3.9E+01	4/99 [4/94]	1.2E+02	10/00 [4/94]	1
1,8-DINITROPYRENE◆	42397-65-9							1.1E-03	3.9E+00	4/99 [4/94]	1.2E+01	10/00 [4/94]	1
INDENO(1,2,3-C,D)PYRENE◆	193-39-5							1.1E-04	3.9E-01	4/99 [4/94]	1.2E+00	10/00 [4/94]	1
3-METHYLCHOLANTHRENE◆	56-49-5							6.3E-03	2.2E+01	4/99 [4/94]	2.2E+01	10/00 [4/94]	1
5-METHYLCHRYSENE◆	3697-24-3							1.1E-03	3.9E+00	4/99 [4/94]	1.2E+01	10/00 [4/94]	1
NAPHTHALENE	91-20-3			9.0E+00	4/00			3.4E-05	1.2E-01	8/04			1

Table last updated: April 25, 2005

Table 1
CONSOLIDATED TABLE OF OEHHA/ARB APPROVED RISK ASSESSMENT HEALTH VALUES ⊕

Chemical	Chemical▼ Abstract Number	Noncancer Effects						Cancer Risk					
		Acute Inhalation ($\mu g/m^3$)	Date◆ Value Reviewed [Added]	Chronic Inhalation ($\mu g/m^3$)	Date◆ Value Reviewed [Added]	Chronic Oral (mg/kg/d)	Date◆ Value Reviewed [Added]	Inhalation‡ Unit Risk $(\mu g/m^3)^{-1}$	Inhalation‡ Cancer Potency Factor $(mg/kg\text{-}d)^{-1}$	Date◆ Value Reviewed [Added]	Oral Slope Factor $(mg/kg\text{-}d)^{-1}$	Date◆ Value Reviewed [Added]	M◆ W A F
5-NITROACENAPHTHENE◆	602-87-9							3.7E-05	1.3E-01	4/99 [4/94]	1.3E-01	10/00 [4/94]	1
6-NITROCHRYSENE◆	7496-02-8							1.1E-02	3.9E+01	4/99 [4/94]	1.2E+02	10/00 [4/94]	1
2-NITROFLUORENE◆	607-57-8							1.1E-05	3.9E-02	4/99 [4/94]	1.2E-01	10/00 [4/94]	1
1-NITROPYRENE◆	5522-43-0							1.1E-04	3.9E-01	4/99 [4/94]	1.2E+00	10/00 [4/94]	1
4-NITROPYRENE◆	57835-92-4							1.1E-04	3.9E-01	4/99 [4/94]	1.2E+00	10/00 [4/94]	1
POTASSIUM BROMATE.... ... (see Bromine & Compounds)													
1,3-PROPANE SULTONE	1120-71-4							6.9E-04	2.4E+00	4/99			1
PROPYLENE (PROPENE)	115-07-1			3.0E+03	4/00								1
PROPYLENE GLYCOL MONOMETHYL ETHER	107-98-2			7.0E+03	2/00								1
PROPYLENE OXIDE	75-56-9	3.1E+03	4/99	3.0E+01	2/00			3.7E-06	1.3E-02	4/99 [7/90]			1
SELENIUM AND COMPOUNDS	7782-49-2 [1170]			2.0E+01	12/01								1
HYDROGEN SELENIDE	7783-07-5	5.0E+00	4/99										1
Selenium sulfide	*7446-34-6*			*2.0E+01*	*12/01*								*1*
SILICA [CRYSTALLINE, RESPIRABLE]	7631-86-9			3.0E+00	2/05								1
SODIUM HYDROXIDE	1310-73-2	8.0E+00	4/99	4.8E+00	7/90								1
STYRENE	100-42-5	2.1E+04	4/99	9.0E+02	4/00								1
SULFATES	9960	1.2E+02	4/99	2.5E+01	1/92								1
SULFUR DIOXIDE	7446-09-5	6.6E+02	4/99[1/92]	6.6E+02	1/92								1
SULFURIC ACID AND OLEUM	7664-93-9	1.2E+02	4/99	*1.0E+00*	*12/01*								*1*
SULFURIC ACID	*7664-93-9*	*1.2E+02*	*4/99*	1.0E+00	12/01								*1*
SULFUR TRIOXIDE	*7446-71-9*	*1.2E+02*	*4/99*										*1*
OLEUM	*8014-95-7*	*1.2E+02*	*4/99*	*1.0E+00*	*12/01*								*1*
1,1,2,2-TETRACHLOROETHANE	79-34-5							5.8E-05	2.0E-01	4/99			1
TETRACHLOROPHENOLS ... (see Chlorophenols)													
2,4,5-TRICHLOROPHENOL ... (see Chlorophenols)													
2,4,6-TRICHLOROPHENOL ... (see Chlorophenols)													
THIOACETAMIDE	62-55-5							1.7E-03	6.1E+00	4/99			1
TOLUENE	108-88-3	3.7E+04	4/99	3.0E+02	4/00								1

Table last updated: April 25, 2005

Table 1

CONSOLIDATED TABLE OF OEHHA/ARB APPROVED RISK ASSESSMENT HEALTH VALUES ®

Chemical	Chemical▼ Abstract Number	Noncancer Effects						Cancer Risk					
		Acute Inhalation ($\mu g/m^3$)	Date◆ Value Reviewed [Added]	Chronic Inhalation ($\mu g/m^3$)	Date◆ Value Reviewed [Added]	Chronic Oral (mg/kg/d)	Date◆ Value Reviewed [Added]	Inhalation▼ Unit Risk $(\mu g/m^3)^{-1}$	Inhalation▼ Cancer Potency Factor $(mg/kg\text{-}d)^{-1}$	Date◆ Value Reviewed [Added]	Oral Slope Factor $(mg/kg\text{-}d)^{-1}$	Date◆ Value Reviewed [Added]	M◆ W A F
Toluene diisocyantates	*26471-62-5 1204*			*7.0E-02*	*1/01*			*1.1E-05*	*3.9E-02*	*4/99*			*1*
TOLUENE-2,4-DIISOCYANATE	584-84-9			7.0E-02	1/01			1.1E-05	3.9E-02	4/99			1
TOLUENE-2,6-DIISOCYANATE	91-08-7			7.0E-02	1/01			1.1E-05	3.9E-02	4/99			1
1,1,2-TRICHLOROETHANE (Vinyl trichloride)	79-00-5							1.6E-05	5.7E-02	4/99			1
TRICHLOROETHYLENE[TAC]	79-01-6			6.0E+02	4/00			2.0E-06 TAC	7.0E-03	10/90			1
TRIETHYLAMINE	121-44-8	2.8E+03	4/99	2.0E+02	9/02								1
URETHANE (Ethyl carbamate)	51-79-6							2.9E-04	1.0E+00	4/99 [7/90]			1
Vanadium Compounds	*N/A*												*1*
Vanadium (fume or dust)	*7440-62-2*	*3.0E+01*	*4/99*										*1*
VANADIUM PENTOXIDE	1314-62-1	3.0E+01	4/99										1
VINYL ACETATE	108-05-4			2.0E+02	12/01								1
VINYL BROMIDE	593-60-2			7.0E+00 RfC	1996								1
VINYL CHLORIDE[TAC] (Chloroethylene)	75-01-4	1.8E+05	4/99	2.6E+01	7/90			7.8E-05 TAC	2.7E-01	12/90			1
VINYLIDENE CHLORIDE (1,1-Dichloroethylene)	75-35-4			7.0E+01	1/01								1
XYLENES (mixed isomers)	1330-20-7 1210	2.2E+04	4/99	7.0E+02	4/00								1
m-XYLENE	108-38-3	2.2E+04	4/99	7.0E+02	4/00								1
o-XYLENE	95-47-6	2.2E+04	4/99	7.0E+02	4/00								1
p-XYLENE	106-42-3	2.2E+04	4/99	7.0E+02	4/00								1
ZINC AND COMPOUNDS	7440-66-6 [1211]			3.5E+01	7/90								1
Zinc oxide	*1314-13-2*			*3.5E+01*	*7/90*								*0.8034*

Table last updated: April 25, 2005

Table 1
CONSOLIDATED TABLE OF OEHHA/ARB APPROVED RISK ASSESSMENT HEALTH VALUES ®

Purpose: The purpose of this reference table is to provide a quick list of all health values that have been approved by the Office of Environmental Health Hazard Assessment (OEHHA) and the Air Resources Board (ARB) for use in facility health risk assessments conducted for the AB 2588 Air Toxics Hot Spots Program. The OEHHA has developed and adopted new risk assessment guidelines that update and replace the California Air Pollution Control Officers Association's (CAPCOA) *Air Toxics "Hot Spots" Program Revised 1992 Risk Assessment Guidelines, October 1993.* The OEHHA has adopted five technical support documents for these guidelines.

This table lists the OEHHA adopted inhalation and oral cancer slope factors, noncancer acute Reference Exposure Levels (RELs), and inhalation and oral noncancer chronic RELs. In addition, it lists the substances in Appendix A-I *(Substances For Which Emissions Must Be Quantified)* and Appendix F (*Criteria For Inputs For Risk Assessment Using Screening Air Dispersion Modeling*) of the ARB's *Air Toxics "Hot Spots" Emission Inventory Criteria and Guidelines (EICG) (July 1997).* OEHHA is still in the process of adopting new noncancer chronic RELs. Therefore, new health values will periodically be added to, or deleted from, this table. Users of this table are advised to monitor the OEHHA website (www.oehha.ca.gov) for any updates to the health values.

◎ Substances written in *italics* do not have explicit OEHHA approved health values, but are included in this table to clarify applicability of OEHHA adopted heath effects values to individual or grouped substances listed in the *Air Toxics "Hot Spots" Emission Inventory Criteria and Guidelines*, Appendix A-I list of *"Substances For Which Emissions Must Be Quantified".*

▼ Chemical Abstract Service Number (CAS): For chemical groupings and mixtures where a CAS number is not applicable, the 4-digit code used in the *Air Toxics "Hot Spots" Emission Inventory Criteria and Guidelines (EICG) Report* is listed. The 4-digit codes enclosed in brackets [ ] are codes that have been phased out, but may still appear on previously reported Hot Spots emissions. For information on the origin and use of the 4-digit code, see the EICG report.

◆ Date Value Reviewed [Added]: These columns list the date that the health value was last reviewed by OEHHA and the Scientific Review Panel, and/or approved for use in the AB 2588 Air Toxics Hot Spots Program. If the health value is unchanged since it was first approved for use in the Hot Spots Program, then the date that the value was first approved for use by CAPCOA is listed within the brackets [ ].

- April 1999 is listed for the cancer potency values and noncancer acute RELs, which have been adopted by the OEHHA as part of the AB 2588 Hot Spot Risk Assessment Guidelines.
- February 2000, April 2000, January 2001, and December 2001 are listed for the first set of 22, the second set of 16, the third set of 22, and the fourth set of 12 noncancer chronic RELs, respectively. The chronic REL for carbon disulfide was adopted in May 2002. Chronic RELs for phosphine and triethylamine were adopted in September 2002. Chronic RELs for fluorides including hydrogen fluoride were adopted August 2003. Chronic REL for silica [crystalline respirable] was adopted February 2005.
- October 2000 is listed for the oral chronic RELs and oral cancer slope factors. 1996 is listed for the U.S. EPA Reference Concentrations. Dates of 1990-1992 and 1996 are listed for chronic RELs that may eventually be dropped or replaced.
- Cancer potency value adopted for naphthalene in August 2004.
- For the substances identified as Toxic Air Contaminants, the Air Resources Board hearing date is listed. The dates for acetaldehyde, benzo[a]pyrene, and methyl tertiary-butyl ether represent the dates the values were approved by the Scientific Review Panel.

? Inhalation cancer potency factor: The "unit risk factor" has been replaced in the new risk assessment algorithms by a factor called the "inhalation cancer potency factor". Inhalation cancer potency factors are expressed as units of inverse dose [i.e., $(mg/kg\text{-}day)^{-1}$]. They were derived from unit risk factors [units = $(ug/m^3)^{-1}$] by assuming that a receptor weighs 70 kilograms and breathes 20 cubic meters of air per day. The inhalation potency factor is used to calculate a potential inhalation cancer risk using the new risk assessment algorithms defined in the OEHHA, *Air Toxics Hot Spots Program; Part IV; Technical Support Document for Exposure Assessment and Stochastic Analysis (September 2000).*

♣ Molecular Weight Adjustment Factor: Molecular weight adjustment factors (MWAF) are only to be used when a toxic metal has a cancer potency factor. For most of the Hot Spots toxic metals, the OEHHA cancer potency factor applies to the weight of the toxic metal atom contained in the overall compound. Some of the Hot Spots compounds contain various elements along with the toxic metal atom (e.g., "Nickel hydroxide", CAS number 12054-48-7, has a formula of H_2NiO_2). Therefore, an adjustment to the reported pounds of the overall compound is needed before applying the OEHHA cancer potency factor for "Nickel and compounds" to such a compound. This ensures that the cancer potency factor is applied only to the fraction of the overall weight of the emissions that are associated with health effects of the metal. In other cases, the Hot Spots metals are already reported as the metal atom equivalent (e.g., CAS 7440-02-0, "Nickel"), and these cases do not use any further molecular weight adjustment. (Refer to Note [7] in Appendix A, List of Substances in the EICG Report for further information on how the emissions of various Hot Spots metal compounds are reported.) The appropriate molecular weight adjustment factors (MWAF) to be used along with the OEHHA cancer potency factors for Hot Spots metals can be found in the MWAF column of this table.

So, for example, assume 100 pounds of "Nickel hydroxide" emissions are reported under CAS number 12054-48-7. To get the Nickel atom equivalent of these emissions, multiply by the listed MWAF (0.6332) for Nickel hydroxide:

- 100 pounds x 0.6332 = 63.32 pounds of Nickel atom equivalent

This step should be completed prior to applying the OEHHA cancer potency factor for "Nickel and compounds" in a calculation for a prioritization score or risk assessment calculation. (For more information see Chapter 8 of OEHHA's document, *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.*)

Note: The value listed in the MWAF column for Asbestos is not a molecular weight adjustment. This is a conversion factor for adjusting mass to fibers or structures. See Appendix C of OEHHA's document *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* for more information on Asbestos, or see the EICG report for reporting guidance. Also see the Asbestos footnote (designated by the symbol ¤)

Table last updated: April 25, 2005

Table 1
CONSOLIDATED TABLE OF OEHHA/ARB APPROVED RISK ASSESSMENT HEALTH VALUES ®

N/A	Not Applicable
RfC/RfD	United States Environmental Protection Agency (U.S. EPA) Reference Concentrations (RfCs) and oral Reference Doses (RfDs) from the U.S. EPA Integrated Risk Information System (1996) have been added if the U.S. EPA health value and/or endpoint was different from the 1993 CAPCOA value or endpoint and OEHHA has not adopted a new value as part of the Hot Spot Risk Assessment Guidelines. The RfCs and RfDs listed meet the criteria of Appendix F of the Air Resources Board's Emission Inventory Criteria and Guidelines Report effective July 1, 1997. These RfC/RfDs may be replaced by new OEHHA values in the future.
TAC	Toxic Air Contaminant: The Air Resources Board has identified this substance as a Toxic Air Contaminant.
AveP	The averaging period of noncancer acute RELs is generally a one-hour exposure. However, some are based on several hour exposure for reproductive/developmental endpoints (see section 1.6 of OEHHA's technical support document for *The Determination of Acute Reference Exposure Levels for Airborne Toxicants, March 1999).* Typically the RELs for the following substances are compared to modeled emission concentrations of the same duration rather than maximum one-hour concentrations (e.g., a 4-hour REL should be compared to the maximum 4-hour average concentration from the air dispersion model). 4-Hour: Arsenic and Inorganic Arsenic Compounds 6-Hour: Benzene, Carbon disulfide, Ethylene glycol monoethyl ether, Ethylene glycol monoethyl ether acetate, Ethylene glycol monomethyl ether 7-Hour: Carbon tetrachloride, Chloroform
¤	Asbestos: The units for the Inhalation Cancer Potency factor for asbestos are (100 PCM fibers/m^3)$^{-1}$. A conversion factor of 100 fibers/0.003 µg can be multiplied by a receptor concentration of asbestos expressed in µg/m^3. Unless other information necessary to estimate the concentration (fibers/m^3) of asbestos at receptors of interest is available. A unit risk factor of 1.9 E 10^{-4} (µg/m^3)$^{-1}$ and an inhalation cancer potency factor of 2.2 E 10^{+2} (mg/kg BW * day)$^{-1}$ are available. For more information on asbestos quantity conversion factors, see Appendix C of OEHHA's *The Air Toxics Hot Spots Program Risk Assessment Guidelines; Part II; Technical Support Document for Describing Available Cancer Potency Factors*, and Appendix C of OEHHA's document *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.*
Ø	Hexavalent Chromium: The oral cancer slope factor for chromium 6+ and compounds has been withdrawn by the Office of Environmental Health Hazard Assessment.
✱	Inorganic Lead: Inorganic Lead was identified by the Air Resources Board as a Toxic Air Contaminant in April 1997. Since information on noncancer health effects show no identified threshold, no Reference Exposure Level has been developed. The document, *Risk Management Guidelines for New, Modified, and Existing Sources of Lead, March 2001*, has been developed by ARB and OEHHA staff for assessing noncancer health impacts from sources of lead. See Appendix F of OEHHA's document *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* for an overview of how to evaluate noncancer impacts from exposure to lead using these risk management guidelines.
❖	Polycyclic Aromatic Hydrocarbons (PAHs): These substances are PAH or PAH-derivatives that have OEHHA-developed Potency Equivalency Factors (PEFs) which were approved by the Scientific Review Panel in April 1994 (see ARB document entitled *Benzo[a]pyrene as a Toxic Air Contaminant*). PAH inhalation slope factors listed here have been adjusted by the PEFs. See Appendix G of OEHHA's document *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* for more information. See section 8.2.3 of OEHHA's *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* for conducting health risks when total (unspeciated) PAHs are reported.
★	Polychlorinated Biphenyls: (unspeciated mixtures) Lowest Risk: For use in cases where congeners with more than four chlorines comprise less than one-half percent of total polychlorinated biphenyls. High Risk: For use in cases where congeners with more than four chlorines do not comprise less than one-half percent of total polychlorinated biphenyls. Low Risk: This number would not ordinarily be used in the Hot Spots program. Chronic Oral: The chronic oral value is U.S. EPA's 1996 oral Reference Dose for Aroclor-1254.
ϖ	Polychlorinated Biphenyls (speciated): Values calculated using WHO_{97} TEF procedure. See OEHHA memo dated August 29, 2003.
•	Polychlorinated Dibenzo-*p*-dioxins and Polychlorinated Dibenzofurans (also referred to as chlorinated dioxins and dibenzofurans): The OEHHA has adopted the World Health Organization 1997 (WHO_{97}) Toxicity Equivalency Factor scheme for evaluating the cancer risk due to exposure to samples containing mixtures of polychlorinated dibenzo-*p*-dioxins (PCDD) and polychlorinated dibenzofurans (PCDF) and determining cancer risks for a number of specific PCB congeners. See Appendix A of OEHHA's *Technical Support Document For Describing Available Cancer Potency Factors* for more information about the scheme. See Appendix E of OEHHA's *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* for the methodology for calculating 2,3,7,8-equivalents for PCDD, PCDFs and a number of specific PCB congeners. See section 8.2.3 of OEHHA's *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* for conducting health risks when total (unspeciated) chlorinated dioxins and furans are reported.
■	Particulate Emissions from Diesel-Fueled Engines: The inhalation cancer potency factor and chronic REL were derived from whole diesel exhaust and should be used only for impacts from the inhalation pathway. The inhalation impacts from speciated emissions from diesel-fueled engines are already accounted for in the inhalation cancer potency factor and REL. However, at the discretion of the risk assessor, speciated emissions from diesel-fueled engines may be used to estimate acute noncancer health impacts or the contribution to cancer risk or chronic noncancer health impacts for the non-inhalation exposure pathway. See Appendix D of OEHHA's document *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* for more information.

Table last updated: April 25, 2005

Table last updated: April 25, 2005

Table 2
OEHHA/ARB APPROVED ACUTE REFERENCE EXPOSURE LEVELS AND TARGET ORGANS®

Substance ®	Chemical▼ Abstract Service Number (CAS)	Acute REL (µg/m³)	Date ◆ Value Reviewed	Target Organs									
				Alimentary Tract	Cardiovascular	Developmental	Eye	Hematologic	Immune	Nervous	Reproductive	Respiratory	Skin
ACROLEIN	107-02-8	1.9E-01	4/99				X					X	
ACRYLIC ACID	79-10-7	6.0E+03	4/99				X					X	
AMMONIA	7664-41-7	3.2E+03	4/99				X					X	
ARSENIC AND COMPOUNDS (INORGANIC) TAC	7440-38-2 1016 [1015]	1.9E-01 AveP	4/99			X					X		
ARSINE	7784-42-1	1.6E+02	4/99					X					
BENZENE TAC	71-43-2	1.3E+03 AveP	4/99			X		X	X		X		
BENZYL CHLORIDE	100-44-7	2.4E+02	4/99				X					X	
CARBON DISULFIDE	75-15-0	6.2E+03 AveP	4/99			X				X	X		
CARBON MONOXIDE	630-08-0	2.3E+04	4/99		X								
CARBON TETRACHLORIDE TAC (Tetrachloromethane)	56-23-5	1.9E+03 AveP	4/99	X		X				X	X		
CHLORINE	7782-50-5	2.1E+02	4/99				X					X	
CHLOROFORM TAC	67-66-3	1.5E+02 AveP	4/99			X				X	X		
CHLOROPICRIN	76-06-2	2.9E+01	4/99				X					X	
COPPER AND COMPOUNDS	7440-50-8 [1067]	1.0E+02	4/99									X	
Cyanide Compounds (inorganic)	*57-12-5 1073*	*3.4E+02*	*4/99*							✓			
HYDROGEN CYANIDE (Hydrocyanic acid)	74-90-8	3.4E+02	4/99							X			
1,4-DIOXANE ◆ (1,4-Diethylene dioxide)	123-91-1	3.0E+03	4/99				X					X	
EPICHLOROHYDRIN (1-Chloro-2,3-epoxypropane)	106-89-8	1.3E+03	4/99				X					X	
Fluorides and Compounds	*1101*	*2.4E+02*	*4/99*				✓					✓	
HYDROGEN FLUORIDE (Hydrofluoric acid)	7664-39-3	2.4E+02	4/99				X					X	
FORMALDEHYDE TAC	50-00-0	9.4E+01	4/99				X		X			X	
GLYCOL ETHERS	1115												
ETHYLENE GLYCOL BUTYL ETHER – EGBE	111-76-2	1.4E+04	4/99				X					X	
ETHYLENE GLYCOL ETHYL ETHER – EGEE	110-80-5	3.7E+02 AveP	4/99 [1/92]			X					X		
ETHYLENE GLYCOL ETHYL ETHER ACETATE - EGEEA	111-15-9	1.4E+02 AveP	4/99			X				X	X		
ETHYLENE GLYCOL METHYL ETHER – EGME	109-86-4	9.3E+01 AveP	4/99			X					X		

Table last updated: April 25, 2005

Table 2
OEHHA/ARB APPROVED ACUTE REFERENCE EXPOSURE LEVELS AND TARGET ORGANS®

Substance ®	Chemical▼ Abstract Service Number (CAS)	Acute REL ($\mu g/m^3$)	Date◆ Value Reviewed	Target Organs									
				Alimentary Tract	Cardiovascular	Developmental	Eye	Hematologic	Immune	Nervous	Reproductive	Respiratory	Skin
HYDROCHLORIC ACID (Hydrogen chloride)	7647-01-0	2.1E+03	4/99				X					X	
HYDROGEN CYANIDE (Hydrocyanic acid) ... (see Cyanide Compounds)													
HYDROGEN FLUORIDE (Hydrofluoric acid) ... (see Fluorides & Compounds)													
HYDROGEN SELENIDE ... (see Selenium & Compounds)													
HYDROGEN SULFIDE	7783-06-4	4.2E+01	4/99 [7/90]							X			
ISOPROPYL ALCOHOL (Isopropanol)	67-63-0	3.2E+03	4/99				X					X	
MERCURY AND COMPOUNDS (INORGANIC)	7439-97-6 [1133]	1.8E+00	4/99			X					X		
Mercuric chloride	*7487-94-7*	*1.8E+00*	*4/99*			✓					✓		
METHANOL	67-56-1	2.8E+04	4/99							X			
METHYL BROMIDE (Bromomethane)	74-83-9	3.9E+03	4/99			X				X	X	X	
METHYL CHLOROFORM (1,1,1-Trichbroethane)	71-55-6	6.8E+04	4/99							X			
METHYL ETHYL KETONE (2-Butanone)	78-93-3	1.3E+04	4/99				X					X	
METHYLENE CHLORIDE[TAC] (Dichloromethane)	75-09-2	1.4E+04	4/99							X			
NICKEL AND COMPOUNDS[TAC]	7440-02-0 [1145]	6.0E+00	4/99						X			X	
Nickel acetate,	*373-02-4*	*6.0E+00*	*4/99*						✓			✓	
Nickel carbonate	*3333-67-3*	*6.0E+00*	*4/99*						✓			✓	
Nickel carbonyl	*13463-39-3*	*6.0E+00*	*4/99*						✓			✓	
Nickel hydroxide	*12054-48-7*	*6.0E+00*	*4/99*						✓			✓	
Nickelocene	*1271-28-9*	*6.0E+00*	*4/99*						✓			✓	
NICKEL OXIDE	1313-99-1	6.0E+00	4/99						X			X	
Nickel refinery dust from the pyrometallurgical process	*1146*	*6.0E+00*	*4/99*						✓			✓	
Nickel subsulfide	*12035-72-2*	*6.0E+00*	*4/99*						✓			✓	
NITRIC ACID	7697-37-2	8.6E+01	4/99									X	
NITROGEN DIOXIDE	10102-44-0	4.7E+02	4/99 [1/92]									X	
OZONE	10028-15-6	1.8E+02	4/99 [1/92]				X					X	
							X			X		X	

Table 2
OEHHA/ARB APPROVED ACUTE REFERENCE EXPOSURE LEVELS AND TARGET ORGANS®

Substance ⊕	Chemical▼ Abstract Service Number (CAS)	Acute REL ($\mu g/m^3$)	Date◆ Value Reviewed	Target Organs									
				Alimentary Tract	Cardiovascular	Developmental	Eye	Hematologic	Immune	Nervous	Reproductive	Respiratory	Skin
PHENOL	108-95-2	5.8E+03	4/99				X					X	
PHOSGENE	75-44-5	4.0E+00	4/99									X	
PROPYLENE OXIDE	75-56-9	3.1E+03	4/99			X	X				X	X	
Selenium and Compounds	*7782-49-2 [1170]*												
HYDROGEN SELENIDE	7783-07-5	5.0E+00	4/99				X					X	
SODIUM HYDROXIDE	1310-73-2	8.0E+00	4/99				X					X	X
STYRENE	100-42-5	2.1E+04	4/99				X					X	
SULFATES	9960	1.2E+02	4/99									X	
SULFUR DIOXIDE	7446-09-5	6.6E+02	4/99 [1/92]									X	
SULFURIC ACID AND OLEUM	7664-93-9	1.2E+02	4/99									X	
SULFURIC ACID	*7664-93-9*	*1.2E+02*	*4/99*									✓	
SULFUR TRIOXIDE	*7446-71-9*	*1.2E+02*	*4/99*									✓	
OLEUM	*8014-95-7*	*1.2E+02*	*4/99*									✓	
TOLUENE	108-88-3	3.7E+04	4/99			X	X			X	X	X	
TRIETHYLAMINE	121-44-8	2.8E+03	4/99				X			X			
Vanadium Compounds	*N/A*												
Vanadium (fume or dust)	*7440-62-2*	*3.0E+01*	*4/99*				✓					✓	
VANADIUM PENTOXIDE	1314-62-1	3.0E+01	4/99				X					X	
VINYL CHLORIDE[TAC] (Chloroethylene)	75-01-4	1.8E+05	4/99				X			X		X	
XYLENES (mixed isomers)	1330-20-7 1210	2.2E+04	4/99				X					X	
m-Xylene	108-38-3	2.2E+04	4/99				X					X	
o-Xylene	95-47-6	2.2E+04	4/99				X					X	
p-Xylene	106-42-3	2.2E+04	4/99				X					X	

Table last updated: April 25, 2005

Table 2
OEHHA/ARB APPROVED ACUTE REFERENCE EXPOSURE LEVELS AND TARGET ORGANS®

Purpose:	The purpose of this reference table is to provide a quick list of all health values that have been approved by the Office of Environmental Health Hazard Assessment (OEHHA) and the Air Resources Board (ARB) for use in facility health risk assessments conducted for the AB 2588 Air Toxics Hot Spots Program. The OEHHA has developed and adopted new risk assessment guidelines that update and replace the California Air Pollution Control Officers Association's (CAPCOA) *Air Toxics "Hot Spots" Program Revised 1992 Risk Assessment Guidelines, October 1993*. The OEHHA has adopted five technical support documents for these guidelines. This table lists the OEHHA adopted inhalation noncancer acute RELs. In addition, it lists the substances in Appendix A-I *(Substances For Which Emissions Must Be Quantified)* and Appendix F (*Criteria For Inputs For Risk Assessment Using Screening Air Dispersion Modeling*) of the ARB's *Air Toxics "Hot Spots" Emission Inventory Criteria and Guidelines (EICG) (July 1997)*. OEHHA is still in the process of adopting new noncancer chronic RELs. Therefore, new health values will periodically be added to, or deleted from, this table. Users of this table are advised to monitor the OEHHA website (*www.oehha.ca.gov*) for any updates to the health values.
◉	Substances written in *italics* and with a ✓ do not have explicit OEHHA approved health values, but are included in this table to clarify applicability of OEHHA adopted heath effects values to individual or grouped substances listed in the *Air Toxics "Hot Spots" Emission Inventory Criteria and Guidelines*, Appendix A-I list of *"Substances For Which Emissions Must Be Quantified"*.
▼	Chemical Abstract Service Number (CAS): For chemical groupings and mixtures where a CAS number is not applicable, the 4-digit code used in the *Air Toxics "Hot Spots" Emission Inventory Criteria and Guidelines (EICG) Report* is listed. The 4-digit codes enclosed in brackets [ ] are codes that have been phased out, but may still appear on previously reported Hot Spots emissions. For information on the origin and use of the 4-digit code, see the EICG report.
◆	Date Value Reviewed [Added]: This column lists the date that the health value was last reviewed by OEHHA and the Scientific Review Panel, and/or approved for use in the AB 2588 Air Toxics Hot Spots Program. If the health value is unchanged since it was first approved for use in the "Hot Spots" Program, then the date that the value was first approved for use by CAPCOA is listed within the brackets [ ]. • April 1999 is listed for the noncancer acute RELs which have been adopted by the OEHHA as part of the AB 2588 Hot Spot Risk Assessment Guidelines.
TAC	Toxic Air Contaminant: The Air Resources Board has identified this substance as a Toxic Air Contaminant.
AveP	The averaging period of noncancer acute RELs is generally a one-hour exposure. However, some are based on several hour exposure for reproductive/developmental endpoints (see section 1.6 of OEHHA's technical support document for *The Determination of Acute Reference Exposure Levels for Airborne Toxicants, March 1999).* Typically the RELs for the following substances are compared to modeled emission concentrations of the same duration rather than maximum one-hour concentrations (e.g., a 4-hour REL should be compared to the maximum 4-hour average concentration from the air dispersion model). 4-Hour: Arsenic and Inorganic Arsenic Compounds 6-Hour: Benzene, Carbon disulfide, Ethylene glycol ethyl ether, Ethylene glycol ethyl ether acetate, Ethylene glycol methyl ether 7-Hour: Carbon tetrachloride, Chloroform

Table last updated: April 25, 2005

Table last updated: April 25, 2005

Table 3
OEHHA/ARB APPROVED CHRONIC REFERENCE EXPOSURE LEVELS AND TARGET ORGANS®

Chemical	Chemical▼ Abstract Number	Chronic Inhalation REL ($\mu g/m^3$)	Chronic Oral REL	Date◆ Value Reviewed [Added]	Target Organs													
					Alimentary	Bone	Cardiovascular	Developmental	Endocrine	Eye	Hematologic	Immune	Kidney	Nervous	Reproductive	Respiratory	Skin
ACETALDEHYDE	75-07-0	9.0E+00		5/93												X	
ACROLEIN	107-02-8	6.0E-02		1/01						X						X	
ACRYLAMIDE	79-06-1	7.0E-01		1/91										X			
ACRYLIC ACID	79-10-7	1.0E+00 R/C		1996												X	
ACRYLONITRILE	107-13-1	5.0E+00		12/01												X	
ALLYL CHLORIDE	107-05-1	1.0E+00 R/C		1996										X			
AMMONIA	7664-41-7	2.0E+02		2/00												X	
ANILINE	62-53-3	1.0E+00 R/C		1996			X										
Antimony Compounds	*7440-36-0*	*2.0E-01 R/C*		*1996*												✓	
ANTIMONY TRIOXIDE	1309-64-4	2.0E-01 R/C		1996												X	
ARSENIC AND COMPOUNDS (INORGANIC) TAC	7440-38-2 1016 [1015]	3.0E-02		1/01			X	X						X			
			3.0E-04	10/00			X										X
ARSINE	7784-42-1	5.0E-02 R/C		1996			X										
BENZENE TAC	71-43-2	6.0E+01		2/00				X			X			X			
BENZIDINE (AND ITS SALTS) *values also apply to:*	92-87-5	1.0E+01		1/91	X									X			
Benzidine based dyes	*1020*	*1.0E+01*		*1/91*	✓									✓			
Direct Black 38	*1937-37-7*	*1.0E+01*		*1/91*	✓									✓			
Direct Blue 6	*2602-46-2*	*1.0E+01*		*1/91*	✓									✓			
Direct Brown 95 (technical grade)	*16071-86-6*	*1.0E+01*		*1/91*	✓									✓			
BENZYL CHLORIDE	100-44-7	1.2E+01		1/92												X	
BERYLLIUM AND COMPOUNDS	7440-41-7 [1021]	7.0E-03		12/01								X				X	
			2.0E-03	12/01	X												
BROMINE AND COMPOUNDS	7726-95-6 [1040]	1.7E+00		1/92												X	
BROMINE PENTAFLUORIDE	7789-30-2	1.7E+00		1/92	X								X			X	
HYDROGEN BROMIDE	10035-10-6	2.4E+01		1/92												X	
Potassium Bromate	*7758-01-2*	*1.7E+00*		1/92												✓	
1,3-BUTADIENE TAC	106-99-0	2.0E+01		1/01											X		

Table last updated: April 25, 2005

Table 3
OEHHA/ARB APPROVED CHRONIC REFERENCE EXPOSURE LEVELS AND TARGET ORGANS®

Chemical	Chemical▼ Abstract Number	Chronic Inhalation REL ($\mu g/m^3$)	Chronic Oral REL	Date◆ Value Reviewed [Added]	Target Organs												
					Alimentary	Bone	Cardiovascular	Developmental	Endocrine	Eye	Hematologic	Immune	Kidney	Nervous	Reproductive	Respiratory	Skin
CADMIUM AND COMPOUNDS[T7AC]	7440-43-9 [1045]	2.0E-02		1/01									X			X	
			5.0E-04	10/00									X				
CARBON DISULFIDE	75-15-0	8.0E+02		5/02										X	X		
CARBON TETRACHLORIDE[TAC] (Tetrachloromethane)	56-23-5	4.0E+01		1/01	X			X						X			
CHLORINE	7782-50-5	2.0E-01		2/00												X	
CHLORINE DIOXIDE	10049-04-4	6.0E-01		1/01												X	
2-CHLOROACETOPHENONE	532-27-4	3.0E-02[RfC]		1996												X	
CHLOROBENZENE	108-90-7	1.0E+03		1/01	X								X		X		
CHLOROFORM[TAC]	67-66-3	3.0E+02		4/00	X			X					X				
Chlorophenols	*1060*																
2-CHLOROPHENOL	95-57-8	1.8E+01		1/91	X			X*							X*		
PENTACHLOROPHENOL	87-86-5	2.0E-01		1/92	X			X*							X*		
TETRACHLOROPHENOLS	25167-83-3	8.8E+01		1/92	X			X*							X*		
2,3,4,6-Tetrachlorophenol	*58-90-2*	*8.8E+01*		*1/92*	✓			✓*							✓*		
CHLOROPICRIN	76-06-2	4.0E-01		12/01												X	
CHLOROPRENE	126-99-8	1.0E+00		192										X			
CHROMIUM 6+[TAC]	18540-29-9	2.0E-01		1/01												X	
			2.0E-02	10/00							X						
Barium chromate	*10294-40-3*	*2.0E-01*		*1/01*												✓	
			2.0E-02	*10/00*							✓						
Calcium chromate	*13765-19-0*	*2.0E-01*		*1/01*												✓	
			2.0E-02	*10/00*							✓						
Lead chromate	*7758-97-6*	*2.0E-01*		*1/01*												✓	
			2.0E-02	*10/00*							✓						
Sodium dichromate	*10588-01-9*	*2.0E-01*		*1/01*												✓	
			2.0E-02	*10/00*							✓						
Strontium chromate	*7789-06-2*	*2.0E-01*		*1/01*												✓	
			2.0E-02	*10/00*							✓						

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Chemical	Chemical▼ Abstract Number	Chronic Inhalation REL ($\mu g/m^3$)	Chronic Oral REL	Date◆ Value Reviewed [Added]	Target Organs												
					Alimentary	Bone	Cardiovascular	Developmental	Endocrine	Eye	Hematologic	Immune	Kidney	Nervous	Reproductive	Respiratory	Skin
CHROMIUM TRIOXIDE (as chromic acid mist)	1333-82-0	2.0E-03		1/01												X	
			2.0E-02	*10/00*							✓						
COPPER AND COMPOUNDS	7440-50-8 [1067]	2.4E+00		1/92												X	
CRESOLS (mixtures of)	1319-77-3	6.0E+02		1/01										X			
m-CRESOL	108-39-4	6.0E+02		1/01										X			
o-CRESOL	95-48-7	6.0E+02		1/01										X			
p-CRESOL	106-44-5	6.0E+02		1/01										X			
Cyanide Compounds (inorganic)	*57-12-5 1073*	*9.0E+00*		*4/00*			✓		✓					✓			
HYDROGEN CYANIDE (Hydrocyanic acid)	74-90-8	9.0E+00		4/00			X		X					X			
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	96-12-8	2.0E-01		1/92	X			X*							X*	X	
p-DICHLOROBENZENE	106-46-7	8.0E+02		1/01	X								X	X		X	
1,1,-DICHLOROETHYLENE ... (see Vinylidene Chloride)																	
DI(2-ETHYLHEXYL)PHTHALATE (DEHP)	117-81-7	7.0E+01		1/91	X												
DIESEL EXHAUST ... (see Particulate Emissions from Diesel-Fueled Engines)																	
DIETHANOLAMINE	111-42-2	3.0E+00		12/01			X							X			
N,N-DIMETHYL FORMAMIDE	68-12-2	8.0E+01		1/01	X											X	
1,4-DIOXANE+ (1,4-Diethylene dioxide)	123-91-1	3.0E+03		4/00	X		X						X				
EPICHLOROHYDRIN (1-Chloro-2,3-epoxypropane)	106-89-8	3.0E+00		1/01						X						X	
1,2-EPOXYBUTANE	106-88-7	2.0E+01		1/01			X									X	
ETHYL ACRYLATE	140-88-5	4.8E+01		1/92	X								X			X	
ETHYL BENZENE	100-41-4	2.0E+03		2/00	X			X	X				X				
ETHYL CHLORIDE (Chlorethane)	75-00-3	3.0E+04		4/00	X			X									
ETHYLENE DIBROMIDE[TAC] (1,2-Dibromoethane)	106-93-4	8.0E-01		12/01											X		
ETHYLENE DICHLORIDE[TAC] (1,2-Dichloroethane)	107-06-2	4.0E+02		1/01	X												
ETHYLENE GLYCOL	107-21-1	4.0E+02		4/00				X					X			X	
ETHYLENE OXIDE[TAC] (1,2-Epoxyethane)	75-21-8	3.0E+01		1/01										X			

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Chemical	Chemical▼ Abstract Number	Chronic Inhalation REL ($\mu g/m^3$)	Chronic Oral REL	Date◆ Value Reviewed [Added]	Target Organs													
					Alimentary	Bone	Cardiovascular	Developmental	Endocrine	Eye	Hematologic	Immune	Kidney	Nervous	Reproductive	Respiratory	Skin	
Fluorides	1101	1.3E+01				X										X		
			4.0E-02	8/03		X												
HYDROGEN FLUORIDE (Hydrofluoric acid)	7664-39-3	1.4E+01				X										X		
			4.0E-02	8/03		X												
FLUOROCARBONS (chlorinated)	1104 [1105]	7.0E+02		1/91										X				
Chlorinated fluorocarbon (CFC-113)	*76-13-1*	*7.0E+02*		*1/91*										✓				
CHLORODIFLUOROMETHANE (Freon 22)	75-45-6	5.0E+04[RIC]		1996				X	X				X					
Dichlorofluoromnethane (Freon 12)	*75-43-4*	*7.0E+02*		*1/91*										✓				
Trichlorofluoromethane (Freon 11)	*75-69-4*	*7.0E+02*		*1/91*										✓				
Fluorocarbons (brominated)	*1103*	*7.0E+02*		*1/91*										✓				
FORMALDEHYDE[TAC]	50-00-0	3.0E+00		2/00						X						X		
GASOLINE VAPORS	1110	2.1E+03		1/91										X		X		
GLUTARALDEHYDE	111-30-8	8.0E-02		1/01												X		
GLYCOL ETHERS	1115																	
ETHYLENE GLYCOL BUTYL ETHER – EGBE	111-76-2	2.0E+01		1/92				X*							X*	X		
ETHYLENE GLYCOL ETHYL ETHER – EGEE	110-80-5	7.0E+01		2/00							X				X			
ETHYLENE GLYCOL ETHYL ETHER ACETATE - EGEEA	111-15-9	3.0E+02		2/00				X										
ETHYLENE GLYCOL METHYL ETHER – EGME	109-86-4	6.0E+01		2/00											X			
ETHYLENE GLYCOL METHYL ETHER ACETATE - EGMEA	110-49-6	9.0E+01		2/00											X			
HEXACHLOROBENZENE	118-74-1	2.8E+00		7/90	X													
HEXACHLOROCYCLOHEXANES (mixed or technical grade)	608-73-1 1120	1.0E+00		1/91	X								X					
			3.0E-04	1/91	X								X					
alpha-HEXACHLOROCYCLOHEXANE	319-84-6	1.0E+00		1/91	X								X					
			3.0E-04	1/91	X								X					
beta-HEXACHLOROCYCLOHEXANE	319-85-7	1.0E+00		1/91	X								X					
			3.0E-04	1/91	X								X					

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Chemical	Chemical▼ Abstract Number	Chronic Inhalation REL ($\mu g/m^3$)	Chronic Oral REL	Date◆ Value Reviewed [Added]	Target Organs													
					Alimentary	Bone	Cardiovascular	Developmental	Endocrine	Eye	Hematologic	Immune	Kidney	Nervous	Reproductive	Respiratory	Skin
gamma-HEXACHLOROCYCLOHEXANE (Lindane)	58-89-9	1.0E+00		1/91	X								X				
			3.0E-04	1/91	X								X				
HEXACHLOROCYCLOPENTADIENE	77-47-4	2.4E-01		1/91	X												
n-HEXANE	110-54-3	7.0E+03		4/00										X			
HYDRAZINE	302-01-2	2.0E-01		1/01	X				X								
HYDROCHLORIC ACID (Hydrogen chloride)	7647-01-0	9.0E+00		2/00												X	
HYDROGEN CYANIDE (Hydrocyanic acid) (see Cyanide Compounds)																	
HYDROGEN BROMIDE ... (see Bromine & Compounds)																	
HYDROGEN FLUORIDE (Hydrofluoric acid) (see Fluorides & Compounds)																	
HYDROGEN SULFIDE	7783-06-4	1.0E+01		4/00												X	
ISOPHORONE	78-59-1	2.0E+03		12/01	X			X									
ISOPROPYL ALCOHOL (Isopropanol)	67-63-0	7.0E+03		2/00				X					X				
LINDANE ... (see gamma-Hexachlorocyclohexane)																	
MALEIC ANHYDRIDE	108-31-6	7.0E-01		12/01												X	
MANGANESE AND COMPOUNDS	7439-96-5 [1132]	2.0E-01		4/00										X			
MERCURY AND COMPOUNDS (INORGANIC)	7439-97-6 [1133]	9.0E-02		2/00										X			
			3.0E-04	10/00 [1/92]								X	X				
Mercuric chloride	*7487-94-7*	*9.0E-02*		*2/00*										✓			
			3.0E-04	*10/00 [1/92]*								✓	✓				
MERCURY AND COMPOUNDS (ORGANIC)	N/A													X			
METHYL MERCURY	593-74-8	1.0E+00		1/91				X									
METHANOL	67-56-1	4.0E+03		4/00				X						X		X	
METHYL BROMIDE (Bromomethane)	74-83-9	5.0E+00		2/00	X					X			X				
METHYL tertiary-BUTYL ETHER	1634-04-4	8.0E+03		2/00										X			
METHYL CHLOROFORM (1,1,1-Trichloroethane)	71-55-6	1.0E+03		2/00											X		
METHYL ETHYL KETONE (2-Butanone)	78-93-3	1.0E+03[R/C]		1996													

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Chemical	Chemical▼ Abstract Number	Chronic Inhalation REL ($\mu g/m^3$)	Chronic Oral REL	Date◆ Value Reviewed [Added]	Target Organs												
					Alimentary	Bone	Cardiovascular	Developmental	Endocrine	Eye	Hematologic	Immune	Kidney	Nervous	Reproductive	Respiratory	Skin
METHYL ISOCYANATE	624-83-9	1.0E+00		12/01											X	X	
METHYL MERCURY ... (see Mercury & Compounds)																	
METHYL METHACRYLATE	80-62-6	9.8E+02		1/92												X	
METHYLENE CHLORIDE[TAC] (Dichloromethane)	75-09-2	4.0E+02		2/00			X							X			
4,4'-METHYLENE DIANILINE (AND ITS DICHLORIDE)	101-77-9	2.0E+01		12/01	X					X							
METHYLENE DIPHENYL ISOCYANATE	101-68-8	7.0E-01		1/01												X	
MINERAL FIBERS (<1% FREE SILICA)	N/A	2.4E+01		1/92												X	
Ceramic fibers (man-made)	*1056*	*2.4E+01*		*1/92*												✓	
Glasswool (man-made fibers)	*1111*	*2.4E+01*		*1/92*												✓	
Mineral fibers (fine: man-made)	*1136*	*2.4E+01*		*1/92*												✓	
Rockwool (man-made fibers)	*1168*	*2.4E+01*		*1/92*												✓	
Slagwool (man-made fibers)	*1181*	*2.4E+01*		*1/92*												✓	
NAPHTHALENE	91-20-3	9.0E+00		4/00												X	
NICKEL AND COMPOUNDS[TAC]	7440-02-0 [1145]	5.0E-02		2/00							X					X	
			5.0E-02	10/00	X												
Nickel acetate	*373-02-4*	*5.0E-02*		*2/00*							✓					✓	
			5.0E-02	*10/00*	✓												
Nickel carbonate	*3333-67-3*	*5.0E-02*		*2/00*							✓					✓	
			5.0E-02	*10/00*	✓												
Nickel carbonyl	*13463-39-3*	*5.0E-02*		*2/00*							✓					✓	
			5.0E-02	*10/00*	✓												
Nickel hydroxide	*12054-48-7*	*5.0E-02*		*2/00*							✓					✓	
			5.0E-02	*10/00*	✓												
Nickelocene	*1271-28-9*	*5.0E-02*		*2/00*							✓					✓	
			5.0E-02	*10/00*	✓												
NICKEL OXIDE	1313-99-1	1.0E-01		2/00							X					X	
			5.0E-02	10/00	X												

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Chemical	Chemical▼ Abstract Number	Chronic Inhalation REL ($\mu g/m^3$)	Chronic Oral REL	Date◆ Value Reviewed [Added]	Target Organs												
					Alimentary	Bone	Cardiovascular	Developmental	Endocrine	Eye	Hematologic	Immune	Kidney	Nervous	Reproductive	Respiratory	Skin
Nickel refinery dust from pyrometallurgical process	*1146*	*5.0E-02*		*2/00*							✓					✓	
			5.0E-02	*10/00*	✓												
Nickel subsulfide	*12035-72-2*	*5.0E-02*		*2/00*							✓					✓	
			5.0E-02	*10/00*	✓												
NITROBENZENE	98-95-3	1.7E+00		1/91	X								X				
NITROGEN DIOXIDE	10102-44-0	4.7E+02		1/92												X	
2-NITROPROPANE	79-46-9	2.0E+01		1/92	X												
OZONE	10028-15-6	1.8E+02		1/92												X	
PARTICULATE EMISSIONS FROM DIESEL-FUELED ENGINES[TAC]■	9901	5.0E+00[TAC]		8/98												X	
PENTACHLOROPHENOL ... (see Chlorophenols)																	
PERCHLOROETHYLENE[TAC] (Tetrachloroethylene)	127-18-4	3.5E+01[TAC]		10/91	X								X				
PHENOL	108-95-2	2.0E+02		4/00	X		X						X	X			
PHOSPHINE	7803-51-2	8.0E-01		9/02	X						X		X	X		X	
PHOSPHORIC ACID	7664-38-2	7.0E+00		2/00												X	
PHOSPHORUS (WHITE)	7723-14-0	7.0E-02		1/91				X*							X*		
PHTHALIC ANHYDRIDE	85-44-9	2.0E+01		1/01												X	
PCB (POLYCHLORINATED BIPHENYLS) [lowest, low and high risk]*	1336-36-3	1.2E+00		1/91	X			X*				X			X*		
			2.0E-05[RfD]	1996	X			X*				X			X*		
DIOXIN-LIKE POLYCHLORINATED BIPHENYLS (PCBS) ϖ					X			X	X		X				X	X	
3,3',4,4'-TETRACHLOROBIPHENYL (PCB 77)	32598-13-3	4.0E-01		8/03	X			X	X		X				X	X	
			1.0E-04	8/03	X			X	X		X				X	X	
3,4,4',5-TETRACHLOROBIPHENYL (PCB 81)	70362-50-4	4.0E-01		8/03	X			X	X		X				X	X	
			1.0E-04	8/03	X			X	X		X				X	X	
2,3,3',4,4'-PENTACHLOROBIPHENYL (PCB 105)	32598-14-4	4.0E-01		8/03	X			X	X		X				X	X	
			1.0E-04	8/03	X			X	X		X				X	X	
2,3,4,4',5-PENTACHLOROBIPHENYL (PCB 114)	74472-37-0	8.0E-02		8/03	X			X	X		X				X	X	
			2.0E-05	8/03	X			X	X		X				X	X	

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					Alimentary	Bone	Cardiovascular	Developmental	Endocrine	Eye	Hematologic	Immune	Kidney	Nervous	Reproductive	Respiratory	Skin
2,3',4,4',5-PENTACHLOROBIPHENYL (PCB 118)	31508-00-6	4.0E-01		8/03	X			X	X		X				X	X	
			1.0E-04	8/03	X			X	X		X				X	X	
2,3',4,4',5'-PENTACHLOROBIPHENYL (PCB 123)	65510-44-3	4.0E-01		8/03	X			X	X		X				X	X	
			1.0E-04	8/03	X			X	X		X				X	X	
3,3',4,4',5-PENTACHLOROBIPHENYL (PCB 126)	57465-28-8	4.0E-04		8/03	X			X	X		X				X	X	
			1.0E-07	8/03	X			X	X		X				X	X	
2,3,3',4,4',5-HEXACHLOROBIPHENYL (PCB 156)	38380-08-4	8.0E-02		8/03	X			X	X		X				X	X	
			2.0E-05	8/03	X			X	X		X				X	X	
2,3,3',4,4',5'-HEXACHLOROBIPHENYL (PCB 157)	69782-90-7	8.0E-02		8/03	X			X	X		X				X	X	
			2.0E-05	8/03	X			X	X		X				X	X	
2,3',4,4',5,5'-HEXACHLOROBIPHENYL (PCB 167)	52663-72-6	4.0E+00		8/03	X			X	X		X				X	X	
			1.0E-03	8/03	X			X	X		X			*	X	X	
3,3',4,4',5,5'-HEXACHLOROBIPHENYL (PCB 169)	32774-16-6	4.0E-03		8/03	X			X	X		X				X	X	
			1.0E-06	8/03	X			X	X		X				X	X	
2,3,3',4,4',5,5'-HEPTACHLOROBIPHENYL (PCB 189)	39635-31-9	4.0E-01		8/03	X			X	X		X				X	X	
			1.0E-04	8/03	X			X	X		X				X	X	
POLYCHLORINATED DIBENZO-P-DIOXINS (PCDD) (Treated as 2,3,7,8-TCDD for HRA)[TAC]●	1085 1086	4.0E-05		2/00	X			X	X		X				X	X	
			1.0E-08	10/00	X			X	X		X				X	X	
2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN[TAC]	1746-01-6	4.0E-05		2/00	X			X	X		X				X	X	
			1.0E-08	10/00	X			X	X		X				X	X	
1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN	40321-76-4	4.0E-05		8/03	X			X	X		X				X	X	
			1.0E-08	8/03	X			X	X		X				X	X	
1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN	39227-28-6	4.0E-04		2/00	X			X	X		X				X	X	
			1.0E-07	10/00	X			X	X		X				X	X	
1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN	57653-85-7	4.0E-04		2/00	X			X	X		X				X	X	
			1.0E-07	10/00	X			X	X		X				X	X	
1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN	19408-74-3	4.0E-04		2/00	X			X	X		X				X	X	
			1.0E-07	10/00	X			X	X		X				X	X	

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					Alimentary	Bone	Cardiovascular	Developmental	Endocrine	Eye	Hematologic	Immune	Kidney	Nervous	Reproductive	Respiratory	Skin
1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN	35822-46-9	4.0E-03		2/00	X			X	X		X				X	X	
			1.0E-06	10/00	X			X	X		X				X	X	
1,2,3,4,6,7,8,9-OCTACHLORODIBENZO-P-DIOXIN	3268-87-9	4.0E-01		8/03	X			X	X		X				X	X	
			1.0E-04	8/03	X			X	X		X				X	X	
POLYCHLORINATED DIBENZOFURANS (PCDF) (Treated as 2,3,7,8-TCDD for HRA)[TAC◆]	1080	4.0E-05		2/00	X			X	X		X				X	X	
			1.0E-08	10/00	X			X	X		X				X	X	
2,3,7,8-TETRACHLORODIBENZOFURAN	5120-73-19	4.0E-04		2/00	X			X	X		X				X	X	
			1.0E-07	10/00	X			X	X		X				X	X	
1,2,3,7,8-PENTACHLORODIBENZOFURAN	57117-41-6	8.0E-04		2/00	X			X	X		X				X	X	
			2.0E-07	10/00	X			X	X		X				X	X	
2,3,4,7,8-PENTACHLORODIBENZOFURN	57117-31-4	8.0E-05		2/00	X			X	X		X				X	X	
			2.0E-08	10/00	X			X	X		X				X	X	
1,2,3,4,7,8-HEXACHLORODIBENZOFURAN	70648-26-9	4.0E-04		2/00	X			X	X		X				X	X	
			1.0E-07	10/00	X			X	X		X				X	X	
1,2,3,6,7,8-HEXACHLORODIBENZOFURAN	57117-44-9	4.0E-04		2/00	X			X	X		X				X	X	
			1.0E-07	10/00	X			X	X		X				X	X	
1,2,3,7,8,9-HEXACHLORODIBENZOFURAN	72918-21-9	4.0E-04		2/00	X			X	X		X				X	X	
			1.0E-07	10/00	X			X	X		X				X	X	
2,3,4,6,7,8-HEXACHLORODIBENZOFURAN	60851-34-5	4.0E-04		2/00	X			X	X		X				X	X	
			1.0E-07	10/00	X			X	X		X				X	X	
1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN	67562-39-4	4.0E-03		2/00	X			X	X		X				X	X	
			1.0E-06	10/00	X			X	X		X				X	X	
1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN	55673-89-7	4.0E-03		2/00	X			X	X		X				X	X	
			1.0E-06	10/00	X			X	X		X				X	X	
1,2,3,4,6,7,8,9-OCTACHLORODIBENZOFURAN	39001-02-0	4.0E-01		8/03	X			X	X		X				X	X	
			1.0E-04	8/03	X			X	X		X				X	X	
POTASSIUM BROMATE ... (see Bromine & Compounds)																	
PROPYLENE (PROPENE)	115-07-1	3.0E+03		4/00												X	

Table last updated: April 25, 2005

Table 3
OEHHA/ARB APPROVED CHRONIC REFERENCE EXPOSURE LEVELS AND TARGET ORGANS®

Chemical	Chemical▼ Abstract Number	Chronic Inhalation REL ($\mu g/m^3$)	Chronic Oral REL	Date◆ Value Reviewed [Added]	Target Organs													
					Alimentary	Bone	Cardiovascular	Developmental	Endocrine	Eye	Hematologic	Immune	Kidney	Nervous	Reproductive	Respiratory	Skin
PROPYLENE GLYCOL MONOMETHYL ETHER	107-98-2	7.0E+03		2/00	X												
PROPYLENE OXIDE	75-56-9	3.0E+01		2/00												X	
SELENIUM AND COMPOUNDS (other than hydrogen selenide)	7782-49-2 [1170]	2.0E+01		12/01	X		X							X			
Selenium sulfide	*7446-34-6*	*2.0E+01*		*12/01*	✓		✓							✓			
SILICA [CRYSTALLINE, RESPIRABLE]	7631-86-9	3.0E+00		2/05												X	
SODIUM HYDROXIDE	1310-73-2	4.8E+00		7/90						X*						X	X*
STYRENE	100-42-5	9.0E+02		4/00										X			
SULFATES	9960	2.5E+01		1/92												X	
SULFUR DIOXIDE	7446-09-5	6.6E+02		1/92												X	
SULFURIC ACID	7664-93-9	1.0E+00		12/01												X	
Sulfuric Acid and Oleum	*7664-93-9*	*1.0E+00*		*12/01*												✓	
Sulfuric Trioxide	*7446-71-9*	*1.0E+00*		*12/01*												✓	
Oleum	*8014-95-7*	*1.0E+00*		*12/01*												✓	
TETRACHLOROPHENOLS ... (see Chlorophenols)																	
TOLUENE	108-88-3	3.0E+02		4/00				X						X		X	
Toluene diisocyanates	*26471-62-5 1204*	*7.0E-02*		*1/01*												✓	
TOLUENE-2,4-DIISOCYANATE	584-84-9	7.0E-02		1/01												X	
TOLUENE-2,6-DIISOCYANATE	91-08-7	7.0E-02		1/01												X	
TRICHLOROETHYLENE[TAC]	79-01-6	6.0E+02		4/00						X				X			
TRIETHYLAMINE	121-44-8	2.0E+02		9/02						X							
VINYL ACETATE	108-05-4	2.0E+02		12/01												X	
VINYL BROMIDE	593-60-2	7.0E+00[RFC]		1996	X												
VINYL CHLORIDE[TAC] (Chloroethylene)	75-01-4	2.6E+01		7/90	X			X*							X*		
VINYLIDENE CHLORIDE (1,1,-Dichloroethylene)	75-35-4	7.0E+01		1/01	X												
XYLENES (mixed isomers)	1330-20-7 1210	7.0E+02		4/00										X		X	
m-XYLENE	108-38-3	7.0E+02		4/00										X		X	
o-XYLENE	95-47-6	7.0E+02		4/00										X		X	

Table last updated: April 25, 2005

Table 3
OEHHA/ARB APPROVED CHRONIC REFERENCE EXPOSURE LEVELS AND TARGET ORGANS®

Chemical	Chemical▼ Abstract Number	Chronic Inhalation REL ($\mu g/m^3$)	Chronic Oral REL	Date◆ Value Reviewed [Added]	Target Organs												
					Alimentary	Bone	Cardiovascular	Developmental	Endocrine	Eye	Hematologic	Immune	Kidney	Nervous	Reproductive	Respiratory	Skin
p-XYLENE	106-42-3	7.0E+02		4/00										X		X	
ZINC COMPOUNDS	7440-66-6 [1211]	3.5E+01		7/90			X*				X*					X	
Zinc oxide	*1314-13-2*	*3.5E+01*		*7/90*			✓*				✓*					✓	

Table last updated: April 25, 2005

Table 3
OEHHA/ARB APPROVED CHRONIC REFERENCE EXPOSURE LEVELS AND TARGET ORGANS®

Purpose:	The purpose of this reference table is to provide a quick list of all health values that have been approved by the Office of Environmental Health Hazard Assessment (OEHHA) and the Air Resources Board (ARB) for use in facility health risk assessments conducted for the AB 2588 Air Toxics Hot Spots Program. The OEHHA has developed and adopted new risk assessment guidelines that update and replace the California Air Pollution Control Officers Association's (CAPCOA) *Air Toxics "Hot Spots" Program Revised 1992 Risk Assessment Guidelines, October 1993*. The OEHHA has adopted five technical support documents for these guidelines. This table lists the OEHHA adopted inhalation and oral noncancer chronic RELs. In addition, it lists the substances in Appendix A-I *(Substances For Which Emissions Must Be Quantified)* and Appendix F (*Criteria For Inputs For Risk Assessment Using Screening Air Dispersion Modeling*) of the ARB's *Air Toxics" Hot Spots" Emission Inventory Criteria and Guidelines (EICG) (July 1997)*. OEHHA is still in the process of adopting new noncancer chronic RELs. Therefore, new health values will periodically be added to, or deleted from, this table. Users of this table are advised to monitor the OEHHA website (*www.oehha.ca.gov*) for any updates to the health values.
◉	Substances written in *italics* and with a ✓ do not have explicit OEHHA approved health values, but are included in this table to clarify applicability of OEHHA adopted heath effects values to individual or grouped substances listed in the *Air Toxics" Hot Spots" Emission Inventory Criteria and Guidelines*, Appendix A-I list of *"Substances For Which Emissions Must Be Quantified"*.
▼	Chemical Abstract Service Number (CAS): For chemical groupings and mixtures where a CAS number is not applicable, the 4-digit code used in the *Air Toxics "Hot Spots" Emission Inventory Criteria and Guidelines (EICG) Report* is listed. The 4-digit codes enclosed in brackets [ ] are codes that have been phased out, but may still appear on previously reported Hot Spots emissions. For information on the origin and use of the 4-digit code, see the EICG report.
X *	These are chronic RELs which were approved by CAPCOA for use in the AB 2588 Air Toxics Hot Spots Program. These CAPCOA chronic RELs will eventually be removed or replaced by approved OEHHA chronic RELs. In the CAPCOA Guidelines (1993), these target organ systems were combined (reproductive/developmental; cardiovascular/blood).
◆	Date Value Reviewed [Added]: This column lists the date that the health value was last reviewed by OEHHA and the Scientific Review Panel, and/or approved for use in the AB 2588 Air Toxics Hot Spots Program. If the health value is unchanged since it was first approved for use in the "Hot Spots" Program, then the date that the value was first approved for use by CAPCOA is listed within the brackets [ ]. • February 2000, April 2000, January 2001, and December 2001 are listed for the first set of 22, the second set of 16, the third set of 22, and the fourth set of 12 noncancer chronic RELs, respectively. The chronic REL for carbon disulfide was adopted in May 2002. Chronic RELs for phosphine and triethylamine were adopted in September 2002. Chronic RELs for fluorides including hydrogen fluoride were adopted August 2003. Chronic REL for silica [crystalline respirable] was adopted February 2005. • October 2000 is listed for the oral chronic RELs. 1996 is listed for the U.S. EPA Reference Concentrations. Dates of 1990-1992 are listed for chronic RELs that may eventually be dropped or replaced. • For the substances identified as Toxic Air Contaminants, the Air Resources Board hearing date is listed. The date for acetaldehyde represents the date the value was approved by the Scientific Review Panel.
RfC/RfD	United States Environmental Protection Agency (U.S. EPA) Reference Concentrations (RfCs) and oral Reference Doses (RfDs) from the U.S. EPA Integrated Risk Information System (1996) have been added if the U.S. EPA health value and/or endpoint was different from the 1993 CAPCOA value or endpoint and OEHHA has not adopted a new value as part of the Hot Spot Risk Assessment Guidelines. The RfCs and RfDs listed meet the criteria of Appendix F of the Air Resources Board's Emission Inventory Criteria and Guidelines Report effective July 1, 1997. These RfC/RfDs may be replaced by new OEHHA values in the future.
TAC	Toxic Air Contaminant: The Air Resources Bo ard has identified this substance as a Toxic Air Contaminant.
★	Polychlorinated Biphenyls (unspeciated mixtures): Chronic Oral: The chronic oral value is U.S. EPA's 1996 oral Reference Dose for Aroclor-1254.
ϖ	Polychlorinated Biphenyls (speciated): Values calculated using WHO_{97} TEF procedure. See OEHHA memo dated August 29, 2003.
•	Polychlorinated Dibenzo-*p*-dioxins and Polychlorinated Dibenzofurans (also referred to as chlorinated dioxins and dibenzofurans): The OEHHA has adopted the World Health Organization 1997 (WHO-97) Toxicity Equivalency Factor scheme for evaluating the cancer risk due to exposure to samples containing mixtures of polychlorinated dibenzo-*p*-dioxins (PCDD) and polychlorinated dibenzofurans (PCDF) and determining cancer risks for a number of specific PCB congeners. See Appendix A of OEHHA's *Technical Support Document For Describing Available Cancer Potency Factors* for more information about the scheme. See Appendix E of OEHHA's *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* for the methodology for calculating 2,3,7,8-equivalents for PCDD, PCDFs and a number of specific PCB congeners. See section 8.2.3 of OEHHA's *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* for conducting health risks when total (unspeciated) chlorinated dioxins and furans are reported.
■	Particulate Emissions from Diesel-Fueled Engines: The inhalation cancer potency factor and chronic REL were derived from whole diesel exhaust and should be used only for impacts from the inhalation pathway. The inhalation impacts from speciated emissions from diesel-fueled engines are already accounted for in the inhalation cancer potency factor and REL. However, at the discretion of the risk assessor, speciated emissions from diesel-fueled engines may be used to estimate acute noncancer health impacts or the contribution to cancer risk or chronic noncancer health impacts for the non-inhalation exposure pathway. See Appendix D of OEHHA's document *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* for more information.

Table last updated: April 25, 2005

Table last updated: April 25, 2005

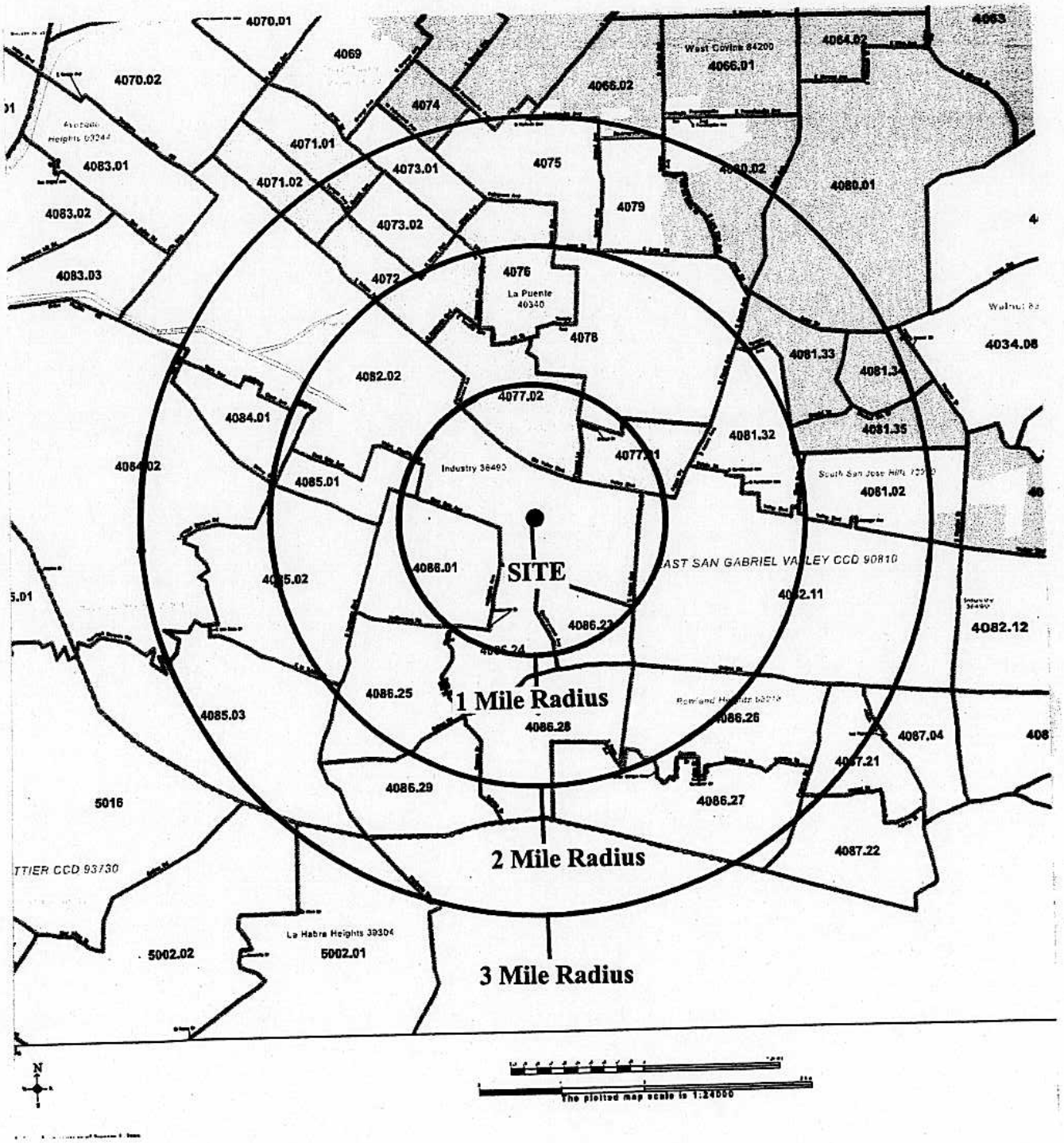


FIGURE 8.1D-1
Census Tracts Within 3 Mile Radius

CH2MHill

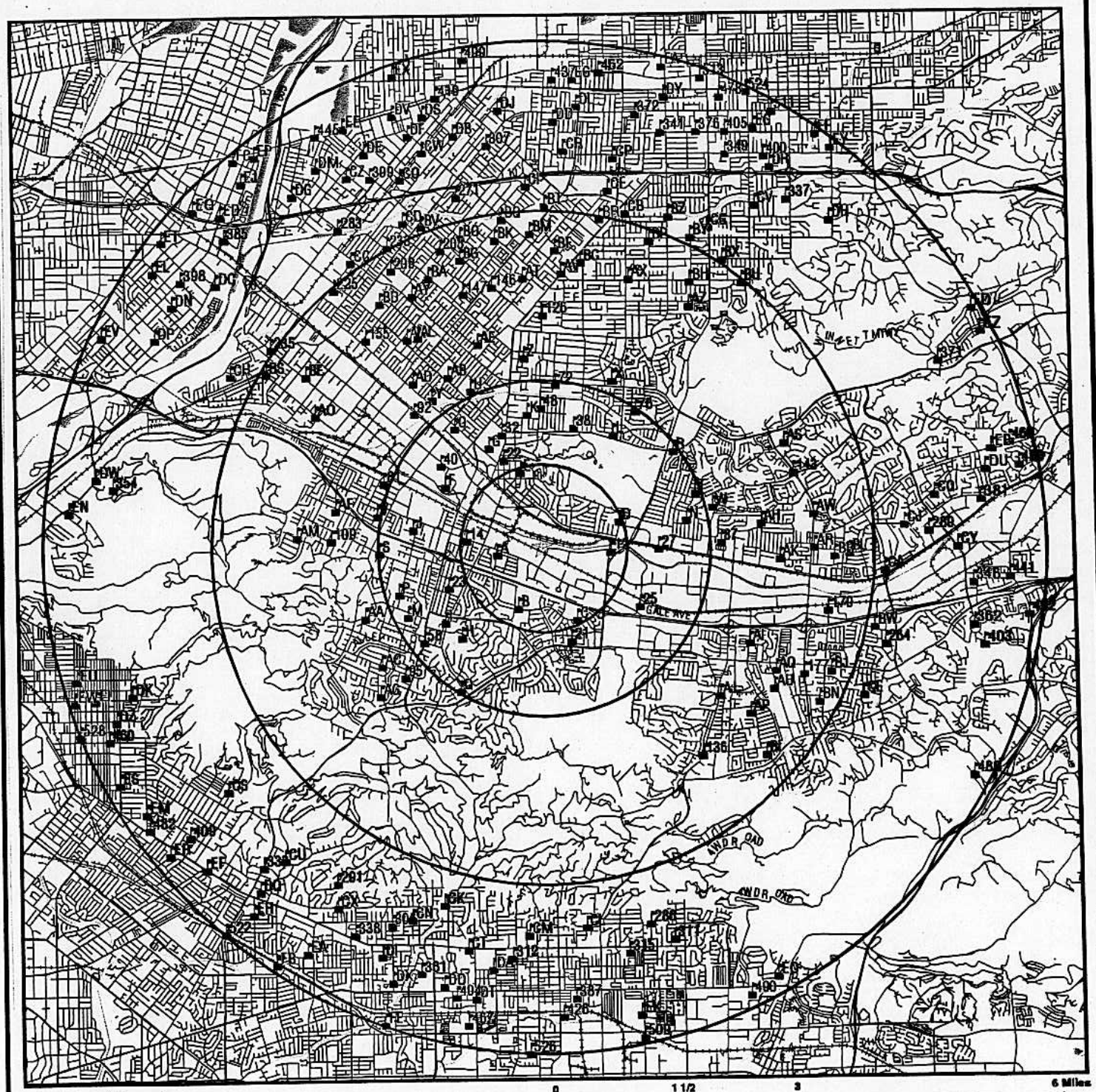
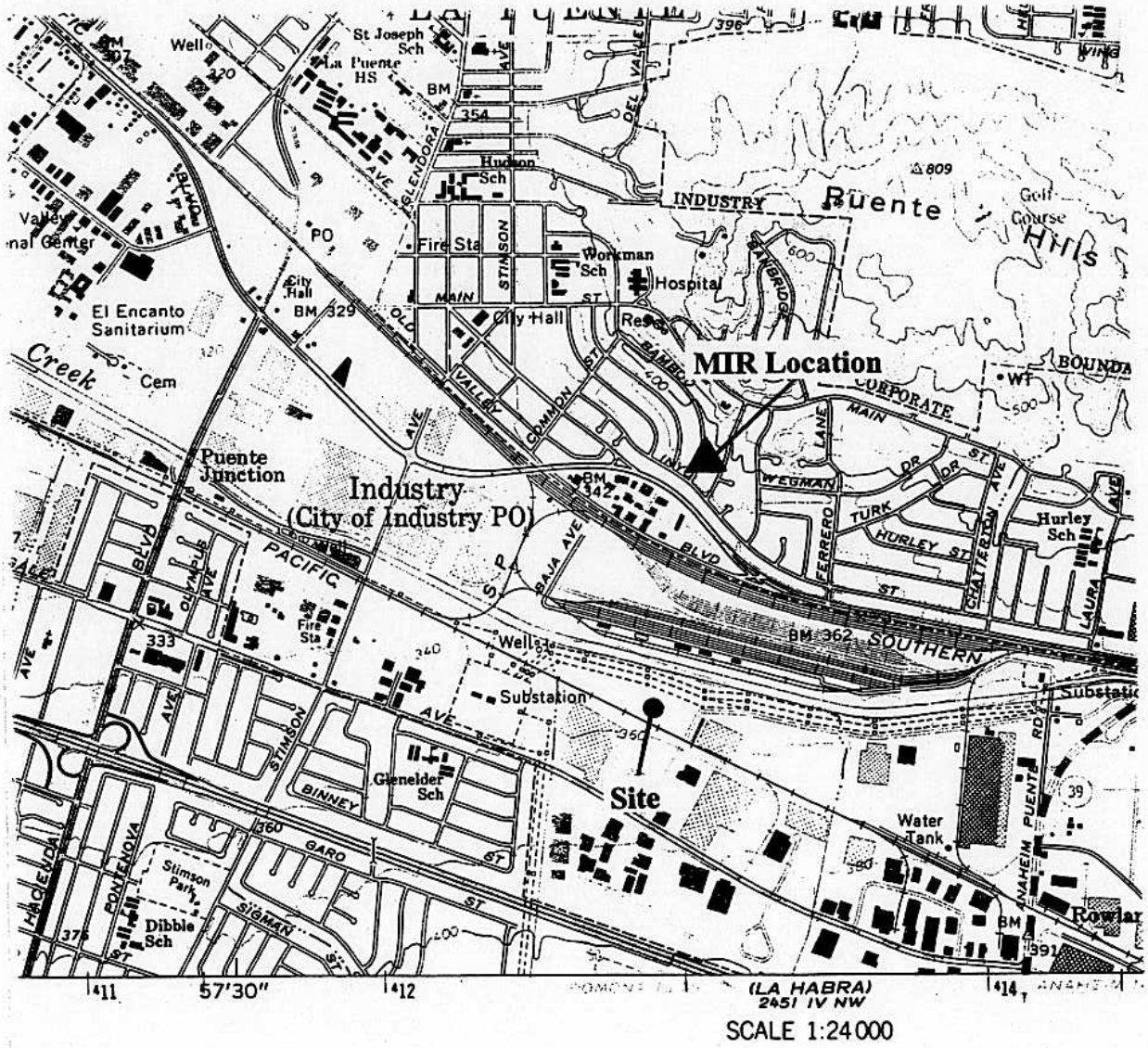


FIGURE 8.D-2
Sensitive Receptors Within 6 Mile Radius

CH2MHill

FIGURE 8.1D-3
6 Mile Radius with Census Tracts

CH2MHill



MIR Location

Figure 8.1D-4

APPENDIX 8.1E

Construction Emissions and Impact Analysis

8.1E.1 Construction Phases

Construction of WCEP is expected to last approximately 12 months. The construction will occur in the following four main phases:

- Site preparation;
- Foundation work;
- Construction/installation of major structures; and
- Installation of major equipment.

The WCEP site is approximately 11.48 acres in size and is essentially flat. The site was previously used as a warehouse site. The warehouse will be demolished by the City of Industry as part of its redevelopment plans. As such, the site will require only minimum grading and leveling prior to construction of the power blocks, support systems, and site buildings. Site preparation includes finish grading, excavation of footings and foundations, and backfilling operations. After site preparation is finished, the construction of the foundations and structures is expected to begin. Once the foundations and structures are finished, installation and assembly of the mechanical and electrical equipment are scheduled to commence.

Fugitive dust emissions from the construction of WCEP will result from:

- Dust entrained during site preparation and finish grading/excavation at the construction site;
- Dust entrained during onsite travel on paved and unpaved surfaces;
- Dust entrained during aggregate and soil loading and unloading operations; and
- Wind erosion of areas disturbed during construction activities.

Combustion emissions during construction will result from:

- Exhaust from the diesel construction equipment used for site preparation, grading, excavation, and construction of onsite structures;
- Exhaust from water trucks used to control construction dust emissions;
- Exhaust from diesel-powered welding machines, electric generators, air compressors, and water pumps;
- Exhaust from pickup trucks and diesel trucks used to transport workers and materials around the construction site;
- Exhaust from diesel trucks used to deliver concrete, fuel, and construction supplies to the construction site;

- Exhaust from locomotives used to deliver mechanical equipment to the project area; and
- Exhaust from automobiles used by workers to commute to the construction site.

To determine the potential worst-case daily construction impacts, exhaust and dust emission rates have been calculated and evaluated for each source of emissions. Worst-case daily dust emissions are expected to occur during the first month of construction when site preparation occurs. The worst-case daily exhaust emissions are expected to occur during the middle of the construction schedule during the installation of the major mechanical equipment. Annual emissions are based on the average equipment mix during the 12-month construction period.

8.1E.2 Available Mitigation Measures

The following mitigation measures are proposed to control exhaust emissions from the diesel heavy equipment used during construction of WCEP:

- Operational measures, such as limiting time spent with the engine idling by shutting down equipment when not in use;
- Regular preventive maintenance to prevent emission increases due to engine problems;
- Use of low sulfur and low aromatic fuel meeting California standards for motor vehicle Diesel fuel; and
- Use of low-emitting gas and diesel engines meeting state and federal emissions standards (Tier I and II) for construction equipment, including, but not limited to catalytic converter systems and particulate filter systems.

The following mitigation measures are proposed to control fugitive dust emissions during construction of the project:

- Use either water application or chemical dust suppressant application to control dust emissions from on-site unpaved road travel and unpaved parking areas;
- Use vacuum sweeping and/or water flushing of paved road surface to remove buildup of loose material to control dust emissions from travel on the paved access road (including adjacent public streets impacted by construction activities) and paved parking areas;
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard;
- Limit traffic speeds on all unpaved site areas to 5 mph;
- Install sandbags or other erosion control measures to prevent silt runoff to roadways;
- Replant vegetation in disturbed areas as quickly as possible;
- Use wheel washers or wash off tires of all trucks exiting construction site; and

- Mitigate fugitive dust emissions from wind erosion of areas disturbed from construction activities (including storage piles) by application of either water or chemical dust suppressant.

8.1E.3 Estimation of Emissions with Mitigation Measures

Tables 8.1E-1 through 8.1E-3 show the estimated maximum daily and annual heavy equipment exhaust and fugitive dust emissions with recommended mitigation measures. Detailed emission calculations are included in Tables 8.1E-5 through 8.1E-7.

TABLE 8.1E-1
Maximum Daily Emissions During Construction (fugitive dust), pounds per day

	NO_x	CO	VOC	SO_x	PM_{10}
Onsite					
Construction Fugitive Dust	0	0	0	0	9.17
Offsite					
Worker Travel, Truck/Rail Deliveries	0	0	0	0	0.74
Total =	**0**	**0**	**0**	**0**	**9.91**

TABLE 8.1E-2
Maximum Daily Emissions During Construction (exhaust emissions), pounds per day

	NO_x	CO	VOC	SO_x	PM_{10}
Onsite and Offsite					
Construction Equipment, Worker Travel, Truck/Rail Deliveries	101.2	134.4	20.4	10.9	6.5
Total =	**101.2**	**134.4**	**20.4**	**10.9**	**6.5**

TABLE 8.1E-3
Annual Emissions During Construction, tons per year

	NO_x	CO	VOC	SO_x	PM_{10}
Onsite and Offsite					
Construction Equipment, Fugitive Dust, Worker Travel, Truck/Rail Deliveries	6.7	15.5	2.0	0.5	.4
Total =	**6.7**	15.5	2.0	0.5	.4
Construction Period Total Emissions (including offsite linears)	6.7	15.5	2.0	0.5	.4
Total Construction Period =	**6.7**	15.5	2.0	0.5	.4

Appendix 8.1B, Table 8.1B-8 presents the current significance thresholds for the South Coast AQMD, including the thresholds for construction emissions. These significance thresholds are not exceeded except for NO_x which exceeds the daily threshold by 1.2 pounds.

Dispersion modeling of the NO_x emissions at the estimated levels do not cause or contribute to a violation of any NO_2 ambient air quality standard.

8.1E.4 Analysis of Ambient Impacts from Facility Construction

Ambient air quality impacts from emissions during the construction of WCEP were assessed through an air quality dispersion modeling analysis. The modeling analysis considers the construction site location, the surrounding topography, and the sources of emissions during construction, including vehicle and equipment exhaust emissions and fugitive dust.

8.1E.4.1 Existing Ambient Levels

As with the modeling analysis of project operating impacts (Section 8.1), monitoring stations delineated in Section 8.1.3 were used to establish the ambient background levels for the construction impact modeling analysis. Table 8.1-43 shows the maximum concentrations of NO_2, SO_2, CO and PM_{10} recorded for 1996 through 2004 at those monitoring stations.

8.1E.4.2 Dispersion Model

As in the analysis of project operating impacts, the USEPA-approved Industrial Source Complex Short Term (ISCST3) model was used to estimate ambient impacts from construction activities. A detailed discussion of the ISCST3 dispersion model is included in Section 8.1.5.

The emission sources for the construction site were grouped into two categories: exhaust emissions and dust emissions. An effective emission plume height of 10 feet was used for all exhaust emissions. For construction dust emissions, an effective plume height of 1.64 feet was used in the modeling analysis. The exhaust emissions were modeled as a set of point sources that covered the entire area of the construction site. The dust emissions were modeled as a single area source that covered the total area of the construction site. The construction impacts modeling analysis used the same receptor locations as used for the project operating impact analysis. A detailed discussion of the receptor locations is included in Section 8.1.5.

To determine the construction impacts on short-term ambient air quality standards (24 hours and less), the worst-case daily onsite construction emission levels shown in Tables 8.1E-1 and 8.1E-2 were used. For pollutants with annual average ambient standards, the annual onsite emission levels shown in Table 8.1E-3 were used. As with the project operating impact analysis, the meteorological data set used for the construction emission impacts analysis was the data collected from the AQMD Walnut meteorological monitoring station for 1981.

8.1E.4.3 Modeling Results

Based on the emission rates of NO_x, SO_2, CO, and PM_{10} and the meteorological data, the ISCST3 model calculates hourly and annual ambient impacts for each pollutant. As mentioned above, the modeled 1-hour, 3-hour, 8-hour, and 24-hour ambient impacts are based on the worst-case daily emission rates of NO_x, SO_2, CO, and PM_{10}. The annual impacts are based on the annual emission rates of these pollutants.

The one-hour and annual average concentrations of NO_2 were computed following the revised USEPA guidance for computing these concentrations (August 9, 1995 Federal Register, 60 FR 40465). The one-hour average was adjusted using the Ozone Limiting Method. The annual average was calculated using the ambient ratio method (ARM) with the national default value of 0.75 for the annual average NO_2/NO_x ratio.

The modeling analysis results are shown in Table 8.1E-4. Also included in the table are the maximum background levels that have occurred in the last three years and the resulting total ambient impacts. As shown in Table 8.1E-4, construction impacts for all modeled pollutants are expected to be below the most stringent state and national standards. However, the state and federal 24-hour and annual average PM_{10} standards are exceeded in the absence of the construction emissions for WCEP.

TABLE 8.1E-4
Modeled Maximum Construction Impacts

Pollutant	Averaging Time	Maximum Construction Impacts ($\mu g/m^3$)	Background ($\mu g/m^3$)	Total Impact ($\mu g/m^3$)	State Standard ($\mu g/m^3$)	Federal Standard ($\mu g/m^3$)
NO_2	1-hour	82.5	297	379.5	470	-
	Annual	1.4	67.9	69.5	-	100
SO_2	1-hour	11.2	52.4	63.6	650	-
	3-hour	6.9	52.4	59.3	-	1300
	24-hour	1.9	25.4	27.3	109	365
	Annual	0.3	8	8.3	-	80
CO	1-hour	49	12650	12699	23,000	40,000
	8-hour	25	4989	5014	10,000	10,000
PM_{10}	24-hour	22.8	164	186.8	50	150
	Annual[b]	2.6	58.1	60.7	30	-

Notes:
[a]ARM applied for annual average, using national default 0.75 ratio.
[b]Annual Arithmetic Mean.
[c]Based on maximum daily emissions.
[d]Based on maximum daily emissions.

The ISCST3 model tends to over predict construction emission impacts from fugitive dust due to the cold plume (i.e., ambient temperature) effect of dust emissions. Most of the plume dispersion characteristics in the ISCST3 model are derived from observations of hot plumes associated with typical smoke stacks. The ISCST3 model does compensate for plume temperature; however, for ambient temperature plumes the model assumes negligible buoyancy and dispersion. Consequently, the ambient concentrations in cold plumes remain high even at significant distances from a source. WCEP construction site impacts are not unusual in comparison to most construction sites; construction sites that use good dust suppression techniques and low-emitting vehicles typically do not cause violations of air quality standards. The input and output modeling files are being provided electronically.

ATTACHMENT 8.1E-1

Detailed Emission Calculations

Table 8.1E-5 Construction Emissions Calculations

Table 8.1E-6 SCAQMD Emfac Data (Years 2003-2025)

Table 8.1E-7 Construction Equipment Emissions Factors (CEC)

able 8.1E5 CONSTRUCTION PHASE-Equipment Exhaust Emissions

roject: Edison Mission Energy-Walnut Creek Energy Park

Projected Construction Year(s): 2007-2008

Equip. Type	# On Site	Est. HP Each (a)	Fuel Type (b)	Avg.Load Factor % (c)	Avg.Daily Hours (d)	Adj.Daily Hours (e)	Total Days (f)	Total Adj. Hours (g)	Total HP/Hrs	Total Un-Adj Hours
ozer	0	120	D	67.9	10	0.00	0	0.0	0.0	0
oader	1	175	D	53.5	10	5.35	15	80.2	14031.2	150
craper	0	250	D	75.9	10	0.00	0	0.0	0.0	0
rader	1	175	D	52.9	10	5.29	5	26.5	4628.8	50
rane	1	175	D	49.4	10	4.94	220	1086.9	190205.4	2200
orklift	2	120	D	34.5	10	6.90	220	1518.0	182160.0	2200
ackhoe	1	50	D	53.5	10	5.35	30	160.4	8017.8	300
ump Truck	1	250	D	43.7	8	3.50	15	52.4	13110.0	120
ater Truck	1	175	D	43.7	10	4.37	30	131.1	22942.5	300
ervice Truck	1	175	D	43.7	10	4.37	180	786.6	137655.0	1800
uel Truck	1	175	D	43.7	8	3.50	180	629.3	110124.0	1440
oom Truck	1	175	D	49.4	10	4.94	60	296.4	51874.2	600
oncrete Pump	1	175	D	71.3	8	5.70	30	171.1	29946.0	240
ort.Air Comp.	2	50	D	55.2	8	8.83	180	1589.8	79488.0	1440
ort. Elec. Gen	2	25	D	85.1	8	13.62	90	1225.4	30636.0	720
ort. Light Plant	2	25	D	71.3	8	11.41	30	342.2	8556.0	240
rencher	1	120	D	79.9	8	6.40	30	191.9	23025.0	240
ompactor	1	120	D	66.1	8	5.29	4	21.2	2540.1	32
aver	1	120	D	68.1	8	5.45	3	16.3	1960.7	24
***	0	0	D	0.0	0	0.00	0	0.0	0.0	0
***	0	0	D	0.0	0	0.00	0	0.0	0.0	0

(a) Ref: South Coast AQMD-CEQA Handbook, Table A9-8-C, and updated CEC data (see at end of this Appendix).
(b) D=diesel, G=gasoline
(c) Ref (a) Table A9-8-D, increased by 15% to adj for updated load levels
(d) Ref (a) Table A9-8-C (at 100% load)
(e) Adjusted daily hours at average load factor.
(f) Total estimated days on site from construction schedule.
(g) Total operational hours during construction phase at average load factor.

Note: Equipment exhaust emissions factors are based on data derived from the SCAQMD website (Air Quality Planning section) and data supplied by CEC for selected equipment categories, etc. (August 2005)

EMISSIONS FACTORS (h)

Equipment Exhaust Data

Equip. Type	HP	lbs/hp-hr CO	g/hp-hr	lbs/hp-hr VOC	g/hp-hr	lbs/hp-hr NOx	g/hp-hr	lbs/hp-hr SOx	g/hp-hr	lbs/hp-hr PM10	g/hp-hr
Dozer	120	0.0041	1.9	0.0012	0.5	0.0084	3.8	0.0012	0.5	0.0008	0.4
Loader	175	0.0033	1.5	0.0007	0.3	0.007	3.2	0.0013	0.6	0.0004	0.2
Scraper	250	0.0024	1.1	0.0007	0.3	0.0104	4.7	0.0017	0.8	0.0004	0.2
Grader	175	0.0038	1.7	0.0008	0.4	0.0084	3.8	0.0015	0.7	0.0005	0.2
Crane	175	0.0026	1.2	0.0006	0.3	0.0055	2.5	0.001	0.5	0.0003	0.1
Forklift	120	0.0021	1.0	0.0007	0.3	0.0041	1.9	0.00001	0.0	0.0005	0.2
Backhoe	50	0.0094	4.3	0.0036	1.6	0.0071	3.2	0.0014	0.6	0.001	0.5
Dump Truck	250	0.0016	0.7	0.0005	0.2	0.0079	3.6	0.0014	0.6	0.0003	0.1
Water Truck	175	0.0042	1.9	0.001	0.5	0.0092	4.2	0.0015	0.7	0.0006	0.3
Service Truck	175	0.0042	1.9	0.001	0.5	0.0092	4.2	0.0015	0.7	0.0006	0.3
Fuel Truck	175	0.0042	1.9	0.001	0.5	0.0092	4.2	0.0015	0.7	0.0006	0.3
Boom Truck	175	0.0042	1.9	0.001	0.5	0.0092	4.2	0.0015	0.7	0.0006	0.3
Concrete Pump	175	0.02	9.1	0.003	1.4	0.024	10.9	0.002	0.9	0.0015	0.7
Port.Air Comp.	50	0.0067	3.0	0.0027	1.2	0.0062	2.8	0.0013	0.6	0.0007	0.3
Port. Elec. Gen	25	0.0021	1.0	0.0014	0.6	0.0038	1.7	0.00001	0.0	0.0005	0.2
Port. Light Plant	25	0.0021	1.0	0.0014	0.6	0.0038	1.7	0.00001	0.0	0.0005	0.2
Trencher	120	0.0034	1.5	0.0008	0.4	0.0061	2.8	0.0012	0.5	0.0006	0.3
Compactor	120	0.0032	1.5	0.0008	0.4	0.0058	2.6	0.0011	0.5	0.0006	0.3
Paver	120	0.0038	1.7	0.0009	0.4	0.0069	3.1	0.0013	0.6	0.0007	0.3
***	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
***	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

(h) Ref: Updated factors provided by CEC, August 2005 (2006 factors used), i.e., estimated construction period.
(see EF sheets at end of this Appendix)

Construction Equipment Emissions

Equip. Type	CO lbs/hr	CO lbs/day	CO tons*	VOC lbs/hr	VOC lbs/day	VOC tons*	NOx lbs/hr	NOx lbs/day	NOx tons*	SOx lbs/hr	SOx lbs/day	SOx tons*	PM10 lbs/hr	PM10 lbs/day	PM10 tons*
ozer	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
oader	0.31	2.47	0.02	0.07	0.52	0.00	0.65	5.24	0.05	0.12	0.97	0.01	0.04	0.30	0.00
craper	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
rader	0.35	2.81	0.01	0.07	0.59	0.00	0.78	6.22	0.02	0.14	1.11	0.00	0.05	0.37	0.00
rane	0.22	1.80	0.25	0.05	0.41	0.06	0.48	3.80	0.52	0.09	0.69	0.10	0.03	0.21	0.03
orklift	0.17	1.39	0.19	0.06	0.46	0.06	0.34	2.72	0.37	0.00	0.01	0.00	0.04	0.33	0.05
ackhoe	0.25	2.01	0.04	0.10	0.77	0.01	0.19	1.52	0.03	0.04	0.30	0.01	0.03	0.21	0.00
ump Truck	0.17	1.40	0.01	0.05	0.44	0.00	0.86	6.90	0.05	0.15	1.22	0.01	0.03	0.26	0.00
Vater Truck	0.32	2.57	0.05	0.08	0.61	0.01	0.70	5.63	0.11	0.11	0.92	0.02	0.05	0.37	0.01
ervice Truck	0.32	2.57	0.29	0.08	0.61	0.07	0.70	5.63	0.63	0.11	0.92	0.10	0.05	0.37	0.04
uel Truck	0.32	2.57	0.23	0.08	0.61	0.06	0.70	5.63	0.51	0.11	0.92	0.08	0.05	0.37	0.03
oom Truck	0.36	2.90	0.11	0.09	0.69	0.03	0.80	6.36	0.24	0.13	1.04	0.04	0.05	0.41	0.02
Concrete Pump	2.50	19.96	0.30	0.37	2.99	0.04	2.99	23.96	0.36	0.25	2.00	0.03	0.19	1.50	0.02
Port.Air Comp.	0.37	2.96	0.27	0.15	1.19	0.11	0.34	2.74	0.25	0.07	0.57	0.05	0.04	0.31	0.03
Port. Elec. Gen	0.09	0.71	0.03	0.06	0.48	0.02	0.16	1.29	0.06	0.00	0.00	0.00	0.02	0.17	0.01
Port. Light Plant	0.07	0.60	0.01	0.05	0.40	0.01	0.14	1.08	0.02	0.00	0.00	0.00	0.02	0.14	0.00
Trencher	0.33	2.61	0.04	0.08	0.61	0.01	0.59	4.68	0.07	0.12	0.92	0.01	0.06	0.46	0.01
Compactor	0.25	2.03	0.00	0.06	0.51	0.00	0.46	3.68	0.01	0.09	0.70	0.00	0.05	0.38	0.00
Paver	0.31	2.48	0.00	0.07	0.59	0.00	0.56	4.51	0.01	0.11	0.85	0.00	0.06	0.46	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	**5.84**	**46.73**	**1.80**	1.35	10.79	0.49	**9.84**	**78.72**	**3.21**	1.33	10.67	0.45	**0.66**	**5.32**	**0.24**

*tons = tons emitted during construction phase

CONSTRUCTION PHASE-Fugitive Dust Emissions

Total Site Acreage:	11.48	Site Acreage Subject to Construction Activity: (site plus linear areas)	10
Emission Factor:	0.11	tons/acre/month of activity (see Ref.)	
Month =	720	Hrs (avg)	
lbs/hr =	0.306	PM10 emissions-unadjusted	

Additional PM10 Control Techniques

Type	Used	Avg. % PM10 Reduction
Watering	Yes	50
Surface Sealant	No	0
Dust Suppressant	No	0
Speed Control	Yes	25

% Control: 75

Release Factor: 0.25

Construction Site Activity Levels

Hrs/Day:	12	
Days/Wk:	6	
Day/Month:	26	
Months/Construction:	3	**
Annual Const Hours:	3744	
Total Construction Hrs:	936.0	

Unadjusted Controlled PM10 Emissions:

lbs/hr:	3.1
lbs/day:	36.7
tons* :	1.4

Total Const Period: 12 months

Controlled PM10 Emissions:

lbs/hr:	0.8
lbs/day:	9.17
tons* :	0.358
Annualized g/sec:	0.01
24 hr g/sec value:	0.048

*tons - tons emitted during the construction phase

Ref: MRI Report, assumes 50% control due to watering, for intensive earth moving activities.
This factor has been further reduced due to the additional controls of more watering and speed controls on-site.

** Although the complete cosntruction period is 12 months, the maximum fugitive dust emissions will occur in the early phase of construction, and are not expected to last more than 3 months. After month 3, fugitive dust emissions will be well below the maximum hourly and daily values presented above.

ONSTRUCTION PHASE - Truck Delivery Emissions

ax # deliveries/day:	18	
g Haul Distance (miles)	19	see note below
MT/Day:	342	
ork days/yr:	312	
otal Const Work Days:	312	

Emissions Factors (lbs/vmt)

NOx	CO	VOC	SOx	PM10
0.03893	0.005932	0.001321	0.000405	0.00073

Ref: SCAQMD Emfac 2002 Ver 2.2, 4-03 (website)
On-Road Heavy Duty Diesels (2006)

Daily Emissions (lbs)

NOx	CO	VOC	SOx	PM10
13.314	2.029	0.452	0.139	0.250

aul distance assumes: 50% of deliveries from adjacent intermodal yard @ 1 mile, 25% from Port of LA @ 36 miles, 25% from Port of LB @ 37 miles.

Construction Period Emissions (tons)

NOx	CO	VOC	SOx	PM10
2.077	0.316	0.070	0.022	0.039

CONSTRUCTION PHASE - Rail Delivery Emissions

Railway emissions calculations should be performed using the updated Locomotive Emissions calcualtion procedures, with the final values in terms of ons per const period entered in the appropriate cells below.

The Locomotive Emissions Calculation procedures are attached.

Railway Delivery Emissions
Construction Period Emissions (tons)

	NOx	CO	VOC	SOx	PM10
Data from Locomotive Emissions Calculations >>>>>>	0	0.000	0.000	0.000	0.000

Edison Mission Energy is not projecting any rail deliveries for this project.

CONSTRUCTION PHASE - Worker Travel - Emissions

Avg # of Workers/Day:	123	
Avg Occupancy/Vehicle:	1.2	
Round Trips/Day:	103	
Avg Roundtrip Distance:	60	miles
VMT/Day:	6150	
VMT/Year:	1918800	
VMT/Const Period:	1918800	
Max # of Workers/Day:	228	
Max Work Month:	8	
Round Trips/Day:	190	
VMT/Day:	11400	

Emissions Factors (lbs/VMT)

NOx	CO	VOC	SOx	PM10
0.001489	0.013925	0.001497	0.000009	0.00008

Ref: SCAQMD Emfac 2002 Ver 2.2, 4-03 (website)
On-Road Vehicles (2006)

Avg. Daily Emissions (lbs)

NOx	CO	VOC	SOx	PM10
9.157	85.639	9.207	0.055	0.492

Monthly Emissions (lbs)

NOx	CO	VOC	SOx	PM10
238.09	2226.61	239.37	1.44	12.79

Maximum Daily Emissions (lbs) Month 8

NOx	CO	VOC	SOx	PM10
16.975	158.745	17.066	0.103	0.912

Construction Period Emissions (tons)

NOx	**CO**	**VOC**	**SOx**	**PM10**
1.429	**13.360**	**1.436**	**0.009**	**0.077**

NSTRUCTION PHASE - Emissions Summary

	PM10	Avg.
Construction Dust:	0.8	lbs/hr
	9.2	lbs/day
	0.4	tons/const period
	0.048	g/sec (24 hr basis)
	0.01	annualized g/sec

	Avg lbs/day	tons/construction period	annualized g/sec
Combustion Equipment:			
NOx	101.2	6.7	0.1933
CO	134.4	15.5	0.4457
VOC*	20.4	2.0	0.0574
SOx	10.9	0.5	0.0137
PM10	6.5	0.4	0.0103

Table 8.1E-6 SCAQMD Emfac Data (Years 2003-2025)

Highest (Most Conservative) EMFAC 2002 (version 2.2) Emission Factors for On-Road Vehicles

Projects in the SCAQMD (Scenario Years 2003 - 2025)

Derived from Wintertime Emissions Inventory (except Annual Average CO for passenger vehicles)
Passenger Vehicles (<8500 pounds), Delivery Trucks (>8500 pounds)

The following emission factors were compiled by running the California Air Resources Board's EMFAC2002 (version 2.2) Burden Model, taking the weighted average of vehicle types and simplifying into two categories which can be used to calculate on-road mobile source emissions. Use the following equation:

Emissions (pounds per day) = N x TL x EF

where N = number of trips, TL = trip length (miles/day), and EF = emission factor (pounds per mile)

This methodology replaces the old EMFAC emission factors in Tables A-9-5-J-1 through A-9-5-L in Appendix A9 of the current SCAQMD CEQA Handbook. All the emission factors account for the emissions from start, running and idling exhaust. In addition, the ROG emission factors take into account diurnal, hot soak, running and resting emissions, and PM10 emission factor takes into account the tire and brake wear.

Scenario Year: 2003 -- Model Years: 1965 to 2003

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.01815	CO	0.025508
NOx	0.002014	NOx	0.031208
ROG	0.001935	ROG	0.003362
SOx	0.00001	SOx	0.000241
PM10	0.000078	PM10	0.000540

Scenario Year: 2004 -- Model Years: 1965 to 2004

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.016559	CO	0.02309
NOx	0.0018	NOx	0.029607
ROG	0.001771	ROG	0.003148
SOx	0.00001	SOx	0.000243
PM10	0.000079	PM10	0.000519

Scenario Year: 2005 -- Model Years: 1965 to 2005

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.015165	CO	0.020984
NOx	0.001634	NOx	0.028142
ROG	0.001626	ROG	0.002955
SOx	0.00001	SOx	0.000246
PM10	0.000079	PM10	0.000500

Scenario Year: 2006 -- Model Years: 1965 to 2006

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.013925	CO	0.019135
NOx	0.001489	NOx	0.026756
ROG	0.001497	ROG	0.002779
SOx	0.000009	SOx	0.000248
PM10	0.000080	PM10	0.000483

EMFAC 2002 Emission Factors for On-Road Mobile Sources (continued)

Scenario Year: 2007 -- Model Years: 1965 to 2007

Passenger Vehicles (pounds/mile)	
CO	0.01282
NOx	0.001361
ROG	0.001383
SOx	0.000009
PM10	0.000080

Delivery Trucks (pounds/mile)	
CO	0.017455
NOx	0.024978
ROG	0.002608
SOx	0.000033
PM10	0.000440

Scenario Year: 2008 -- Model Years: 1965 to 2008

Passenger Vehicles (pounds/mile)	
CO	0.011798
NOx	0.001245
ROG	0.001277
SOx	0.000009
PM10	0.000080

Delivery Trucks (pounds/mile)	
CO	0.015942
NOx	0.023199
ROG	0.00245
SOx	0.000033
PM10	0.000419

Scenario Year: 2009 -- Model Years: 1965 to 2009

Passenger Vehicles (pounds/mile)	
CO	0.010849
NOx	0.001138
ROG	0.001179
SOx	0.000009
PM10	0.000081

Delivery Trucks (pounds/mile)	
CO	0.01454
NOx	0.021501
ROG	0.002295
SOx	0.000033
PM10	0.000400

Scenario Year: 2010 -- Model Years: 1965 to 2010

Passenger Vehicles (pounds/mile)	
CO	0.009954
NOx	0.001038
ROG	0.001087
SOx	0.000009
PM10	0.000081

Delivery Trucks (pounds/mile)	
CO	0.013168
NOx	0.019339
ROG	0.002141
SOx	0.000033
PM10	0.000374

Scenario Year: 2011 -- Model Years: 1966 to 2011

Passenger Vehicles (pounds/mile)	
CO	0.009268
NOx	0.000952
ROG	0.001015
SOx	0.000009
PM10	0.000083

Delivery Trucks (pounds/mile)	
CO	0.012065
NOx	0.01704
ROG	0.002031
SOx	0.000033
PM10	0.000357

EMFAC 2002 Emission Factors for On-Road Mobile Sources (continued)

Scenario Year: 2012 -- Model Years: 1967 to 2012

Passenger Vehicles (pounds/mile)	
CO	0.008512
NOx	0.000868
ROG	0.000941
SOx	0.000009
PM10	0.000083

Delivery Trucks (pounds/mile)	
CO	0.010982
NOx	0.01529
ROG	0.001909
SOx	0.000034
PM10	0.000337

Scenario Year: 2013 -- Model Years: 1968 to 2013

Passenger Vehicles (pounds/mile)	
CO	0.007818
NOx	0.000791
ROG	0.000874
SOx	0.000009
PM10	0.000083

Delivery Trucks (pounds/mile)	
CO	0.010047
NOx	0.013737
ROG	0.001803
SOx	0.000034
PM10	0.000318

Scenario Year: 2014 -- Model Years: 1969 to 2014

Passenger Vehicles (pounds/mile)	
CO	0.007186
NOx	0.000721
ROG	0.000813
SOx	0.000009
PM10	0.000084

Delivery Trucks (pounds/mile)	
CO	0.009273
NOx	0.012369
ROG	0.001712
SOx	0.000034
PM10	0.000303

Scenario Year: 2015 -- Model Years: 1970 to 2015

Passenger Vehicles (pounds/mile)	
CO	0.006611
NOx	0.000659
ROG	0.000759
SOx	0.000009
PM10	0.000084

Delivery Trucks (pounds/mile)	
CO	0.008582
NOx	0.01116
ROG	0.001635
SOx	0.000034
PM10	0.000289

Scenario Year: 2016 -- Model Years: 1971 to 2016

Passenger Vehicles (pounds/mile)	
CO	0.006089
NOx	0.000602
ROG	0.00071
SOx	0.000009
PM10	0.000084

Delivery Trucks (pounds/mile)	
CO	0.00799
NOx	0.010108
ROG	0.001568
SOx	0.000035
PM10	0.000278

EMFAC 2002 Emission Factors for On-Road Mobile Sources (continued)

Scenario Year: 2017 -- Model Years: 1972 to 2017

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.005605	CO	0.007439
NOx	0.000551	NOx	0.009175
ROG	0.000664	ROG	0.001503
SOx	0.000009	SOx	0.000035
PM10	0.000084	PM10	0.000267

Scenario Year: 2018 -- Model Years: 1973 to 2018

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.005162	CO	0.006932
NOx	0.000505	NOx	0.008346
ROG	0.000621	ROG	0.001439
SOx	0.000009	SOx	0.000035
PM10	0.000084	PM10	0.000257

Scenario Year: 2019 -- Model Years: 1974 to 2019

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.004778	CO	0.006512
NOx	0.000465	NOx	0.007615
ROG	0.000585	ROG	0.001382
SOx	0.000009	SOx	0.000035
PM10	0.000084	PM10	0.000248

Scenario Year: 2020 -- Model Years: 1975 to 2020

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.004438	CO	0.006139
NOx	0.00043	NOx	0.006975
ROG	0.000553	ROG	0.001328
SOx	0.000009	SOx	0.000035
PM10	0.000084	PM10	0.000241

Scenario Year: 2021 -- Model Years: 1976 to 2021

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.004166	CO	0.005863
NOx	0.000401	NOx	0.006414
ROG	0.000528	ROG	0.00129
SOx	0.000009	SOx	0.000035
PM10	0.000085	PM10	0.000238

EMFAC 2002 Emission Factors for On-Road Mobile Sources (continued)

Scenario Year: 2022 -- Model Years: 1977 to 2022

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.003883	CO	0.005585
NOx	0.000373	NOx	0.005968
ROG	0.000502	ROG	0.001248
SOx	0.000009	SOx	0.000035
PM10	0.000085	PM10	0.000232

Scenario Year: 2023 -- Model Years: 1978 to 2023

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.003628	CO	0.005344
NOx	0.000348	NOx	0.005585
ROG	0.000477	ROG	0.001211
SOx	0.000009	SOx	0.000035
PM10	0.000085	PM10	0.000228

Scenario Year: 2024 -- Model Years: 1979 to 2024

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.003404	CO	0.005134
NOx	0.000325	NOx	0.005258
ROG	0.000454	ROG	0.001176
SOx	0.000009	SOx	0.000035
PM10	0.000085	PM10	0.000224

Scenario Year: 2025 -- Model Years: 1980 to 2025

Passenger Vehicles (pounds/mile)		Delivery Trucks (pounds/mile)	
CO	0.003216	CO	0.004958
NOx	0.000304	NOx	0.004983
ROG	0.000433	ROG	0.00114
SOx	0.000009	SOx	0.000035
PM10	0.000085	PM10	0.000220

Highest (Most Conservative) EMFAC 2002 (version 2.2, April 23, 2003) Emission Factors for On-Road Heavy Heavy Duty Diesel Trucks

Projects in the SCAQMD (Scenario Years 2005 - 2025)

Derived from Wintertime Emissions Inventory

Heavy Heavy Duty Diesel Trucks (33,001 to 60,000 pounds)

The following emission factors were compiled by running the California Air Resources Board's EMFAC2002 (version 2.2) Burden Model and extracting the Heavy Heavy Duty Diesel Truck (HHDT) Emission Factors. When calculating on-road mobile source emissions from HHDT, use the following equation:

Emissions (pounds per day) = N x TL x EF

where N = number of trips, TL = trip length (miles/day), and EF = emission factor (pounds per mile)

The emission factors account for all emissions from start, running and idling exhaust. In addition, the ROG emission factors take into account diurnal, hot soak, running and resting emissions, and PM10 emission factor takes into account the tire and brake wear.

Scenario Year: 2005 -- Model Years: 1965 to 2005

HHDT-DSL	(pounds/mile)
ROG	0.001403
CO	0.006308
NOx	0.041541
PM10	0.000774
SOx	0.000404

Scenario Year: 2006 -- Model Years: 1965 to 2006

HHDT-DSL	(pounds/mile)
ROG	0.001321
CO	0.005932
NOx	0.03893
PM10	0.00073
SOx	0.000405

Scenario Year: 2007 -- Model Years: 1965 to 2007

HHDT-DSL	(pounds/mile)
ROG	0.001227
CO	0.00552
NOx	0.035635
PM10	0.000644
SOx	4.57E-05

Scenario Year: 2008 -- Model Years: 1965 to 2008

HHDT-DSL	(pounds/mile)
ROG	0.001133
CO	0.005117
NOx	0.032442
PM10	0.000598
SOx	4.6E-05

Scenario Year: 2009 -- Model Years: 1965 to 2009

HHDT-DSL	(pounds/mile)
ROG	0.001042
CO	0.004738
NOx	0.029455
PM10	0.000559
SOx	4.61E-05

Scenario Year: 2010 -- Model Years: 1965 to 2010

HHDT-DSL	(pounds/mile)
ROG	0.000948
CO	0.004335
NOx	0.025802
PM10	0.000507
SOx	4.61E-05

Scenario Year: 2011 -- Model Years: 1966 to 2011

HHDT-DSL	(pounds/mile)
ROG	0.000888
CO	0.004069
NOx	0.022117
PM10	0.000475
SOx	4.61E-05

Scenario Year: 2012 -- Model Years: 1967 to 2012

HHDT-DSL	(pounds/mile)
ROG	0.000813
CO	0.003783
NOx	0.01938
PM10	0.000438
SOx	4.63E-05

Scenario Year: 2013 -- Model Years: 1968 to 2013

HHDT-DSL	(pounds/mile)
ROG	0.000749
CO	0.003551
NOx	0.017054
PM10	0.000408
SOx	4.66E-05

Scenario Year: 2014 -- Model Years: 1969 to 2014

HHDT-DSL	(pounds/mile)
ROG	0.000696
CO	0.003364
NOx	0.0151
PM10	0.000383
SOx	4.71E-05

Highest (Most Conservative) EMFAC 2002 (version 2.2, April 23, 2003)
Emission Factors for On-Road Heavy Heavy Duty Diesel Trucks (concluded)

Scenario Year: 2015 -- Model Years: 1970 to 2015
HHDT-DSL (pounds/mile)

ROG	0.000651
CO	0.003217
NOx	0.013437
PM10	0.000362
SOx	4.62E-05

Scenario Year: 2016 -- Model Years: 1971 to 2016
HHDT-DSL (pounds/mile)

ROG	0.000615
CO	0.003102
NOx	0.012038
PM10	0.000344
SOx	4.7E-05

Scenario Year: 2017-- Model Years: 1972 to 2017
HHDT-DSL (pounds/mile)

ROG	0.000585
CO	0.003005
NOx	0.010831
PM10	0.00033
SOx	4.63E-05

Scenario Year: 2018-- Model Years: 1973 to 2018
HHDT-DSL (pounds/mile)

ROG	0.000558
CO	0.002928
NOx	0.009786
PM10	0.000317
SOx	4.71E-05

Scenario Year: 2019 -- Model Years: 1974 to 2019
HHDT-DSL (pounds/mile)

ROG	0.000536
CO	0.002862
NOx	0.00888
PM10	0.000305
SOx	4.65E-05

Scenario Year: 2020 -- Model Years: 1975 to 2020
HHDT-DSL (pounds/mile)

ROG	0.000518
CO	0.002807
NOx	0.008102
PM10	0.000295
SOx	4.73E-05

Scenario Year: 2021 -- Model Years: 1976 to 2021
HHDT-DSL (pounds/mile)

ROG	0.000512
CO	0.002807
NOx	0.007438
PM10	0.00029
SOx	4.72E-05

Scenario Year: 2022 -- Model Years: 1977 to 2022
HHDT-DSL (pounds/mile)

ROG	0.000501
CO	0.002782
NOx	0.006926
PM10	0.000283
SOx	4.7E-05

Scenario Year: 2023 -- Model Years: 1978 to 2023
HHDT-DSL (pounds/mile)

ROG	0.000492
CO	0.002759
NOx	0.006491
PM10	0.000278
SOx	4.68E-05

Scenario Year: 2024 -- Model Years: 1979 to 2024
HHDT-DSL (pounds/mile)

ROG	0.000483
CO	0.002737
NOx	0.006126
PM10	0.000273
SOx	4.65E-05

Scenario Year: 2025 -- Model Years: 1980 to 2025
HHDT-DSL (pounds/mile)

ROG	0.000477
CO	0.002716
NOx	0.005822
PM10	0.000269
SOx	4.62E-05

Table 8.1E-7 Construction Equipment Emissions Factors (CEC)

Eq Type	HP	2005 lb/hr CO	lb/hp-hr	lb/hr NOx	lb/hp-hr	lb/hr PM10	lb/hp-hr	lb/hr SOx	lb/hp-hr	lb/hr VOC	lb/hp-hr	2006 lb/hr CO	lb/hp-hr	lb/hr NOx	lb/hp-hr	lb/hr PM10	lb/hp-hr	lb/hr SOx	lb/hp-hr	lb/hr VOC	lb/hp-hr	2007 lb/hr CO	lb/hp-hr	lb/hr NOx	lb/hp-hr	lb/hr PM10	lb/hp-hr	lb/hr SOx	lb/hp-hr	lb/hr VOC	lb/hp-hr
Bore/Drill Rigs	15	0.0350	0.0023	0.0700	0.0047	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0690	0.0046	0.0690	0.0046	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0690	0.0046	0.0690	0.0046	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	25	0.0670	0.0027	0.1230	0.0049	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0780	0.0031	0.1560	0.0062	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0770	0.0031	0.1550	0.0062	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	50	0.2280	0.0046	0.2800	0.0056	0.0270	0.0005	0.0730	0.0015	0.0580	0.0012	0.2070	0.0041	0.2720	0.0054	0.0250	0.0005	0.0750	0.0015	0.0380	0.0008	0.1900	0.0038	0.2630	0.0053	0.0210	0.0004	0.0750	0.0015	0.0380	0.0008
	120	0.4710	0.0039	0.8220	0.0069	0.0720	0.0006	0.1660	0.0014	0.1010	0.0008	0.4550	0.0038	0.7550	0.0063	0.0560	0.0005	0.1670	0.0014	0.0750	0.0006	0.4440	0.0037	0.6980	0.0058	0.0430	0.0004	0.1670	0.0014	0.0500	0.0004
	175	0.6930	0.0040	1.2950	0.0074	0.0620	0.0004	0.2910	0.0017	0.1090	0.0006	0.6930	0.0040	1.1650	0.0067	0.0510	0.0003	0.2940	0.0017	0.0810	0.0005	0.6880	0.0039	1.0230	0.0058	0.0430	0.0002	0.2940	0.0017	0.0540	0.0003
	250	0.3160	0.0013	1.6320	0.0065	0.0380	0.0002	0.3880	0.0016	0.0630	0.0003	0.3130	0.0013	1.4980	0.0060	0.0380	0.0002	0.3930	0.0016	0.0630	0.0003	0.3110	0.0012	1.3320	0.0053	0.0370	0.0001	0.3930	0.0016	0.0620	0.0002
	500	0.5160	0.0010	2.2940	0.0046	0.0600	0.0001	0.5630	0.0011	0.0850	0.0002	0.5160	0.0010	2.0720	0.0041	0.0590	0.0001	0.5630	0.0011	0.0710	0.0001	0.5170	0.0010	1.7700	0.0035	0.0590	0.0001	0.5630	0.0011	0.0700	0.0001
	750	1.0350	0.0014	4.8060	0.0064	0.1110	0.0001	1.1460	0.0015	0.1230	0.0002	1.0370	0.0014	4.2800	0.0057	0.1100	0.0001	1.1450	0.0015	0.1220	0.0002	1.0250	0.0014	3.6070	0.0048	0.1090	0.0001	1.1450	0.0015	0.1210	0.0002
	9999	1.5490	0.0002	9.8190	0.0010	0.2140	0.0000	1.7190	0.0002	0.5160	0.0001	1.5400	0.0002	9.5040	0.0010	0.2040	0.0000	1.7140	0.0002	0.5110	0.0001	1.5370	0.0002	8.7620	0.0009	0.1880	0.0000	1.7140	0.0002	0.4330	0.0000
	Composite	0.49	#VALUE!	1.51	#VALUE!	0.06	#VALUE!	0.33	#VALUE!	0.10	#VALUE!	0.48	#VALUE!	1.40	#VALUE!	0.06	#VALUE!	0.33	#VALUE!	0.08	#VALUE!	0.48	#VALUE!	1.25	#VALUE!	0.05	#VALUE!	0.33	#VALUE!	0.07	#VALUE!
Cement and Mortar Mixers	15	0.0320	0.0021	0.0580	0.0039	0.0050	0.0003	0.0000	0.0000	0.0120	0.0008	0.0410	0.0027	0.0700	0.0047	0.0060	0.0004	0.0000	0.0000	0.0120	0.0008	0.0400	0.0027	0.0650	0.0043	0.0050	0.0003	0.0000	0.0000	0.0110	0.0007
	25	0.1160	0.0046	0.1800	0.0072	0.0130	0.0005	0.0000	0.0000	0.0000	0.0000	0.1150	0.0046	0.2040	0.0082	0.0130	0.0005	0.0000	0.0000	0.0000	0.0000	0.1140	0.0046	0.2030	0.0081	0.0130	0.0005	0.0000	0.0000	0.0000	0.0000
	Composite	0.0390	#VALUE!	0.0680	#VALUE!	0.0050	#VALUE!	0.0000	#VALUE!	0.0110	#VALUE!	0.0470	#VALUE!	0.0810	#VALUE!	0.0060	#VALUE!	0.0000	#VALUE!	0.0110	#VALUE!	0.0460	#VALUE!	0.0760	#VALUE!	0.0050	#VALUE!	0.0000	#VALUE!	0.0100	#VALUE!
Concrete/Industrial Saws	25	0.0000	0.0000	0.1430	0.0057	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1420	0.0057	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1410	0.0056	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	50	0.3540	0.0071	0.3370	0.0067	0.0440	0.0009	0.0800	0.0016	0.1770	0.0035	0.3430	0.0069	0.3260	0.0065	0.0440	0.0009	0.0770	0.0015	0.1760	0.0035	0.3580	0.0072	0.3230	0.0065	0.0440	0.0009	0.0770	0.0015	0.0870	0.0017
	120	0.5290	0.0044	1.0990	0.0092	0.1010	0.0008	0.1610	0.0013	0.1510	0.0013	0.5210	0.0043	1.0720	0.0089	0.1000	0.0008	0.1610	0.0013	0.1500	0.0013	0.5170	0.0043	1.0390	0.0087	0.0940	0.0008	0.1610	0.0013	0.1490	0.0012
	175	1.0290	0.0059	2.3530	0.0134	0.0000	0.0000	0.2940	0.0017	0.0000	0.0000	1.0140	0.0058	2.0290	0.0116	0.0000	0.0000	0.2820	0.0016	0.0000	0.0000	1.0070	0.0058	2.0140	0.0115	0.0000	0.0000	0.2820	0.0016	0.0000	0.0000
	Composite	0.4580	#VALUE!	0.8250	#VALUE!	0.0750	#VALUE!	0.1290	#VALUE!	0.1510	#VALUE!	0.4490	#VALUE!	0.7990	#VALUE!	0.0750	#VALUE!	0.1280	#VALUE!	0.1500	#VALUE!	0.4510	#VALUE!	0.7780	#VALUE!	0.0710	#VALUE!	0.1280	#VALUE!	0.1190	#VALUE!
Cranes	50	0.3130	0.0063	0.2520	0.0050	0.0340	0.0007	0.0550	0.0011	0.1360	0.0027	0.2980	0.0060	0.2470	0.0049	0.0300	0.0006	0.0530	0.0011	0.1010	0.0020	0.2820	0.0056	0.2380	0.0048	0.0300	0.0006	0.0530	0.0011	0.1010	0.0020
	120	0.3620	0.0030	0.6980	0.0058	0.0760	0.0006	0.1090	0.0009	0.1050	0.0009	0.3580	0.0030	0.6610	0.0055	0.0720	0.0006	0.1080	0.0009	0.0970	0.0008	0.3530	0.0029	0.6300	0.0053	0.0670	0.0006	0.1080	0.0009	0.0880	0.0007
	175	0.4560	0.0026	1.0240	0.0059	0.0650	0.0004	0.1670	0.0010	0.1080	0.0006	0.4550	0.0026	0.9680	0.0055	0.0610	0.0003	0.1670	0.0010	0.1000	0.0006	0.4540	0.0026	0.9040	0.0052	0.0570	0.0003	0.1670	0.0010	0.0900	0.0005
	250	0.2600	0.0010	1.3100	0.0052	0.0420	0.0002	0.2330	0.0009	0.0850	0.0003	0.2490	0.0010	1.2520	0.0050	0.0390	0.0002	0.2330	0.0009	0.0780	0.0003	0.2410	0.0010	1.1760	0.0047	0.0370	0.0001	0.2330	0.0009	0.0730	0.0003
	500	0.4050	0.0008	1.8800	0.0038	0.0620	0.0001	0.3260	0.0007	0.1170	0.0002	0.3820	0.0008	1.7520	0.0035	0.0580	0.0001	0.3260	0.0007	0.1070	0.0002	0.3690	0.0007	1.6050	0.0032	0.0550	0.0001	0.3260	0.0007	0.1020	0.0002
	750	0.6640	0.0009	3.2590	0.0043	0.1030	0.0001	0.5600	0.0007	0.1720	0.0002	0.6400	0.0009	3.0450	0.0041	0.1020	0.0001	0.5560	0.0007	0.1710	0.0002	0.6160	0.0008	2.8010	0.0037	0.0930	0.0001	0.5560	0.0007	0.1690	0.0002
	Composite	0.3680	#VALUE!	1.1570	#VALUE!	0.0590	#VALUE!	0.1960	#VALUE!	0.1020	#VALUE!	0.3600	#VALUE!	1.0950	#VALUE!	0.0560	#VALUE!	0.1960	#VALUE!	0.0940	#VALUE!	0.3550	#VALUE!	1.0230	#VALUE!	0.0520	#VALUE!	0.1960	#VALUE!	0.0860	#VALUE!
Crawler Tractors	50	0.3540	0.0071	0.2840	0.0057	0.0470	0.0009	0.0550	0.0011	0.1580	0.0032	0.3520	0.0070	0.2820	0.0056	0.0470	0.0009	0.0530	0.0011	0.1560	0.0031	0.3500	0.0070	0.2800	0.0056	0.0470	0.0009	0.0530	0.0011	0.1550	0.0031
	120	0.5010	0.0042	1.0430	0.0087	0.1030	0.0009	0.1420	0.0012	0.1530	0.0013	0.4960	0.0041	1.0120	0.0084	0.1010	0.0008	0.1420	0.0012	0.1470	0.0012	0.4940	0.0041	0.9900	0.0083	0.1000	0.0008	0.1420	0.0012	0.1430	0.0012
	175	0.7350	0.0042	1.7520	0.0100	0.1060	0.0006	0.2510	0.0014	0.1840	0.0011	0.7290	0.0042	1.6980	0.0097	0.1040	0.0006	0.2510	0.0014	0.1770	0.0010	0.7270	0.0042	1.6520	0.0094	0.1020	0.0006	0.2510	0.0014	0.1720	0.0010
	250	0.5990	0.0024	2.2560	0.0090	0.0950	0.0004	0.3450	0.0014	0.1790	0.0007	0.5620	0.0022	2.1830	0.0087	0.0900	0.0004	0.3450	0.0014	0.1680	0.0007	0.5360	0.0021	2.1210	0.0085	0.0860	0.0003	0.3450	0.0014	0.1610	0.0006
	500	1.5020	0.0030	3.2180	0.0064	0.1310	0.0003	0.4690	0.0009	0.2430	0.0005	1.3610	0.0027	3.0810	0.0062	0.1240	0.0002	0.4690	0.0009	0.2290	0.0005	1.2460	0.0025	2.9650	0.0059	0.1190	0.0002	0.4690	0.0009	0.2200	0.0004
	750	2.4700	0.0033	5.8190	0.0078	0.2290	0.0003	0.8600	0.0011	0.4330	0.0006	2.2540	0.0030	5.5990	0.0075	0.2210	0.0003	0.8570	0.0011	0.4290	0.0006	2.0720	0.0028	5.4100	0.0072	0.2120	0.0003	0.8570	0.0011	0.3640	0.0005
	9999	4.2530	0.0004	9.4580	0.0009	0.3340	0.0000	1.2190	0.0001	0.7430	0.0001	3.9330	0.0004	9.2800	0.0009	0.3250	0.0000	1.2150	0.0001	0.7350	0.0001	3.6660	0.0004	9.1000	0.0009	0.3090	0.0000	1.2150	0.0001	0.7270	0.0001
	Composite	0.6750	#VALUE!	1.6170	#VALUE!	0.1060	#VALUE!	0.2320	#VALUE!	0.1740	#VALUE!	0.6500	#VALUE!	1.5640	#VALUE!	0.1030	#VALUE!	0.2320	#VALUE!	0.1660	#VALUE!	0.6310	#VALUE!	1.5210	#VALUE!	0.1000	#VALUE!	0.2320	#VALUE!	0.1610	#VALUE!
Crushing/Proc. Equipment	50	0.6360	0.0127	0.5120	0.0102	0.0710	0.0014	0.1040	0.0021	0.2440	0.0049	0.6280	0.0126	0.5040	0.0101	0.0700	0.0014	0.1050	0.0021	0.2420	0.0048	0.6280	0.0126	0.5000	0.0100	0.0700	0.0014	0.1050	0.0021	0.2290	0.0046
	120	0.6340	0.0053	1.3220	0.0110	0.1310	0.0011	0.1800	0.0015	0.1940	0.0016	0.6290	0.0052	1.2830	0.0107	0.1280	0.0011	0.1790	0.0015	0.1880	0.0016	0.6260	0.0052	1.2550	0.0105	0.1270	0.0011	0.1790	0.0015	0.1830	0.0015
	175	1.0180	0.0058	2.4260	0.0139	0.1470	0.0008	0.3460	0.0020	0.2540	0.0015	1.0100	0.0058	2.3520	0.0134	0.1430	0.0008	0.3480	0.0020	0.2420	0.0014	1.0070	0.0058	2.2890	0.0131	0.1410	0.0008	0.3480	0.0020	0.2410	0.0014
	250	0.8880	0.0036	3.3350	0.0133	0.1380	0.0005	0.5130	0.0021	0.2960	0.0012	0.8330	0.0033	3.2340	0.0129	0.1270	0.0005	0.5150	0.0021	0.2940	0.0012	0.7880	0.0032	3.1230	0.0125	0.1260	0.0005	0.5150	0.0021	0.1950	0.0008
	500	2.1900	0.0044	4.6490	0.0093	0.1900	0.0004	0.6750	0.0014	0.3480	0.0007	1.9810	0.0040	4.4530	0.0089	0.1800	0.0004	0.6780	0.0014	0.3280	0.0007	1.8130	0.0036	4.2860	0.0086	0.1720	0.0003	0.6780	0.0014	0.3260	0.0007
	750	3.1480	0.0042	7.2220	0.0096	0.1850	0.0002	0.9260	0.0012	0.0000	0.0000	2.7520	0.0037	7.1560	0.0095	0.1830	0.0002	1.0530	0.0014	0.0000	0.0000	2.7270	0.0036	6.9090	0.0092	0.1820	0.0002	1.0530	0.0014	0.0000	0.0000
	9999	8.7040	0.0009	18.8890	0.0019	0.5560	0.0001	2.4070	0.0002	1.8520	0.0002	8.0730	0.0008	18.5320	0.0019	0.5500	0.0001	2.2810	0.0002	1.8350	0.0002	7.2730	0.0007	18.3640	0.0018	0.5450	0.0001	2.2810	0.0002	1.8180	0.0002
	Composite	0.9090	#VALUE!	1.8570	#VALUE!	0.1310	#VALUE!	0.2680	#VALUE!	0.2360	#VALUE!	0.8770	#VALUE!	1.7960	#VALUE!	0.1280	#VALUE!	0.2680	#VALUE!	0.2280	#VALUE!	0.8540	#VALUE!	1.7480	#VALUE!	0.1260	#VALUE!	0.2680	#VALUE!	0.2210	#VALUE!
Dumpers/Tenders	25	0.0450	0.0018	0.0780	0.0031	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0440	0.0018	0.0770	0.0031	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0440	0.0018	0.0770	0.0031	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	Composite	0.0450	#VALUE!	0.0780	#VALUE!	0.0000	#VALUE!	0.0000	#VALUE!	0.0000	#VALUE!	0.0440	#VALUE!	0.0770	#VALUE!	0.0000	#VALUE!	0.0000	#VALUE!	0.0000	#VALUE!	0.0440	#VALUE!	0.0770	#VALUE!	0.0000	#VALUE!	0.0000	#VALUE!	0.0000	#VALUE!
Excavators	25	0.0490	0.0020	0.1130	0.0045	0.0070	0.0003	0.0000	0.0000	0.0700	0.0028	0.0630	0.0025	0.1610	0.0064	0.0070	0.0003	0.0000	0.0000	0.0000	0.0000	0.0620	0.0025	0.1460	0.0058	0.0070	0.0003	0.0000	0.0000	0.0000	0.0000
	50	0.2660	0.0053	0.2540	0.0051	0.0310	0.0006	0.0600	0.0012	0.0940	0.0019	0.2540	0.0051	0.2460	0.0049	0.0300	0.0006	0.0590	0.0012	0.0850	0.0017	0.2430	0.0049	0.2410	0.0048	0.0280	0.0006	0.0590	0.0012	0.0760	0.0015
	120	0.4970	0.0041	0.9170	0.0076	0.0960	0.0008	0.1590	0.0013	0.1350	0.0011	0.4910	0.0041	0.8780	0.0073	0.0890	0.0007	0.1590	0.0013	0.1220	0.0010	0.4840	0.0040	0.8390	0.0070	0.0810	0.0007	0.1590	0.0013	0.1080	0.0009
	175	0.5960	0.0034	1.2910	0.0074	0.0760	0.0004	0.2330	0.0013	0.1280	0.0007	0.5970	0.0034	1.2210	0.0070	0.0700	0.0004	0.2330	0.0013	0.1150	0.0007	0.5970	0.0034	1.1250	0.0064	0.0640	0.0004	0.2330	0.0013	0.1020	0.0006
	250	0.3120	0.0012	1.6810	0.0067	0.0470	0.0002	0.3290	0.0013	0.0960	0.0004	0.3020	0.0012	1.6030	0.0064	0.0440	0.0002	0.3290	0.0013	0.0880	0.0004	0.2960	0.0012	1.4910	0.0060	0.0410	0.0002	0.3290	0.0013	0.0810	0.0003
	500	0.4460	0.0009	2.1680	0.0043	0.0630	0.0001	0.4230	0.0008	0.1170	0.0002	0.4320	0.0009	2.0010	0.0040	0.0590	0.0001	0.4230	0.0008	0.1080	0.0002	0.4230	0.0008	1.8020	0.0036	0.0560	0.0001	0.4230	0.0008	0.1000	0.0002
	750	0.7220	0.0010	3.7830	0.0050	0.0950	0.0001	0.7220	0.0010	0.1900	0.0003	0.7150	0.0010	3.5180	0.0047	0.0940	0.0001	0.7210	0.0010	0.1880	0.0003	0.7070	0.0009	3.1440	0.0042	0.0740	0.0001	0.7210	0.0010	0.1860	0.0002
	Composite	0.4810	#VALUE!	1.3020	#VALUE!	0.0700	#VALUE!	0.2430	#VALUE!	0.1200	#VALUE!	0.4760	#VALUE!	1.2300	#VALUE!	0.0650	#VALUE!	0.2430	#VALUE!	0.1090	#VALUE!	0.4720	#VALUE!	1.1380	#VALUE!	0.0600	#VALUE!	0.2430	#VALUE!	0.0970	#VALUE!
Forklifts	50	0.2710	0.0054	0.1820	0.0036	0.0290	0.0006	0.0000	0.0000	0.1090	0.0022	0.2620	0.0052	0.1780	0.0036	0.0280	0.0006	0.0000	0.0000	0.1030	0.0021	0.2520	0.0050	0.1730	0.0035	0.0270	0.0005	0.0000	0.0000	0.0960	0.0019
	120	0.2570	0.0021	0.5210	0.0043	0.0600	0.0005	0.0000	0.0000	0.0840	0.0007	0.2530	0.0021	0.4940	0.0041	0.0570	0.0005	0.0000	0.0000	0.0790	0.0007	0.2500	0.0021	0.4680	0.0039	0.0550	0.0005	0.0000	0.0000	0.0740	0.0006
	175	0.3620	0.0021	0.8630	0.0049	0.0590	0.0003	0.0010	0.0000	0.1000	0.0006	0.3600	0.0021	0.8150	0.0047	0.0570	0.0003	0.0010	0.0000	0.0950	0.0005	0.3580	0.0020	0.7660	0.0044	0.0540	0.0003	0.0010	0.0000	0.0890	0.0005
	250	0.2710	0.0011	1.1030	0.0044	0.0480	0.0002	0.0010	0.0000	0.0910	0.0004	0.2540	0.0010	1.0420	0.0042	0.0450	0.0002	0.0010	0.0000	0.0850	0.0003	0.2370	0.0009	0.9810	0.0039	0.0410	0.0002	0.0010	0.0000	0.0790	0.0003
	500	0.5100	0.0010	1.4150	0.0028	0.0620	0.0001	0.0010	0.0000	0.1130	0.0002	0.4610	0.0009	1.3270	0.0027	0.0580	0.0001	0.0010	0.0000	0.1060	0.0002	0.4120	0.0008	1.2390	0.0025	0.0550	0.0001	0.0010	0.0000	0.1000	0.0002
	Composite	0.2680	#VALUE!	0.5080	#VALUE!	0.0540	#VALUE!	0.0000	#VALUE!	0.0900	#VALUE!	0.2630	#VALUE!	0.4820	#VALUE!	0.0520	#VALUE!	0.0000	#VALUE!	0.0840	#VALUE!	0.2590	#VALUE!	0.4570	#VALUE!	0.0500	#VALUE!	0.0000	#VALUE!	0.0790	#VALUE!
Generator Sets	15	0.0370	0.0025	0.0670	0.0045	0.0080	0.0005	0.0000	0.0000	0.0170	0.0011	0.0350	0.0023	0.0630	0.0042	0.0070	0.0005	0.0000	0.0000	0.0160	0.0011	0.0330	0.0022	0.0580	0.0039	0.0070	0.0005	0.0000	0.0000	0.0150	0.0010
	25	0.0570	0.0023	0.1010	0.0040	0.0130	0.0005	0.0000	0.0000	0.0360	0.0014	0.0530	0.0021	0.0960	0.0038	0.0130	0.0005	0.0000	0.0000	0.0340	0.0014	0.0490	0.0020	0.0900	0.0036	0.0130	0.0005	0.0000	0.0000	0.0330	0.0013
	50	0.3130	0.0063	0.3300	0.0066	0.0370	0.0007	0.0000	0.0000	0.1160	0.0023	0.3090	0.0062	0.3260	0.0065	0.0360	0.0007	0.0000	0.0000	0.1120	0.0022	0.3060	0.0061	0.3220	0.0064	0.0360	0.0007	0.0000	0.0000	0.1080	0.0022
	120	0.5290	0.0044	1.1080	0.0092	0.0940	0.0008	0.0010	0.0000	0.1520	0.0013	0.5250	0.0044	1.0740	0.0090	0.0920	0.0008	0.0010	0.0000	0.1460	0.0012	0.5200	0.0043	1.0410	0.0087	0.0890	0.0007	0.0010	0.0000	0.1400	0.0012
	175	0.7660	0.0044	1.8420	0.0105	0.0960	0.0005	0.0020	0.0000	0.1780	0.0010	0.7620	0.0044	1.7800	0.0102	0.0930	0.0005	0.0020	0.0000	0.1710	0.0010	0.7580	0.0043	1.7190	0.0098	0.0910	0.0005	0.0020	0.0000	0.1640	0.0009
	250	0.6660	0.0027	2.5880	0.0104	0.0900	0.0004	0.0020	0.0000	0.1850	0.0007	0.6350	0.0025	2.4990	0.0100	0.0860	0.0003	0.0020	0.0000	0.1760	0.0007	0.6040	0.0024	2.4110	0.0096	0.0830	0.0003	0.0020	0.0000	0.1670	0.0007
	500	1.3330	0.0027	3.8530	0.0077	0.1340	0.0003	0.0030	0.0000	0.2650	0.0005	1.2470	0.0025	3.7030	0.0074	0.1290	0.0003	0.0030	0.0000	0.2520	0.0005	1.1630	0.0023	3.5550	0.0071	0.1230	0.0002	0.0030	0.0000	0.2380	0.0005
	750	2.1570	0.0029	6.3560	0.0085	0.2180	0.0003	0.0050	0.0000	0.4410	0.0006	2.0170	0.0027	6.1130	0.0082	0.2090	0.0003	0.0050	0.0000	0.4180	0.0005	1.8790	0.0025	5.8730	0.0078	0.2010	0.0003	0.0050	0.0000	0.3950	0.0005
	9999	5.1890	0.0005	14.0590	0.0014	0.4870	0.0000	0.0100	0.0000	1.1090	0.0001	4.8990	0.0005	13.7290	0.0014	0.4660	0.0000	0.0100	0.0000	1.0630	0.0001	4.6120	0.0005	13.4030	0.0013	0.4450	0.0000	0.0100	0.0000	1.0170	0.0001
	Composite	0.3380	#VALUE!	0.6990	#VALUE!	0.0510	#VALUE!	0.0010	#VALUE!	0.1010	#VALUE!	0.3300	#VALUE!	0.6780	#VALUE!	0.0500	#VALUE!	0.0010	#VALUE!	0.0980	#VALUE!	0.3220	#VALUE!	0.6560	#VALUE!	0.0480	#VALUE!	0.0010	#VALUE!	0.0940	#VALUE!
Graders	50	0.3390	0.0068	0.3010	0.0060	0.0250	0.0005	0.0750	0.0015	0.1260	0.0025	0.3240	0.0065	0.2870	0.0057	0.0250	0.0005	0.0730	0.0015	0.1250	0.0025	0.3090	0.0062	0.2850	0.0057	0.0250	0.0005	0.0730	0.0015	0.1240	0.0025
	120	0.5210	0.0043	1.0290	0.0086	0.1030	0.0009	0.1620	0.0014	0.1480	0.0012	0.5150	0.0043	0.9770	0.0081	0.0970	0.0008	0.1620	0.0014	0.1370	0.0011	0.5080	0.0042	0.9260	0.0077	0.0920	0.0008	0.1620	0.0014	0.1250	0.0010
	175	0.6760	0.0039	1.5620	0.0089	0.0920	0.0005	0.2570	0.0015	0.1590	0.0009	0.6730	0.0038	1.4760	0.0084	0.0870	0.0005	0.2570	0.0015	0.1470	0.0008	0.6720	0.0038	1.3770	0.0079	0.0820	0.0005	0.2570	0.0015	0.1340	0.0008
	250	0.4140	0.0017	1.9880	0.0080	0.0640	0.0003	0.3570	0.0014	0.1300	0.0005	0.3790	0.0015	1.8890	0.0076	0.0580	0.0002	0.3570	0.0014	0.1160	0.0005	0.3640	0.0015	1.7800	0.0071	0.0540	0.0002	0.3570	0.0014	0.1070	0.0004

	500	0.5650	0.0011	2.4260	0.0049	0.0780	0.0002	0.4140	0.0008	0.1570	0.0003	0.5020	0.0010	2.2500	0.0045	0.0720	0.0001	0.4180	0.0008	0.1250	0.0003	0.4730	0.0009	2.0730	0.0041	0.0680	0.0001	0.4180	0.0008	0.1240	0.0002
	750	0.9760	0.0013	5.3660	0.0072	0.0000	0.0000	0.7320	0.0010	0.0000	0.0000	0.9640	0.0013	5.0600	0.0067	0.0000	0.0000	0.9200	0.0012	0.0000	0.0000	0.9410	0.0013	4.2350	0.0056	0.0000	0.0000	0.9200	0.0012	0.0000	0.0000
	Composite	0.5670	#VALUE!	1.6230	#VALUE!	0.0840	#VALUE!	0.2760	#VALUE!	0.1480	#VALUE!	0.5530	#VALUE!	1.5370	#VALUE!	0.0790	#VALUE!	0.2760	#VALUE!	0.1350	#VALUE!	0.5460	#VALUE!	1.4420	#VALUE!	0.0740	#VALUE!	0.2760	#VALUE!	0.1240	#VALUE!
Off-Highway Tractors	120	0.6000	0.0050	1.4000	0.0117	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.5940	0.0050	1.3860	0.0116	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.5880	0.0049	1.3730	0.0114	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	175	0.7790	0.0045	1.8580	0.0106	0.1110	0.0006	0.2700	0.0015	0.1940	0.0011	0.7730	0.0044	1.8010	0.0103	0.1080	0.0006	0.2700	0.0015	0.1850	0.0011	0.7710	0.0044	1.7510	0.0100	0.1060	0.0006	0.2700	0.0015	0.1810	0.0010
	250	0.4610	0.0018	1.7450	0.0070	0.0720	0.0003	0.2700	0.0011	0.1370	0.0005	0.4330	0.0017	1.6890	0.0068	0.0680	0.0003	0.2700	0.0011	0.1280	0.0005	0.4130	0.0017	1.6400	0.0066	0.0650	0.0003	0.2700	0.0011	0.1220	0.0005
	750	2.8960	0.0039	7.0290	0.0094	0.2740	0.0004	1.0520	0.0014	0.5140	0.0007	2.6420	0.0035	6.7680	0.0090	0.2600	0.0003	1.0510	0.0014	0.4900	0.0007	2.4410	0.0033	6.5320	0.0087	0.2500	0.0003	1.0510	0.0014	0.4660	0.0006
	9999	5.0540	0.0005	11.5830	0.0012	0.4140	0.0000	1.5290	0.0002	0.8990	0.0001	4.6980	0.0005	11.3700	0.0011	0.3910	0.0000	1.5170	0.0002	0.8900	0.0001	4.3980	0.0004	11.1350	0.0011	0.3870	0.0000	1.5170	0.0002	0.8800	0.0001
	Composite	0.7440	#VALUE!	2.0760	#VALUE!	0.1010	#VALUE!	0.3100	#VALUE!	0.1840	#VALUE!	0.7160	#VALUE!	2.0110	#VALUE!	0.0970	#VALUE!	0.3100	#VALUE!	0.1760	#VALUE!	0.6950	#VALUE!	1.9530	#VALUE!	0.0950	#VALUE!	0.3100	#VALUE!	0.1690	#VALUE!
Off-Highway Trucks	175	0.7430	0.0042	1.7120	0.0098	0.1130	0.0006	0.2580	0.0015	0.1830	0.0010	0.7400	0.0042	1.6170	0.0092	0.1060	0.0006	0.2580	0.0015	0.1820	0.0010	0.7400	0.0042	1.5070	0.0086	0.1000	0.0006	0.2580	0.0015	0.1640	0.0009
	250	0.4430	0.0018	2.0870	0.0083	0.0740	0.0003	0.3450	0.0014	0.1470	0.0006	0.4040	0.0016	1.9810	0.0079	0.0670	0.0003	0.3450	0.0014	0.1320	0.0005	0.3870	0.0015	1.8670	0.0075	0.0630	0.0003	0.3450	0.0014	0.1220	0.0005
	500	0.7420	0.0015	3.0620	0.0061	0.1110	0.0002	0.4930	0.0010	0.2090	0.0004	0.6520	0.0013	2.8450	0.0057	0.1010	0.0002	0.4930	0.0010	0.1880	0.0004	0.6090	0.0012	2.6230	0.0052	0.0950	0.0002	0.4930	0.0010	0.1780	0.0004
	750	1.1720	0.0016	5.0690	0.0068	0.1790	0.0002	0.8190	0.0011	0.3410	0.0005	1.0380	0.0014	4.7350	0.0063	0.1640	0.0002	0.8190	0.0011	0.3060	0.0004	0.9760	0.0013	4.3780	0.0058	0.1550	0.0002	0.8190	0.0011	0.2950	0.0004
	9999	2.5800	0.0003	8.7090	0.0009	0.2650	0.0000	1.1570	0.0001	0.6590	0.0001	2.2980	0.0002	8.4020	0.0008	0.2470	0.0000	1.1570	0.0001	0.6020	0.0001	2.0490	0.0002	8.0060	0.0008	0.2280	0.0000	1.1570	0.0001	0.5620	0.0001
	Composite	0.7650	#VALUE!	3.1190	#VALUE!	0.1120	#VALUE!	0.4930	#VALUE!	0.2200	#VALUE!	0.6840	#VALUE!	2.9300	#VALUE!	0.1020	#VALUE!	0.4940	#VALUE!	0.1990	#VALUE!	0.6410	#VALUE!	2.7310	#VALUE!	0.0960	#VALUE!	0.4940	#VALUE!	0.1870	#VALUE!
Other Construction Equipment	15	0.0390	0.0026	0.0620	0.0041	0.0060	0.0004	0.0010	0.0001	0.0260	0.0017	0.0620	0.0041	0.0940	0.0063	0.0060	0.0004	0.0020	0.0001	0.0090	0.0006	0.0610	0.0041	0.0860	0.0057	0.0060	0.0004	0.0020	0.0001	0.0090	0.0006
	25	0.0470	0.0019	0.1050	0.0042	0.0100	0.0004	0.0000	0.0000	0.0520	0.0021	0.0620	0.0025	0.1300	0.0052	0.0100	0.0004	0.0000	0.0000	0.0000	0.0000	0.0570	0.0023	0.1290	0.0052	0.0100	0.0004	0.0000	0.0000	0.0000	0.0000
	50	0.3380	0.0068	0.3070	0.0061	0.0410	0.0008	0.0680	0.0014	0.1360	0.0027	0.3290	0.0066	0.3080	0.0062	0.0370	0.0007	0.0660	0.0013	0.1360	0.0027	0.3330	0.0067	0.3030	0.0061	0.0370	0.0007	0.0660	0.0013	0.1350	0.0027
	120	0.5780	0.0048	1.2060	0.0101	0.1110	0.0009	0.1750	0.0015	0.1650	0.0014	0.5720	0.0048	1.1690	0.0097	0.1060	0.0009	0.1750	0.0015	0.1630	0.0014	0.5680	0.0047	1.1420	0.0095	0.1050	0.0009	0.1750	0.0015	0.1620	0.0014
	175	0.6050	0.0035	1.4500	0.0083	0.0810	0.0005	0.2210	0.0013	0.1500	0.0009	0.6000	0.0034	1.4060	0.0080	0.0790	0.0005	0.2200	0.0013	0.1340	0.0008	0.5990	0.0034	1.3630	0.0078	0.0770	0.0004	0.2200	0.0013	0.1330	0.0008
	500	1.2030	0.0024	3.0110	0.0060	0.1120	0.0002	0.4590	0.0009	0.2120	0.0004	1.0980	0.0022	2.8800	0.0058	0.1050	0.0002	0.4600	0.0009	0.1980	0.0004	1.0150	0.0020	2.7680	0.0055	0.1020	0.0002	0.4600	0.0009	0.1900	0.0004
	Composite	0.6250	#VALUE!	1.4810	#VALUE!	0.0700	#VALUE!	0.2230	#VALUE!	0.1360	#VALUE!	0.5920	#VALUE!	1.4320	#VALUE!	0.0660	#VALUE!	0.2230	#VALUE!	0.1210	#VALUE!	0.5610	#VALUE!	1.3800	#VALUE!	0.0650	#VALUE!	0.2230	#VALUE!	0.1180	#VALUE!
Pavers	25	0.0920	0.0037	0.2140	0.0086	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1210	0.0048	0.2120	0.0085	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0910	0.0036	0.2110	0.0084	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	50	0.2870	0.0057	0.2860	0.0057	0.0340	0.0007	0.0660	0.0013	0.1020	0.0020	0.2720	0.0054	0.2770	0.0055	0.0320	0.0006	0.0670	0.0013	0.0910	0.0018	0.2600	0.0052	0.2690	0.0054	0.0300	0.0006	0.0670	0.0013	0.0800	0.0016
	120	0.4580	0.0038	0.8650	0.0072	0.0860	0.0007	0.1500	0.0013	0.1230	0.0010	0.4520	0.0038	0.8240	0.0069	0.0800	0.0007	0.1500	0.0013	0.1120	0.0009	0.4470	0.0037	0.7890	0.0066	0.0740	0.0006	0.1500	0.0013	0.1000	0.0008
	175	0.6670	0.0038	1.4720	0.0084	0.0830	0.0005	0.2660	0.0015	0.1430	0.0008	0.6680	0.0038	1.3960	0.0080	0.0780	0.0004	0.2660	0.0015	0.1310	0.0007	0.6680	0.0038	1.2980	0.0074	0.0710	0.0004	0.2660	0.0015	0.1170	0.0007
	250	0.3890	0.0016	2.0570	0.0082	0.0580	0.0002	0.4010	0.0016	0.1150	0.0005	0.3780	0.0015	1.9650	0.0079	0.0540	0.0002	0.4010	0.0016	0.1150	0.0005	0.3640	0.0015	1.8400	0.0074	0.0510	0.0002	0.4010	0.0016	0.1140	0.0005
	500	0.4570	0.0009	2.2080	0.0044	0.0650	0.0001	0.4240	0.0008	0.1120	0.0002	0.4430	0.0009	2.0500	0.0041	0.0610	0.0001	0.4250	0.0009	0.1110	0.0002	0.4290	0.0009	1.8640	0.0037	0.0550	0.0001	0.4250	0.0009	0.1110	0.0002
	Composite	0.4490	#VALUE!	0.8940	#VALUE!	0.0670	#VALUE!	0.1650	#VALUE!	0.1200	#VALUE!	0.4420	#VALUE!	0.8490	#VALUE!	0.0620	#VALUE!	0.1650	#VALUE!	0.1090	#VALUE!	0.4350	#VALUE!	0.8020	#VALUE!	0.0580	#VALUE!	0.1650	#VALUE!	0.0980	#VALUE!
Paving Equipment	25	0.0490	0.0020	0.0980	0.0039	0.0100	0.0004	0.0000	0.0000	0.0410	0.0016	0.0570	0.0023	0.1240	0.0050	0.0100	0.0004	0.0000	0.0000	0.0140	0.0006	0.0570	0.0023	0.1180	0.0047	0.0090	0.0004	0.0000	0.0000	0.0140	0.0006
	50	0.2910	0.0058	0.2650	0.0053	0.0340	0.0007	0.0540	0.0011	0.1120	0.0022	0.2860	0.0057	0.2630	0.0053	0.0320	0.0006	0.0600	0.0012	0.1110	0.0022	0.2840	0.0057	0.2610	0.0052	0.0330	0.0007	0.0600	0.0012	0.1100	0.0022
	120	0.3900	0.0033	0.8150	0.0068	0.0750	0.0006	0.1180	0.0010	0.1140	0.0010	0.3870	0.0032	0.7910	0.0066	0.0730	0.0006	0.1180	0.0010	0.1100	0.0009	0.3850	0.0032	0.7720	0.0064	0.0720	0.0006	0.1180	0.0010	0.1060	0.0009
	175	0.5770	0.0033	1.3790	0.0079	0.0770	0.0004	0.2100	0.0012	0.1380	0.0008	0.5720	0.0033	1.3360	0.0076	0.0750	0.0004	0.2100	0.0012	0.1320	0.0008	0.5700	0.0033	1.2980	0.0074	0.0740	0.0004	0.2100	0.0012	0.1280	0.0007
	250	0.4070	0.0016	1.5660	0.0063	0.0610	0.0002	0.2540	0.0010	0.1170	0.0005	0.3820	0.0015	1.5160	0.0061	0.0570	0.0002	0.2540	0.0010	0.1070	0.0004	0.3640	0.0015	1.4690	0.0059	0.0550	0.0002	0.2540	0.0010	0.1060	0.0004
	Composite	0.4190	#VALUE!	0.9610	#VALUE!	0.0690	#VALUE!	0.1440	#VALUE!	0.1170	#VALUE!	0.4140	#VALUE!	0.9340	#VALUE!	0.0670	#VALUE!	0.1440	#VALUE!	0.1100	#VALUE!	0.4110	#VALUE!	0.9090	#VALUE!	0.0660	#VALUE!	0.1440	#VALUE!	0.1070	#VALUE!
Plate Compactors	15	0.0180	0.0012	0.0290	0.0019	0.0020	0.0001	0.0000	0.0000	0.0090	0.0006	0.0260	0.0017	0.0410	0.0027	0.0020	0.0001	0.0000	0.0000	0.0090	0.0006	0.0260	0.0017	0.0390	0.0026	0.0020	0.0001	0.0000	0.0000	0.0090	0.0006
	Composite	0.0180	#VALUE!	0.0290	#VALUE!	0.0020	#VALUE!	0.0000	#VALUE!	0.0090	#VALUE!	0.0260	#VALUE!	0.0410	#VALUE!	0.0020	#VALUE!	0.0000	#VALUE!	0.0090	#VALUE!	0.0260	#VALUE!	0.0390	#VALUE!	0.0020	#VALUE!	0.0000	#VALUE!	0.0090	#VALUE!
Rollers	15	0.0250	0.0017	0.0390	0.0026	0.0040	0.0003	0.0010	0.0001	0.0160	0.0011	0.0390	0.0026	0.0590	0.0039	0.0040	0.0003	0.0010	0.0001	0.0080	0.0005	0.0380	0.0025	0.0540	0.0036	0.0040	0.0003	0.0010	0.0001	0.0080	0.0005
	25	0.0510	0.0020	0.1030	0.0041	0.0090	0.0004	0.0010	0.0000	0.0380	0.0015	0.0600	0.0024	0.1310	0.0052	0.0080	0.0003	0.0020	0.0001	0.0190	0.0008	0.0580	0.0023	0.1250	0.0050	0.0080	0.0003	0.0020	0.0001	0.0190	0.0008
	50	0.2590	0.0052	0.2640	0.0053	0.0310	0.0006	0.0620	0.0012	0.0900	0.0018	0.2460	0.0049	0.2550	0.0051	0.0290	0.0006	0.0620	0.0012	0.0810	0.0016	0.2350	0.0047	0.2480	0.0050	0.0270	0.0005	0.0620	0.0012	0.0710	0.0014
	120	0.3870	0.0032	0.7320	0.0061	0.0710	0.0006	0.1270	0.0011	0.1040	0.0009	0.3820	0.0032	0.6960	0.0058	0.0670	0.0006	0.1280	0.0011	0.0940	0.0008	0.3770	0.0031	0.6670	0.0056	0.0610	0.0005	0.1280	0.0011	0.0840	0.0007
	175	0.5580	0.0032	1.2310	0.0070	0.0690	0.0004	0.2240	0.0013	0.1190	0.0007	0.5580	0.0032	1.1670	0.0067	0.0640	0.0004	0.2240	0.0013	0.1070	0.0006	0.5580	0.0032	1.0850	0.0062	0.0590	0.0003	0.2240	0.0013	0.0950	0.0005
	250	0.3060	0.0012	1.6060	0.0064	0.0440	0.0002	0.3170	0.0013	0.0890	0.0004	0.2950	0.0012	1.5360	0.0061	0.0420	0.0002	0.3180	0.0013	0.0880	0.0004	0.2860	0.0011	1.4360	0.0057	0.0410	0.0002	0.3180	0.0013	0.0780	0.0003
	500	0.4280	0.0009	2.0610	0.0041	0.0610	0.0001	0.3970	0.0008	0.1130	0.0002	0.4120	0.0008	1.9140	0.0038	0.0550	0.0001	0.3960	0.0008	0.0980	0.0002	0.3990	0.0008	1.7410	0.0035	0.0510	0.0001	0.3960	0.0008	0.0830	0.0002
	Composite	0.3710	#VALUE!	0.7740	#VALUE!	0.0590	#VALUE!	0.1390	#VALUE!	0.0970	#VALUE!	0.3680	#VALUE!	0.7380	#VALUE!	0.0550	#VALUE!	0.1390	#VALUE!	0.0860	#VALUE!	0.3640	#VALUE!	0.6970	#VALUE!	0.0510	#VALUE!	0.1390	#VALUE!	0.0770	#VALUE!
Rough Terrain Forklifts	50	0.3930	0.0079	0.3560	0.0071	0.0460	0.0009	0.0810	0.0016	0.1430	0.0029	0.3720	0.0074	0.3440	0.0069	0.0410	0.0008	0.0810	0.0016	0.1280	0.0026	0.3550	0.0071	0.3360	0.0067	0.0410	0.0008	0.0810	0.0016	0.1130	0.0023
	120	0.4300	0.0036	0.8100	0.0068	0.0850	0.0007	0.1350	0.0011	0.1190	0.0010	0.4250	0.0035	0.7710	0.0064	0.0800	0.0007	0.1350	0.0011	0.1090	0.0009	0.4190	0.0035	0.7390	0.0062	0.0740	0.0006	0.1350	0.0011	0.0980	0.0008
	175	0.6750	0.0039	1.4870	0.0085	0.0890	0.0005	0.2590	0.0015	0.1510	0.0009	0.6750	0.0039	1.4110	0.0081	0.0830	0.0005	0.2590	0.0015	0.1360	0.0008	0.6760	0.0039	1.3120	0.0075	0.0770	0.0004	0.2590	0.0015	0.1240	0.0007
	250	0.3660	0.0015	1.8690	0.0075	0.0540	0.0002	0.3540	0.0014	0.1250	0.0005	0.3470	0.0014	1.7900	0.0072	0.0540	0.0002	0.3580	0.0014	0.0830	0.0003	0.3330	0.0013	1.6790	0.0067	0.0490	0.0002	0.3580	0.0014	0.0820	0.0003
	500	0.5210	0.0010	2.4960	0.0050	0.0770	0.0002	0.4630	0.0009	0.1290	0.0003	0.5050	0.0010	2.3190	0.0046	0.0700	0.0001	0.4600	0.0009	0.1280	0.0003	0.4950	0.0010	2.1000	0.0042	0.0630	0.0001	0.4600	0.0009	0.1270	0.0003
	Composite	0.4560	#VALUE!	0.8900	#VALUE!	0.0840	#VALUE!	0.1500	#VALUE!	0.1230	#VALUE!	0.4510	#VALUE!	0.8460	#VALUE!	0.0790	#VALUE!	0.1500	#VALUE!	0.1120	#VALUE!	0.4460	#VALUE!	0.8060	#VALUE!	0.0730	#VALUE!	0.1500	#VALUE!	0.1010	#VALUE!
Rubber Tired Dozers	175	0.6600	0.0038	1.3960	0.0080	0.0750	0.0004	0.2640	0.0015	0.1890	0.0011	0.6740	0.0039	1.3300	0.0076	0.0750	0.0004	0.2730	0.0016	0.1870	0.0011	0.6700	0.0038	1.1910	0.0068	0.0370	0.0002	0.2730	0.0016	0.1860	0.0011
	250	0.6560	0.0026	2.4750	0.0099	0.1030	0.0004	0.3800	0.0015	0.1930	0.0008	0.6160	0.0025	2.3950	0.0096	0.0980	0.0004	0.3800	0.0015	0.1840	0.0007	0.5870	0.0023	2.3260	0.0093	0.0930	0.0004	0.3800	0.0015	0.1750	0.0007
	500	1.5030	0.0030	3.2710	0.0065	0.1320	0.0003	0.4790	0.0010	0.2460	0.0005	1.3630	0.0027	3.1310	0.0063	0.1240	0.0002	0.4790	0.0010	0.2290	0.0005	1.2490	0.0025	3.0140	0.0060	0.1200	0.0002	0.4790	0.0010	0.2220	0.0004
	750	2.0790	0.0028	4.9570	0.0066	0.1910	0.0003	0.7380	0.0010	0.3420	0.0005	1.9010	0.0025	4.7750	0.0064	0.1830	0.0002	0.7390	0.0010	0.3380	0.0005	1.7460	0.0023	4.6100	0.0061	0.1810	0.0002	0.7390	0.0010	0.3350	0.0004
	9999	3.6450	0.0004	8.5710	0.0009	0.2960	0.0000	1.0840	0.0001	0.9850	0.0001	3.5120	0.0004	8.3900	0.0008	0.2930	0.0000	1.1160	0.0001	0.9760	0.0001	3.2850	0.0003	8.2130	0.0008	0.2900	0.0000	1.1160	0.0001	0.9660	0.0001
	Composite	1.2090	#VALUE!	3.0370	#VALUE!	0.1230	#VALUE!	0.4530	#VALUE!	0.2320	#VALUE!	1.1060	#VALUE!	2.9190	#VALUE!	0.1170	#VALUE!	0.4520	#VALUE!	0.2190	#VALUE!	1.0240	#VALUE!	2.8170	#VALUE!	0.1120	#VALUE!	0.4520	#VALUE!	0.2110	#VALUE!
Rubber Tired Loaders	25	0.0600	0.0024	0.1340	0.0054	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0890	0.0036	0.1630	0.0065	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0880	0.0035	0.1470	0.0059	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	50	0.3770	0.0075	0.3300	0.0066	0.0440	0.0009	0.0740	0.0015	0.1370	0.0027	0.3590	0.0072	0.3200	0.0064	0.0410	0.0008	0.0740	0.0015	0.1260	0.0025	0.3430	0.0069	0.3120	0.0062	0.0390	0.0008	0.0740	0.0015	0.1110	0.0022
	120	0.4120	0.0034	0.7750	0.0065	0.0830	0.0007	0.1270	0.0011	0.1160	0.0010	0.4070	0.0034	0.7380	0.0062	0.0780	0.0007	0.1270	0.0011	0.1060	0.0009	0.4020	0.0034	0.7070	0.0059	0.0720	0.0006	0.1270	0.0011	0.0960	0.0008
	175	0.5840	0.0033	1.2840	0.0073	0.0790	0.0005	0.2210	0.0013	0.1320	0.0008	0.5840	0.0033	1.2180	0.0070	0.0740	0.0004	0.2210	0.0013	0.1210	0.0007	0.5840	0.0033	1.1330	0.0065	0.0680	0.0004	0.2210	0.0013	0.1090	0.0006
	250	0.3190	0.0013	1.6580	0.0066	0.0500	0.0002	0.3090	0.0012	0.1010	0.0004	0.3080	0.0012	1.5840	0.0063	0.0470	0.0002	0.3090	0.0012	0.0940	0.0004	0.2970	0.0012	1.4810	0.0059	0.0440	0.0002	0.3090	0.0012	0.0860	0.0003
	500	0.4880	0.0010	2.3320	0.0047	0.0730	0.0001	0.4290	0.0009	0.1370	0.0003	0.4720	0.0009	2.1660	0.0043	0.0680	0.0001	0.4290	0.0009	0.1260	0.0003	0.4560	0.0009	1.9700	0.0039	0.0640	0.0001	0.4290	0.0009	0.1180	0.0002
	750	0.9890	0.0013	4.9650	0.0066	0.1500	0.0002	0.9040	0.0012	0.3000	0.0004	0.9580	0.0013	4.6340	0.0062	0.1430	0.0002	0.9050	0.0012	0.2470	0.0003	0.9290	0.0012	4.2340	0.0056	0.1370	0.0002	0.9050	0.0012	0.2440	0.0003
	9999	1.8620	0.0002	7.5420	0.0008	0.1910	0.0000	1.0980	0.0001	0.4770	0.0000	1.6510	0.0002	7.2170	0.0007	0.1890	0.0000	1.1310	0.0001	0.4720	0.0000	1.3990	0.0001	6.8070	0.0007	0.1860	0.0000	1.1310	0.0001	0.4660	0.0000
	Composite	0.4380	#VALUE!	1.2530	#VALUE!	0.0730	#VALUE!	0.2210	#VALUE!	0.1190	#VALUE!	0.4320	#VALUE!	1.1870	#VALUE!	0.0680	#VALUE!	0.2210	#VALUE!	0.1090	#VALUE!	0.4250	#VALUE!	1.1110	#VALUE!	0.0630	#VALUE!	0.2210	#VALUE!	0.0990	#VALUE!
Scrapers	120	0.6900	0.0058	1.4040	0.0117	0.1470	0.0012	0.2020	0.0017	0.2100	0.0018	0.6890	0.0057	1.3610	0.0113	0.1420	0.0012	0.2030	0.0017	0.2090	0.0017	0.6840	0.0057	1.3060	0.0109	0.1330	0.0011	0.2030	0.0017	0.1660	0.0014
	175	0.8570	0.0049	2.0530	0.0117	0.1260	0.0007	0.3070	0.0018	0.2190	0.0013	0.8540	0.0049	1.9800	0.0113	0.1220	0.0007	0.3070	0.0018	0.2080	0.0012	0.8500	0.0049	1.8670	0.0107	0.1170	0.0007	0.3070	0.0018	0.1930	0.0011
	250	0.6380	0.0026	2.6920	0.0108	0.1020	0.0004	0.4350	0.0017	0.2010	0.0008	0.5880	0.0024	2.5900	0.0104	0.0940	0.0004	0.4350	0.0017	0.1860	0.0007	0.5310	0.0021	2.4360	0.0097	0.0850	0.0003	0.4350	0.0017	0.1660	0.0007
	500	1.1660	0.0023	3.7680	0.0075	0.1420	0.0003	0.5820	0.0012	0.2700	0.0005	1.0270	0.0021	3.5700	0.0071	0.1320	0.0003	0.5820	0.0012	0.2480	0.0005	0.8890	0.0018	3.3010	0.0066	0.1190	0.0002	0.5820	0.0012	0.2230	0.0004
	750	1.9120	0.0025	6.5950	0.0088	0.2480	0.0003	1.0300	0.0014	0.4770	0.0006	1.6980	0.0023	6.2780	0.0084	0.2310	0.0003	1.0310	0.0014	0.4250	0.0006	1.4800	0.0020	5.8300	0.0078	0.2010	0.0003	1.0310	0.0014	0.3730	0.0005
	Composite	1.0010	#VALUE!	3.2030	#VALUE!	0.1330	#VALUE!	0.4960	#VALUE!	0.2490	#VALUE!	0.9090	#VALUE!	3.0510	#VALUE!	0.1240	#VALUE!	0.4960	#VALUE!	0.2300	#VALUE!	0.8160	#VALUE!	2.8390	#VALUE!	0.1140	#VALUE!	0.4960	#VALUE!	0.2070	#VALUE!
Signal Boards	15	0.0240	0.0016	0.0370	0.0025	0.0040	0.0003	0.0010	0.0001	0.0130	0.0009	0.0380	0.0025	0.0530	0.0035	0.0040	0.0003	0.0010	0.0001	0.0060	0.0004	0.0380	0.0025	0.0490	0.0033	0.0040	0.0003	0.0010	0.0001	0.0050	0.0003
	50	0.4150	0.0083	0.3900	0.0078	0.0490	0.0010	0.0730	0.0015	0.2440	0.0049	0.4120	0.0082	0.3870	0.0077	0.0480	0.0010	0.0940	0.0019	0.2420	0.0048	0.3850	0.0077	0.3850	0.0077	0.0480	0.0010	0.0940	0.0019	0.2400	0.0048

	120	0.5660	0.0047	1.1790	0.0098	0.1070	0.0009	0.1720	0.0014	0.1590	0.0013
	175	0.8650	0.0049	2.0760	0.0119	0.1140	0.0007	0.3190	0.0018	0.2100	0.0012
	250	0.6880	0.0028	2.6650	0.0107	0.0980	0.0004	0.4480	0.0018	0.2180	0.0009
	Composite	0.0860	#VALUE!	0.1830	#VALUE!	0.0130	#VALUE!	0.0240	#VALUE!	0.0300	#VALUE!
Skid Steer Loaders	25	0.0470	0.0019	0.1010	0.0040	0.0100	0.0004	0.0020	0.0001	0.0400	0.0016
	50	0.2160	0.0043	0.2410	0.0048	0.0260	0.0005	0.0610	0.0012	0.0710	0.0014
	120	0.2710	0.0023	0.4870	0.0041	0.0470	0.0004	0.0920	0.0008	0.0670	0.0006
	Composite	0.2220	#VALUE!	0.3100	#VALUE!	0.0320	#VALUE!	0.0670	#VALUE!	0.0680	#VALUE!
Surfacing Equipment	50	0.1590	0.0032	0.1430	0.0029	0.0160	0.0003	0.0320	0.0006	0.0000	0.0000
	120	0.5300	0.0044	0.9850	0.0082	0.0760	0.0006	0.1520	0.0013	0.0000	0.0000
	175	0.5050	0.0029	1.2120	0.0069	0.0000	0.0000	0.2020	0.0012	0.0000	0.0000
	250	0.4520	0.0018	1.7090	0.0068	0.0500	0.0002	0.3020	0.0012	0.0000	0.0000
	500	1.0140	0.0020	2.6020	0.0052	0.1010	0.0002	0.4030	0.0008	0.1890	0.0004
	750	1.4560	0.0019	4.1750	0.0056	0.1460	0.0002	0.6310	0.0008	0.0000	0.0000
	Composite	0.7780	#VALUE!	1.9880	#VALUE!	0.0770	#VALUE!	0.3120	#VALUE!	0.1050	#VALUE!
Tractors/Loaders/Backhoes	25	0.0790	0.0032	0.1380	0.0055	0.0130	0.0005	0.0000	0.0000	0.0500	0.0020
	50	0.4760	0.0095	0.3600	0.0072	0.0520	0.0010	0.0720	0.0014	0.1850	0.0037
	120	0.4080	0.0034	0.8490	0.0071	0.0870	0.0007	0.1120	0.0009	0.1270	0.0011
	175	0.6380	0.0036	1.5170	0.0087	0.0960	0.0005	0.2100	0.0012	0.1630	0.0009
	250	0.6480	0.0026	2.4410	0.0098	0.1000	0.0004	0.3490	0.0014	0.2490	0.0010
	Composite	0.4240	#VALUE!	0.8580	#VALUE!	0.0860	#VALUE!	0.1150	#VALUE!	0.1320	#VALUE!
Trenchers	15	0.0360	0.0024	0.0510	0.0034	0.0040	0.0003	0.0000	0.0000	0.0400	0.0027
	25	0.1100	0.0044	0.2420	0.0097	0.0260	0.0010	0.0000	0.0000	0.0760	0.0030
	50	0.2960	0.0059	0.3220	0.0064	0.0360	0.0007	0.0780	0.0016	0.1010	0.0020
	120	0.4160	0.0035	0.7710	0.0064	0.0740	0.0006	0.1400	0.0012	0.1090	0.0009
	175	0.7260	0.0041	1.5770	0.0090	0.0850	0.0005	0.2980	0.0017	0.1520	0.0009
	250	0.4060	0.0016	2.2430	0.0090	0.0550	0.0002	0.4610	0.0018	0.1560	0.0006
	500	0.5650	0.0011	2.7830	0.0056	0.0730	0.0001	0.5650	0.0011	0.1220	0.0002
	750	0.8450	0.0011	5.9150	0.0079	0.0000	0.0000	0.8450	0.0011	0.0000	0.0000
	Composite	0.3810	#VALUE!	0.6520	#VALUE!	0.0590	#VALUE!	0.1270	#VALUE!	0.1080	#VALUE!
Welders	15	0.0430	0.0029	0.0790	0.0053	0.0070	0.0005	0.0000	0.0000	0.0160	0.0011
	25	0.0730	0.0029	0.1120	0.0045	0.0110	0.0004	0.0000	0.0000	0.0350	0.0014
	50	0.3210	0.0064	0.2910	0.0058	0.0370	0.0007	0.0000	0.0000	0.1230	0.0025
	120	0.2850	0.0024	0.5960	0.0050	0.0550	0.0005	0.0000	0.0000	0.0860	0.0007
	175	0.5710	0.0033	1.3490	0.0077	0.0630	0.0004	0.0010	0.0000	0.1430	0.0008
	Composite	0.2360	#VALUE!	0.3330	#VALUE!	0.0350	#VALUE!	0.0000	#VALUE!	0.0840	#VALUE!

	120	0.5590	0.0047	1.1420	0.0095	0.1030	0.0009	0.1730	0.0014	0.1580	0.0013
	175	0.8610	0.0049	2.0090	0.0115	0.1090	0.0006	0.3220	0.0018	0.2080	0.0012
	250	0.6400	0.0026	2.5600	0.0102	0.0980	0.0004	0.4440	0.0018	0.2170	0.0009
	Composite	0.0970	#VALUE!	0.1930	#VALUE!	0.0130	#VALUE!	0.0240	#VALUE!	0.0230	#VALUE!
Skid Steer Loaders	25	0.0600	0.0024	0.1330	0.0053	0.0090	0.0004	0.0020	0.0001	0.0150	0.0006
	50	0.2040	0.0041	0.2340	0.0047	0.0240	0.0005	0.0610	0.0012	0.0590	0.0012
	120	0.2660	0.0022	0.4600	0.0038	0.0410	0.0003	0.0920	0.0008	0.0570	0.0005
	Composite	0.2130	#VALUE!	0.2990	#VALUE!	0.0290	#VALUE!	0.0670	#VALUE!	0.0550	#VALUE!
Surfacing Equipment	50	0.1580	0.0032	0.1420	0.0028	0.0160	0.0003	0.0310	0.0006	0.0000	0.0000
	120	0.5240	0.0044	0.8990	0.0075	0.0000	0.0000	0.1460	0.0012	0.0000	0.0000
	175	0.5000	0.0029	1.1000	0.0063	0.0000	0.0000	0.1950	0.0011	0.0000	0.0000
	250	0.4500	0.0018	1.6500	0.0066	0.0500	0.0002	0.2920	0.0012	0.0000	0.0000
	500	0.9250	0.0019	2.4950	0.0050	0.0940	0.0002	0.4010	0.0008	0.1880	0.0004
	750	1.3430	0.0018	3.9330	0.0052	0.1440	0.0002	0.5960	0.0008	0.0000	0.0000
	Composite	0.7200	#VALUE!	1.8990	#VALUE!	0.0700	#VALUE!	0.3070	#VALUE!	0.1040	#VALUE!
Tractors/Loaders/Backhoes	25	0.0850	0.0034	0.1640	0.0066	0.0120	0.0005	0.0000	0.0000	0.0330	0.0013
	50	0.4710	0.0094	0.3550	0.0071	0.0520	0.0010	0.0720	0.0014	0.1810	0.0036
	120	0.4040	0.0034	0.8240	0.0069	0.0860	0.0007	0.1120	0.0009	0.1230	0.0010
	175	0.6330	0.0036	1.4710	0.0084	0.0940	0.0005	0.2100	0.0012	0.1570	0.0009
	250	0.6180	0.0025	2.3240	0.0093	0.0990	0.0004	0.3610	0.0014	0.2470	0.0010
	Composite	0.4210	#VALUE!	0.8340	#VALUE!	0.0840	#VALUE!	0.1150	#VALUE!	0.1280	#VALUE!
Trenchers	15	0.0510	0.0034	0.0750	0.0050	0.0040	0.0003	0.0000	0.0000	0.0000	0.0000
	25	0.1430	0.0057	0.3190	0.0128	0.0230	0.0009	0.0000	0.0000	0.0380	0.0015
	50	0.2820	0.0056	0.3120	0.0062	0.0340	0.0007	0.0790	0.0016	0.0890	0.0018
	120	0.4100	0.0034	0.7370	0.0061	0.0680	0.0006	0.1400	0.0012	0.0970	0.0008
	175	0.7260	0.0041	1.4910	0.0085	0.0780	0.0004	0.2990	0.0017	0.1300	0.0007
	250	0.4030	0.0016	2.1490	0.0086	0.0540	0.0002	0.4600	0.0018	0.0780	0.0003
	500	0.5490	0.0011	2.5700	0.0051	0.0720	0.0001	0.5640	0.0011	0.1210	0.0002
	750	0.8450	0.0011	5.0700	0.0068	0.0000	0.0000	1.0810	0.0014	0.0000	0.0000
	Composite	0.3730	#VALUE!	0.6250	#VALUE!	0.0540	#VALUE!	0.1270	#VALUE!	0.0940	#VALUE!
Welders	15	0.0410	0.0027	0.0770	0.0051	0.0070	0.0005	0.0000	0.0000	0.0150	0.0010
	25	0.0710	0.0028	0.1100	0.0044	0.0110	0.0004	0.0000	0.0000	0.0350	0.0014
	50	0.3190	0.0064	0.2880	0.0058	0.0360	0.0007	0.0000	0.0000	0.1200	0.0024
	120	0.2830	0.0024	0.5790	0.0048	0.0540	0.0005	0.0000	0.0000	0.0830	0.0007
	175	0.5720	0.0033	1.3070	0.0075	0.0630	0.0004	0.0010	0.0000	0.1390	0.0008
	Composite	0.2340	#VALUE!	0.3260	#VALUE!	0.0340	#VALUE!	0.0000	#VALUE!	0.0810	#VALUE!

	120	0.5570	0.0046	1.1170	0.0093	0.1010	0.0008	0.1730	0.0014	0.1570	0.0013
	175	0.8570	0.0049	1.9490	0.0111	0.1080	0.0006	0.3220	0.0018	0.1840	0.0011
	250	0.6250	0.0025	2.5010	0.0100	0.0970	0.0004	0.4440	0.0018	0.2160	0.0009
	Composite	0.0970	#VALUE!	0.1850	#VALUE!	0.0130	#VALUE!	0.0240	#VALUE!	0.0210	#VALUE!
Skid Steer Loaders	25	0.0580	0.0023	0.1270	0.0051	0.0080	0.0003	0.0020	0.0001	0.0140	0.0006
	50	0.1910	0.0038	0.2280	0.0046	0.0220	0.0004	0.0610	0.0012	0.0480	0.0010
	120	0.2600	0.0022	0.4330	0.0036	0.0350	0.0003	0.0920	0.0008	0.0460	0.0004
	Composite	0.2040	#VALUE!	0.2870	#VALUE!	0.0250	#VALUE!	0.0670	#VALUE!	0.0450	#VALUE!
Surfacing Equipment	50	0.1570	0.0031	0.1410	0.0028	0.0160	0.0003	0.0310	0.0006	0.0000	0.0000
	120	0.5200	0.0043	0.8920	0.0074	0.0000	0.0000	0.1460	0.0012	0.0000	0.0000
	175	0.4950	0.0028	1.0890	0.0062	0.0000	0.0000	0.1950	0.0011	0.0000	0.0000
	250	0.3980	0.0016	1.5920	0.0064	0.0500	0.0002	0.2920	0.0012	0.0000	0.0000
	500	0.8510	0.0017	2.3910	0.0048	0.0810	0.0002	0.4010	0.0008	0.1860	0.0004
	750	1.2800	0.0017	3.7910	0.0051	0.1420	0.0002	0.5960	0.0008	0.0000	0.0000
	Composite	0.6700	#VALUE!	1.8270	#VALUE!	0.0620	#VALUE!	0.3070	#VALUE!	0.1040	#VALUE!
Tractors/Loaders/Backhoes	25	0.0750	0.0030	0.1560	0.0062	0.0120	0.0005	0.0000	0.0000	0.0170	0.0007
	50	0.4720	0.0094	0.3530	0.0071	0.0520	0.0010	0.0720	0.0014	0.1790	0.0036
	120	0.4030	0.0034	0.8070	0.0067	0.0850	0.0007	0.1120	0.0009	0.1200	0.0010
	175	0.6320	0.0036	1.4330	0.0082	0.0930	0.0005	0.2100	0.0012	0.1540	0.0009
	250	0.5650	0.0023	2.2850	0.0091	0.0980	0.0004	0.3610	0.0014	0.2460	0.0010
	Composite	0.4190	#VALUE!	0.8160	#VALUE!	0.0830	#VALUE!	0.1150	#VALUE!	0.1250	#VALUE!
Trenchers	15	0.0510	0.0034	0.0620	0.0041	0.0040	0.0003	0.0000	0.0000	0.0000	0.0000
	25	0.1380	0.0055	0.2990	0.0120	0.0220	0.0009	0.0000	0.0000	0.0370	0.0015
	50	0.2690	0.0054	0.3060	0.0061	0.0320	0.0006	0.0790	0.0016	0.0790	0.0016
	120	0.4050	0.0034	0.7050	0.0059	0.0620	0.0005	0.1400	0.0012	0.0850	0.0007
	175	0.7270	0.0042	1.3740	0.0079	0.0710	0.0004	0.2990	0.0017	0.1160	0.0007
	250	0.3930	0.0016	1.9880	0.0080	0.0540	0.0002	0.4600	0.0018	0.0770	0.0003
	500	0.5390	0.0011	2.3190	0.0046	0.0660	0.0001	0.5640	0.0011	0.1200	0.0002
	750	0.8330	0.0011	4.7220	0.0063	0.0000	0.0000	1.0810	0.0014	0.0000	0.0000
	Composite	0.3650	#VALUE!	0.5960	#VALUE!	0.0500	#VALUE!	0.1270	#VALUE!	0.0830	#VALUE!
Welders	15	0.0400	0.0027	0.0740	0.0049	0.0070	0.0005	0.0000	0.0000	0.0150	0.0010
	25	0.0680	0.0027	0.1070	0.0043	0.0110	0.0004	0.0000	0.0000	0.0350	0.0014
	50	0.3160	0.0063	0.2850	0.0057	0.0360	0.0007	0.0000	0.0000	0.1170	0.0023
	120	0.2820	0.0024	0.5620	0.0047	0.0530	0.0004	0.0000	0.0000	0.0800	0.0007
	175	0.5720	0.0033	1.2660	0.0072	0.0630	0.0004	0.0010	0.0000	0.1350	0.0008
	Composite	0.2320	#VALUE!	0.3180	#VALUE!	0.0340	#VALUE!	0.0000	#VALUE!	0.0790	#VALUE!

			Base Factors g/bhp, if Tier 1 >50 hp (1)						Appendix A Table A3 Adjustment (2)							Adjustment (3)	Adjusted Factors, g/bhp, if Tier 1>50 hp					
Equipment	HP Cat.	Tier	BSFC lb/hp-hr	NOx	CO	POC	SOx	PM10	Adj. Type	NOx	CO	POC	SOx	PM10		PM10 Fuel S	BSFC	NOx	CO	POC	SOx	PM10
Crawler Crane- Greater than 300 ton	175-300	1	0.367	5.5772	0.7475	0.3085	0.00499	0.2521	None	1	1	1	1	1		-0.086	0.367	5.58	0.75	0.31	0.0049	0.17
Crawler Crane- Greater than 200 ton	175-300	1	0.367	5.5772	0.7475	0.3085	0.00499	0.2521	None	1	1	1	1	1		-0.086	0.367	5.58	0.75	0.31	0.0049	0.17
Crane - Mobile 65 ton	175-300	1	0.367	5.5772	0.7475	0.3085	0.00499	0.2521	None	1	1	1	1	1		-0.086	0.367	5.58	0.75	0.31	0.0049	0.17
Cranes -Mobile 45 ton	100-175	1	0.367	5.6523	0.8667	0.3384	0.00499	0.2799	None	1	1	1	1	1		-0.086	0.367	5.65	0.87	0.34	0.0049	0.19
Cranes - Mobile 35 ton	100-175	1	0.367	5.6523	0.8667	0.3384	0.00499	0.2799	None	1	1	1	1	1		-0.086	0.367	5.65	0.87	0.34	0.0049	0.19
Bulldozer D6H	100-175	1	0.367	5.6523	0.8667	0.3384	0.00499	0.2799	HI LF	0.95	1.53	1.05	1.01	1.23		-0.087	0.371	5.37	1.33	0.36	0.0049	0.26
Bulldozer D4C	50-100	1	0.408	5.5988	2.3655	0.5213	0.00555	0.473	HI LF	0.95	1.53	1.05	1.01	1.23		-0.096	0.412	5.32	3.62	0.55	0.0055	0.49
Excavator- Trencher	50-100	1	0.408	5.5988	2.3655	0.5213	0.00555	0.473	HI LF	0.95	1.53	1.05	1.01	1.23		-0.096	0.412	5.32	3.62	0.55	0.0055	0.49
Excavator- Earth Scraper	175-300	1	0.367	5.5772	0.7475	0.3085	0.00499	0.2521	HI LF	0.95	1.53	1.05	1.01	1.23		-0.087	0.371	5.30	1.14	0.32	0.0049	0.22
Excavator-Motor Grader	100-175	1	0.367	5.6523	0.8667	0.3384	0.00499	0.2799	HI LF	0.95	1.53	1.05	1.01	1.23		-0.087	0.371	5.37	1.33	0.36	0.0049	0.26
Excavator- Backhoe/loader	50-100	1	0.408	5.5988	2.3655	0.5213	0.00555	0.473	Lo LF	1.1	2.57	2.29	1.18	1.97		-0.113	0.481	6.16	6.08	1.19	0.0064	0.82
Excavator - loader	50-100	1	0.408	5.5988	2.3655	0.5213	0.00555	0.473	HI LF	0.95	1.53	1.05	1.01	1.23		-0.096	0.412	5.32	3.62	0.55	0.0055	0.49
Vibratory Roller	100-175	1	0.367	5.6523	0.8667	0.3384	0.00499	0.2799	HI LF	0.95	1.53	1.05	1.01	1.23		-0.087	0.371	5.37	1.33	0.36	0.0049	0.26
Portable Compaction roller	175-300	1	0.367	5.5772	0.7475	0.3085	0.00499	0.2521	HI LF	0.95	1.53	1.05	1.01	1.23		-0.087	0.371	5.30	1.14	0.32	0.0049	0.22
Truck- Water	Onroad	na	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad		Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad
Forklift	50-100	1	0.408	5.5988	2.3655	0.5213	0.00555	0.473	HI LF	0.95	1.53	1.05	1.01	1.23		-0.096	0.412	5.32	3.62	0.55	0.0055	0.49
Dump Truck	Onroad	na	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad		Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad
Service Truck- 1 ton	Onroad	na	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad		Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad
Truck- Fuel/Lube	Onroad	na	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad		Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad
Concrete Pumper Truck	Onroad	na	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad		Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad
Tractor Truck 5th Wheel	Onroad	na	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad		Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad
Trucks- Pickup 3/4 ton	Onroad	na	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad		Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad
Trucks- 3 ton	Onroad	na	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad		Onroad	Onroad	Onroad	Onroad	Onroad	Onroad	Onroad
Diesel Powered Welder	25-50	0	0.408	6.9	5	1.8	0.00555	0.8	Lo LF	1.1	2.57	2.29	1.18	1.97		-0.094	0.40	7.59	12.85	4.12	0.0052	1.48
Light Plants	25-50	0	0.408	6.9	5	1.8	0.00555	0.8	None	1	1	1	1	1		-0.094	0.40	6.90	5.00	1.80	0.0053	0.71
Portable Compaction- Vibratory Plate	25-50	0	0.408	6.9	5	1.8	0.00555	0.8	None	1	1	1	1	1		-0.095	0.408	6.90	5.00	1.80	0.0054	0.70
Portable Compaction- Vibratory Ram	25-50	0	0.408	6.9	5	1.8	0.00555	0.8	None	1	1	1	1	1		-0.095	0.408	6.90	5.00	1.80	0.0054	0.70
Articulating Boom Platforms	25-50	0	0.408	6.9	5	1.8	0.00555	0.8	Lo LF	1.1	2.57	2.29	1.18	1.97		-0.113	0.481	7.59	12.85	4.12	0.0063	1.46
Pumps	Gasoline	na	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline		Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline
Air Compressor 185 CFM	25-50	0	0.408	6.9	5	1.8	0.00555	0.8	None	1	1	1	1	1		-0.094	0.40	6.90	5.00	1.80	0.0053	0.71
Air Compressor 750 CFM	25-50	0	0.408	6.9	5	1.8	0.00555	0.8	None	1	1	1	1	1		-0.094	0.40	6.90	5.00	1.80	0.0053	0.71
Concrete Vibrators	25-50	0	0.408	6.9	5	1.8	0.00555	0.8	HI LF	0.95	1.53	1.05	1.01	1.23		-0.096	0.412	6.56	7.65	1.89	0.0054	0.89
Concrete Trowel Machine	25-50	0	0.408	6.9	5	1.8	0.00555	0.8	HI LF	0.95	1.53	1.05	1.01	1.23		-0.096	0.412	6.56	7.65	1.89	0.0054	0.89
Fusion Welder	25-50	0	0.408	6.9	5	1.8	0.00555	0.8	Lo LF	1.1	2.57	2.29	1.18	1.97		-0.113	0.481	7.59	12.85	4.12	0.0063	1.46
Portable Power Generators	25-50	0	0.408	6.9	5	1.8	0.00555	0.8	None	1	1	1	1	1		-0.095	0.408	6.90	5.00	1.80	0.0054	0.70

		Adjusted factors lbs/gallon (4)					Total Fuel Use (Gals/day)	Daily Emissions Lbs/day					Total Fuel Use (Gals/yr)	Annual Emissions Lbs/yr					
Equipment	Tier	NOx	CO	POC	SOx	PM10		NOx	CO	POC	SOx	PM10		NOx	CO	POC	SOx	PM10
Crawler Crane- Greater than 300 ton	1	237.87	31.88	13.16	0.21	7.09	0	0.00	0.00	0.00	0.00	0.00	1227	291.86	39.12	16.14	0.25	8.70
Crawler Crane- Greater than 200 ton	1	237.87	31.88	13.16	0.21	7.09	0	0.00	0.00	0.00	0.00	0.00	4182	994.76	133.33	55.02	0.87	29.65

Cran[illegible]bile 65 ton	1	237.87	31.88	13.16	0.21	7.09	0	0.00	0.00	0.00	0.00	0.00	2909	691.96	92.74	38.28	0.60	20.63
Cranes - Mobile 45 ton	1	241.07	36.96	14.43	0.21	8.28	0	0.00	0.00	0.00	0.00	0.00	1600	385.71	59.14	23.09	0.33	13.24
Cranes - Mobile 35 ton	1	241.07	36.96	14.43	0.21	8.28	0	0.00	0.00	0.00	0.00	0.00	3055	736.47	112.93	44.09	0.63	25.28
Bulldozer D6H	1	226.75	56.00	15.00	0.21	10.88	44	9.98	2.46	0.66	0.01	0.48	1200	272.10	67.20	18.01	0.25	13.05
Bulldozer D4C	1	202.03	137.47	20.79	0.21	18.44	24	4.85	3.30	0.50	0.00	0.44	873	176.37	120.01	18.15	0.18	16.10
Excavator- Trencher	1	202.03	137.47	20.79	0.21	18.44	0	0.00	0.00	0.00	0.00	0.00	873	176.37	120.01	18.15	0.18	16.10
Excavator- Earth Scraper	1	223.74	48.29	13.68	0.21	9.43	216	48.33	10.43	2.95	0.04	2.04	1964	439.42	94.85	26.86	0.41	18.53
Excavator-Motor Grader	1	226.75	56.00	15.00	0.21	10.88	40	9.07	2.24	0.60	0.01	0.44	2545	577.08	142.51	38.19	0.53	27.68
Excavator- Backhoe/loader	1	200.23	197.65	38.81	0.21	26.63	0	0.00	0.00	0.00	0.00	0.00	2909	582.47	574.97	112.90	0.60	77.48
Excavator - loader	1	202.03	137.47	20.79	0.21	18.44	20	4.04	2.75	0.42	0.00	0.37	727	146.88	99.94	15.12	0.15	13.40
Vibratory Roller	1	226.75	56.00	15.00	0.21	10.88	80	18.14	4.48	1.20	0.02	0.87	5818	1319.23	325.79	87.30	1.21	63.28
Portable Compaction roller	1	223.74	48.29	13.68	0.21	9.43	0	0.00	0.00	0.00	0.00	0.00	5818	1301.70	280.98	79.58	1.21	54.88
Truck- Water	na	170.68	106.79	15.33	0.21	9.59	25.04	4.27	2.67	0.38	0.01	0.24	3642	621.62	388.92	55.82	0.76	34.94
Forklift	1	202.03	137.47	20.79	0.21	18.44	10	2.02	1.37	0.21	0.00	0.18	2000	404.07	274.95	41.58	0.42	36.87
Dump Truck	na	170.68	106.79	15.33	0.21	9.59	50.08	8.55	5.35	0.77	0.01	0.48	1366	233.15	145.87	20.94	0.29	13.10
Service Truck- 1 ton	na	74.40	59.47	5.57	0.21	4.83	0	0.00	0.00	0.00	0.00	0.00	1021	75.97	60.71	5.68	0.21	4.93
Truck- Fuel/Lube	na	170.68	106.79	15.33	0.21	9.59	6.26	1.07	0.67	0.10	0.00	0.06	967	165.05	103.26	14.82	0.20	9.28
Concrete Pumper Truck	na	170.68	106.79	15.33	0.21	9.59	0	0.00	0.00	0.00	0.00	0.00	683	116.58	72.94	10.47	0.14	6.55
Tractor Truck 5th Wheel	na	170.68	106.79	15.33	0.21	9.59	0	0.00	0.00	0.00	0.00	0.00	4097	699.28	437.50	62.79	0.86	39.30
Trucks- Pickup 3/4 ton	na	62.81	677.30	46.28	0.27	1.56	12.48	0.78	8.45	0.58	0.00	0.02	4652	292.19	3150.80	215.29	1.26	7.26
Trucks- 3 ton	na	74.40	59.47	5.57	0.21	4.83	12.48	0.93	0.74	0.07	0.00	0.06	4538	337.65	269.85	25.26	0.95	21.93
Diesel Powered Welder	0	297.01	502.84	161.30	0.20	58.01	0	0.00	0.00	0.00	0.00	0.00	924	274.43	464.62	149.04	0.19	53.60
Light Plants	0	270.01	195.66	70.44	0.21	27.64	0	0.00	0.00	0.00	0.00	0.00	3140	847.82	614.36	221.17	0.65	86.80
Porta[illegible]mpaction- Vibratory Plate	0	264.71	191.82	69.06	0.21	27.03	0	0.00	0.00	0.00	0.00	0.00	473	125.21	90.73	32.66	0.10	12.78
Portab[illegible]ompaction- Vibratory Ram	0	264.71	191.82	69.06	0.21	27.03	0	0.00	0.00	0.00	0.00	0.00	400	105.88	76.73	27.62	0.08	10.81
Articulating Boom Platforms	0	246.77	417.78	134.01	0.20	47.58	0	0.00	0.00	0.00	0.00	0.00	1036	255.65	432.82	138.84	0.21	49.29
Pumps	na	79.44	13813.38	748.58	0.27	2.35	2.032	0.16	28.07	1.52	0.00	0.00	222	17.63	3066.57	166.19	0.06	0.52
Air Compressor 185 CFM	0	270.01	195.66	70.44	0.21	27.64	10.16	2.74	1.99	0.72	0.00	0.28	1940	523.81	379.57	136.65	0.40	53.63
Air Compressor 750 CFM	0	270.01	195.66	70.44	0.21	27.64	0	0.00	0.00	0.00	0.00	0.00	2806	757.64	549.01	197.64	0.58	77.57
Concrete Vibrators	0	248.99	290.58	71.79	0.21	33.71	0	0.00	0.00	0.00	0.00	0.00	855	212.88	248.45	61.38	0.18	28.83
Concrete Trowel Machine	0	248.99	290.58	71.79	0.21	33.71	0	0.00	0.00	0.00	0.00	0.00	120	29.88	34.87	8.61	0.02	4.05
Fusion Welder	0	246.77	417.78	134.01	0.20	47.58	0	0.00	0.00	0.00	0.00	0.00	581	143.37	242.73	77.86	0.12	27.64
Portable Power Generators	0	264.71	191.82	69.06	0.21	27.03	0	0.00	0.00	0.00	0.00	0.00	277	73.33	53.13	19.13	0.06	7.49
							552.5						71440					

	Totals	114.93	74.98	10.67	0.12	5.96		14405.50	13421.92	2280.33	15.15	985.16
							Tons/yr	7.20	6.71	1.14	0.01	0.49
Applicant Estimate		135.69	64.92	10.07	0.12	6.71		8.06	5.81	1.01	0.01	0.47
Difference		-20.76	10.06	0.60	0.00	-0.75		-0.86	0.90	0.13	0.00	0.02
Percentile		-15.3%	15.5%	5.9%	-3.4%	-11.1%		-10.6%	15.5%	12.9%	-24.2%	4.8%

(rounding issue)

(rounding issue)

(1) - Steady State Emission Factors from Table A2 of EPA November 2002 NR-009b Publication.

(2) - In use adjustment factors per Table A3 EPA November 2002 NR-009b Publication.

(3) - PM10 and SO2 adjustments due to Equation 5 and Equation 7 on pages 18 and 19, Respectively of EPA Report No. NR-009b

(4) - C[illegible]ation uses adjusted BSFC and assumed 7.1 lbs/gallon. The onroad and gasoline powered pump emission factors are not adjusted, except for SO2 adjusted for pumps per the gasoline powered 3/4 ton pickup value.

APPENDIX 8.1F

Evaluation of Best Available Control Technology

To evaluate BACT for the proposed turbine, the guidelines for large simple cycle gas turbines (> 50 MW) as delineated in the District, state, and federal BACT listings were reviewed. The relevant BACT determinations for this analysis are shown in the following tables.

TABLE 8.1F-1
SCAQMD BACT Data for Simple Cycle Gas Turbines

Pollutant	BACT	Typical Technology
Nitrogen Oxides	5 ppm dry @ 15% O_2 , 1 or 3 hr avg	1. SCR + DLN, or, 2. SCR + water or steam injection
Sulfur Dioxide	Natural gas fuel	PUC regulated gas
Carbon Monoxide	6 ppm dry @ 15% O_2, 1 or 3 hr avg	Catalytic oxidation
VOC	2 ppm dry @ 15% O_2	Catalytic oxidation
PM_{10}	Natural gas fuel	PUC regulated gas

Achieved in practice, from website August 2005

TABLE 8.1F-2
SCAQMD Recent BACT Decisions for Simple Cycle Gas Turbines (achieved in practice)

Facility	NO_x	CO	VOC	PM_{10}/SO_x
Colton	3.5*	6	2	Natural gas
Indigo	5	6	2	Natural gas
LADWP-Valley	5	6	2	Natural gas

Ammonia slip BACT is 5 ppmv for all listings. SCR for NOx all listings. CO catalyst for CO and VOC all listings.
* Dated 2-17-04, applicant proposed 3.5 ppm NOx, while AQMD states 5 ppm NOx is BACT/LAER
From SCAQMD website, August 2005.

TABLE 8.1F-3
Summary of BACT Recommendations from ARB-CEC BACT Guidance (SImple Cycle)*

NO_X	CO	VOC	SO_X	PM_{10}
5 ppm dry @15% O_2, 3 hr avg 5 ppm NH3 slip @ 15% O_2	6 ppm dry @15% O_2 3 hr avg	2 ppm dry @ 15% O_2 3 hr avg	Natural Gas Fuel Fuel S< 1gr/100 scf	Natural Gas Fuel

* CARB, July 1999.

TABLE 8.1F-4
Recent Facility BACT Determinations for Large Simple Cycle Gas Turbines

Facility/Location	NO_X	CO	VOC	PM_{10}/SO_X
GWF Tracy	5 ppm	6 ppm	2 ppm	Natural gas
Enpower Corp. CPA Peaker Analysis*	5-8 ppm	6-10 ppm	2-3 ppm	Natural gas
Henrietta Peakers	3.6 ppm	6 ppm	2 ppm	Natural gas
Los Esteros	5 ppm	6 ppm	2 ppm	Natural gas
Calpeak-Enterprise	5 ppm	6 ppm	2 ppm	Natural gas
Calpeak-Border	5 ppm	6 ppm	2 ppm	Natural gas
RAMCO	5 ppm	6 ppm	2 ppm	Natural gas

* Not a public domain document.

The USEPA RACT-BACT-LAER Clearinghouse (RBLC) was also consulted to review recent USEPA BACT decisions for simple cycle gas-fired gas turbines. These recent BACT decisions are summarized in Table 8.1F-5.

TABLE 8.1F-5
Simple Cycle Turbine RBLC BACT Determinations (Natural Gas)

RBLC ID	Unit Size, mmbtu/hr	NOx ppm	CO ppm	VOC ppm
CA0997	1611	2	4	1.4
VA0263	1624	10.5	9	
VA0266	1624	9	9	
VA0262	866	9	51	2.6
VA0261	2132		2	1.7
IA0060		3	5	
SC0064	1751	2.5	14	

TABLE 8.1F-5
Simple Cycle Turbine RBLC BACT Determinations (Natural Gas)

RBLC ID	Unit Size, mmbtu/hr	NOx ppm	CO ppm	VOC ppm
OK0072	1832	3.5	17.2	
VA0250	1887	2.5		
FL0232	1591	25	10	
IN0095	469	25	25	
MI0327	1679	15		
CA0593	412	5	6	2
MI0296	855	9	25	
IN0096	1146	9	25	
FL0227	1803	9	7.4	1.4
FL0229	1910	9	9	1.4
MI0321	849	9	25	
CA0951	464	5	6	2
SC0058	3296	3.5	11.7	3.5
AR0042	6077	3.5	7	
NM0043	1500	9	9	7
Average	-	**8.5**	**13.9**	**2.55**
Range	**412 - 6077**	**2 -25**	**2 - 51**	**1.4 - 7**

BA recent compilation of BACT determinations is presented in AWMA Paper #42752 (June 2002), "Comparison of the Most Recent BACT Determinations for Combustion Turbines by State Air Pollution Control Agencies". Data presented in this paper was derived from surveys conducted nationwide. Simple cycle BACT data is summarized as follows:

NO_x	5-12 ppm
CO	9-25 ppm
VOC	No Data
PM_{10}	Nat gas fuel
SO_2	Nat gas fuel

Based on the above data, it would seem that the most appropriate and current range for BACT for simple cycle combustion turbines (achieved in practice) is as follows:

NO_x	5 ppm	(DLN, DLN+SCR, SCR + water/steam injection)
CO	6 ppm	(good combustion practices (GCP), GCP + CO catalyst)
VOC	2 ppm	(good combustion practices (GCP), GCP + CO catalyst)
PM_{10}	Nat gas fuel	(clean fuel)
SO_x	Nat gas fuel	(clean fuel)

Cooling Tower BACT

BACT for the cooling tower is the use of high efficiency drift eliminators at a rating or 0.0005%.

Diesel Fired IC Engine BACT

BACT levels for the diesel fired fire pump engine are as follows:

TABLE 8.1F-6
Summary of BACT Recommendations from SCAQMDGuidance for Diesel Fired Fire Pump Engines

	NOx, g/bhp	CO, g/bhp	VOC, g/bhp	SOx, %S wt.	PM10, g/bhp
Fire Pump Engines	3.9 – 6.9	0.45 – 8.5	0.09 – 1.0	<=0.05	0.14 – 0.38

The proposed diesel engine will also comply with the EPA Tier II and/or Tier III standards as applicable based upon engine size and year of manufacture.

The proposed diesel engine will comply with the CARB proposed Air Toxic Control Measure (ACTM) for Stationary Compression Ignition Engines (upon adoption by the South Coast AQMD). Since the fire pump engine is classified as emergency standby, with a rating greater than 50 hp, and operational hours less than 100 hours per year, the performance standard to be met will be 0.1g/hp-hr using CARB certified diesel fuel. Add-on controls would not be required, and a HRA would also not be required. In addition the engine will comply with AQMD Rule 1470 and the Tier standards as delineated in Title 13 CCR Section 2423, based upon engine size and year of manufacture.

Table 8.1F-7 SCR Design Data

Table 8.1F-8 CO Catalyst Design Data

Table 8.1F-7 SCR Design Data

SCR CATALYST SYSTEM SPECIFICATIONS FOR GE AERO ENERGY PRODUCTS

Please Specify	Description	Units
Lead Time Required	< 4 months / must confirm manufacturing availability	
Guaranteed Life	Earliest of 20,000 hours from first gas-in or 51 months from Contracted Delivery	op. hours
Expected Life @ 800 °F	> 20,000 hours	op. hours
Catalyst Module Dimensions	133.5"W x 81.5"H x 24"D	feet
Total Catalyst Dimensions	22.25'W x 34'H x 2.5'D	feet
Module Weight and Total Weight	4,600 / 46,000 total	pounds
Catalyst Volume	Approx. 27 m3	ft^3
Space Velocity	23,580	1/hr *
Max. Operating Temperature	870°F - Continuous 930°F – limited to 500hrs total or 1020°F limited to 4 hrs total.	°F
Pressure Drop (guar/exp)	4.8/4.3	in H_2O
Percent Open Area to Flow	> 78	%
Catalyst Pitch	2.1	mm
Geometric Surface Area	> 1670	m^2/m^3
BET Surface Area	Proprietary	m^2/g
Cell Density and Geometry	70 cell product (approx 144cpsi)	cpsi
SO_2 to SO_3 Conversion	< 2.5%	%
Major Contaminants and Maximum Contaminant Levels	See Catalyst Degradation Chart	

GHSV in ft^3/hr gas @ STP / ft^3 catalyst

ENGELHARD

Engelhard Corporation
101 Wood Avenue, P.O. Box 770
Iselin, NJ 08830-0770
732-205-5000

Engelhard Corporation
2205 Chequers Court
Bel Air, MD 21015
410-569-0297
e-mail: fred_booth@engelhard.com

Table 8.1F-8 CO Catalyst Design Data

DATE: August 11, 2005 **NO. PAGES** 1

TO: EXPRESS INTEGRATED TECHNOLOGIES via e-mail
ATTN: Phil Childers

FROM: Fred Booth Ph 410-569-0297 // FAX 410-569-1841

RE: EIT C05-115
GE – LMS100 // SoCalEd Project
CO Catalyst – Engelhard Proposal EPB00262-Rev. 1a - Data Sheet

Design and Construction Details	CO
Catalyst material	Pt on ALUMINA
Catalyst manufactured by	ENGELHARD
Number of catalyst layers	1
Total number of modules	LATER
Catalyst Module length x width x height (ft)	Nom. 2 ft x 2 ft x 2.5 in.
Include room for a spare layer	YES
Catalyst module cells per sq in.	140
Catalyst space volume (ratio of gas volume (ft3/hr) and catalyst volume in service (ft3))	Nom. 120,000 Max.
a) Catalyst conversion efficiency %	See Proposal –
b) Catalyst efficiency after 10000 hours of operation	See Proposal –
Catalyst washing requirements	DE-ION WATER
The maximum temp. catalyst can withstand 0F	1250
Minimum operating catalyst temperature 0F	500
Over temperature protection for catalyst	
Differential pressure protection	
Exhaust gas face velocity through catalyst housing, fps	Nom. 24
Ammonia Injection Grid (AIG)	N/A
Number of headers	N/A
Branches per header	N/A
AIG pipes total	N/A
Ammonia Flow Control Skid	N/A
Number of blowers / fans provided	N/A
Atomizing air requirements (CFM)	N/A
How is the ammonia injection skid controls interfaced with plant controls?	N/A
Catalyst support frame / structure	
Number of test elements provided for each layer of catalyst	8
List of catalyst poisons and operating conditions that may reduce the life of catalyst.	SEE WARRANTY
Catalyst life, (operating hours)	20,000
Pressure drop, (In of WC)	1.9"wg Max.
Lifting equipment and tools	N / R
At design operating conditions, estimated ammonia consumption, lb/hr	N/A
Will the catalyst supplier accept spent catalyst for disposal?	YES
Type of gaskets used	Zetex Rope

APPENDIX 8.1G

Offset Listing

Table 8.1G-1 (on the following page) presents the most recent listing of ERC's currently held in the SCAQMD bank as of August, 2005.

The WCEP Project will purchase or acquire sufficient emission reduction credits and RECLAIM trading credits to offset the proposed project emissions in the amounts delineated in Table 8.1G-2.

TABLE 8.1G-2
SCAQMD Emission Bank Credits Required By WCEP*
Emission Reduction Credits (lbs/yr)

	PM_{10}	VOC	NO_X RTCs	SO_2 RTCs	CO
Total Emission Credits Required to Mitigate WCEP Project Emissions	126960	53040	149600	10760	299040

* Values derived from App 8.1A, Table 8.1A-2a, with 1.2:1 adjustment factor for ERCs.

The WCEP Project currently holds ERCs and/or RTCs in the following amounts.

TABLE 8.1G-3
SCAQMD Emission Bank Credits Held By WCEP as of AFC Submittal Date.
Emission Reduction Credits (lbs/yr)

	PM_{10}	VOC	NO_X RTCs	SO_2 RTCs	CO
Total Emission Credits Held/Owned by WCEP at time of AFC/AQMD Application Submittal	-	-	-	-	-

Specific ERC and/or RTC certificates will provided to the South Coast AQMD under a separate submittal.

Table 8.1G-1 **LIST OF ACTIVE SCAQMD ERCs - AUGUST 2005**

FAC ID	ERC NBR	COMPANY NAME	ADDRESS	CITY	ZIP	EMIT	AMOUNT	ORIGIN	AMZ	COASTAL/INLAND	ISSUED
3487	AQ000004	CHEVRON U.S.A. INC, DAMERON FEE	BEACH/MEMPHIS	HUNTINGTON BEACH	90631	ROG	4	B	18	Coastal	12/17/1990
20872	AQ000006	CBS INC	7800 BEVERLY BLVD	LOS ANGELES	90036	SOX	8	B	1	Coastal	12/17/1990
22602	AQ000015	EXXON CO U.S.A., PROD. FAC TUA 1 & 2	AVALON & WATER ST	WILMINGTON	90744	CO	1	B	4	Coastal	12/17/1990
76386	AQ000016	BOSTIK INC	500 W 17TH ST	LONG BEACH	90813	1514 PM10	1	B	4	Coastal	12/17/1990
2185	AQ000022	BLUE DAISY CEMENT PROD. INC	306 & 314 E COMPTON BLVD	GARDENA	90247	PM10	1	B	12	Coastal	12/17/1990
77468	AQ000023	ACTION CRANE MAINTENANCE	13477 YORBA AVE	CHINO	91710	5055 ROG	1	B	33	Inland	12/17/1990
7183	AQ000025	CLASSIC METAL FINISHING INC	11927 RIVERA RD	SANTA FE SPRINGS	90670	2209 ROG	2	B	5	Coastal	12/17/1990
41016	AQ000026	SEL-REX, DIV OMI INTL CORP	20801 NORDHOFF ST	CHATSWORTH	91311	NOX	1	B	6	Coastal	12/17/1990
9305	AQ000033	FORTIFIBER CORP	4489 BANDINI BLVD	LOS ANGELES	90023	4777 NOX	3	B	1	Coastal	12/17/1990
11433	AQ000034	LITTLEJOHN-REULAND CORP	4575 PACIFIC BLVD	VERNON	90058	2271 ROG	2	B	1	Coastal	12/17/1990
45597	AQ000035	PACIFIC TANK LTD	1015 E ELM AVE	FULLERTON	92631	5021 PM10	3	B	16	Coastal	12/17/1990
9301	AQ000036	CHEVRON U.S.A. INC	2040 CENTURY PARK EAST	WEST LOS ANGELES	90212	ROG	23	B	2	Coastal	12/17/1990
5779	AQ000038	US GOVT, MARINE CORPS, CAMP PENDLETON	USMCB CAMP PENDLETON	SAN CLEMENTE	92672	SOX	2	B	21	Coastal	12/17/1990
58876	AQ000044	VESPER CORP	4411 KATELLA AVE	LOS ALAMITOS	90720	3599 ROG	5	B	17	Coastal	12/17/1990
5143	AQ000045	SOUTH BAY PETR CO	5899 W IMPERIAL HWY	LOS ANGELES	90009	ROG	1	B	3	Coastal	12/17/1990
14966	AQ000046	U S GOV'T, V A MEDICAL CENTER, WEST L A	11301 WILSHIRE BLVD	LOS ANGELES	90073	ROG	2	B	1	Coastal	12/17/1990
14966	AQ000047	U S GOV'T, V A MEDICAL CENTER, WEST L A	11301 WILSHIRE BLVD	LOS ANGELES	90073	NOX	40	B	1	Coastal	12/17/1990
14966	AQ000049	U S GOV'T, V A MEDICAL CENTER, WEST L A	11301 WILSHIRE BLVD	LOS ANGELES	90073	PM10	6	B	1	Coastal	12/17/1990
50242	AQ000051	REMET CORP	16511 KNOTT AVE	LA MIRADA	90638	6011 ROG	1	B	5	Coastal	12/17/1990
5595	AQ000055	MAGIC CHEF, DIV MAGIC CHEF INC	245 N VINELAND AVE	CITY OF INDUSTRY	91746	2319 NOX	2	B	11	Inland	12/17/1990
50629	AQ000058	BOC GASES	1290 E SEPULVEDA BLVD	CARSON	90745	CO	2	B	4	Coastal	12/17/1990
11920	AQ000063	US GOVT, GEN SERV ADM	312 N SPRING ST	LOS ANGELES	90012	4701 NOX	3	B	1	Coastal	12/17/1990
10348	AQ000064	TRIANGLE BRASS MFG CO	3520-38 EMERY ST	LOS ANGELES	90023	ROG	5	B	1	Coastal	12/17/1990
21906	AQ000065	AJAX CEMENT CO INC	4850 E LA PALMA AVE	ANAHEIM	92807	PM10	1	B	16	Coastal	12/17/1990
29549	AQ000066	FOUR MEDIA LABORATORY	3611 SAN FERNANDO RD	BURBANK	91505	1043 ROG	1	B	1	Coastal	12/17/1990
4882	AQ000069	KLP A GENLYTE CO	13100 MARLAY AVE	FONTANA	92335	6995 ROG	5	B	34	Inland	12/17/1990
4882	AQ000070	KLP A GENLYTE CO	13100 MARLAY AVE	FONTANA	92335	6995 NOX	2	B	34	Inland	12/17/1990
16618	AQ000071	LNP/ICI ADVANCED MATERIALS	1831 E CARNEGIE	SANTA ANA	92705	5502 PM10	2	B	17	Coastal	12/17/1990
59033	AQ000072	WEST COAST METAL CRAFTS	3980 CHERRY AVE	LONG BEACH	90807	3727 ROG	3	B	4	Coastal	12/17/1990
4327	AQ000073	AUDIO MAGNETICS CORP	2606 MICHELSON DR	IRVINE	92664	ROG	2	B	20	Coastal	12/17/1990
15446	AQ000074	HOFFMAN BROS PACKING CO INC	2731 S SOTO ST	VERNON	90023	4270 NOX	5	B	1	Coastal	12/17/1990
36254	AQ000076	CHEVRON U.S.A. INC, PLACERITA 26	PLACERITA CYN SEC 6 RD	LOS ANGELES COUNTY		PM10	1	B	13	Coastal	12/17/1990
47448	AQ000081	ELECTRO-RACK PROD. INC	1443 S SUNKIST ST	ANAHEIM	92806	5626 ROG	2	B	17	Coastal	12/17/1990
53366	AQ000084	ENVIRONMENTAL METALS CORP	2950 E LA JOLLA	ANAHEIM	92806	1307 NOX	1	B	16	Coastal	12/17/1990
14369	AQ000085	GEBE ELECTRONICS SERV INC	4112 W JEFFERSON BLVD	LOS ANGELES	90016	4190 ROG	5	B	1	Coastal	12/17/1990
61546	AQ000086	K T INDUSTRIES INC	3203 FLETCHER DR	LOS ANGELES	90065	2919 ROG	1	B	1	Coastal	12/17/1990
64362	AQ000087	BREA CANON OIL CO INC	17001 E CARBON CANYON RD	BREA	92621	6903 ROG	1	B	16	Coastal	12/17/1990
51849	AQ000088	ELIMINATOR CUSTOM BOATS	10795 SAN SEVAINE WAY	MIRA LOMA	91752	1146 ROG	4	B	23	Inland	12/17/1990
22940	AQ000089	EASTERN MUN WATER DIST	SOUTH MURRIETA RD	SUN CITY	92585	ROG	1	B	24	Inland	12/17/1990
22940	AQ000090	EASTERN MUN WATER DIST	SOUTH MURRIETA RD	SUN CITY	92585	NOX	1	B	24	Inland	12/17/1990
22940	AQ000091	EASTERN MUN WATER DIST	SOUTH MURRIETA RD	SUN CITY	92585	CO	1	B	24	Inland	12/17/1990
35194	AQ000092	MONTCLAIR BRONZE INC	5621 STATE ST	MONTCLAIR	91763	PM10	3	B	33	Inland	12/17/1990
9126	AQ000094	ENGINEERED FIBERGLASS INC	3122 S RIVERSIDE AVE	RIALTO	92376	ROG	1	B	34	Inland	12/17/1990
12062	AQ000114	W. L. CHAPMAN CO INC	950 S TURNBULL CYN RD	CITY OF INDUSTRY	91745	1404 SOX	6	B	10	Inland	1/26/1991
5960	AQ000154	H. KRASNE MFG CO INC	3171 E 12TH ST	LOS ANGELES	90023	PM10	2	B	1	Coastal	5/22/1991
18508	AQ000162	AIR PROD & CHEM INC	3305 E 26TH ST	LOS ANGELES	90023	4501 PM10	2	B	1	Coastal	5/22/1991
4909	AQ000169	VIRCO MFG CORP	15134 S VERMONT	LOS ANGELES	90044	ROG	4	B	3	Coastal	5/22/1991
10766	AQ000175	ALCO PACIFIC INC	16908-32 S BROADWAY	CARSON	90248	NOX	3	B	3	Coastal	5/22/1991
10766	AQ000176	ALCO PACIFIC INC	16908-32 S BROADWAY	CARSON	90248	SOX	3	B	3	Coastal	5/22/1991
81347	AQ000180	YONEKYU INTERNATIONAL CORP	3615 E VERNON AVE	LOS ANGELES	90058	1815 CO	1	B	1	Coastal	5/22/1991
395	AQ000182	FIBERITE, INC.	645-691 N CYPRESS	ORANGE		92666 PM10	1	B	17	Coastal	5/22/1991
25133	AQ000189	MOBIL OIL CORP	2305 S RIVERSIDE AVE	BLOOMINGTON	92316	2931 ROG	6	B	34	Inland	5/22/1991
8325	AQ000194	SEATING PRODUCTS INDUSTRIES	8765 S AVALON	LOS ANGELES	90003	3544 ROG	2	B	12	Coastal	5/22/1991
58370	AQ000196	J & L CUSTOM PLASTIC EXTRUSIONS INC	1532 SANTA ANITA AVE	SOUTH EL MONTE	91733	3314 ROG	3	B	11	Inland	5/22/1991
22004	AQ000197	ORGAN-O-SIL FIBER CO INC	17616 GOTHARD ST UNIT B	HUNTINGTON BEACH	92648	PM10	2	B	18	Coastal	5/22/1991

83691 AQ000198	HARTMAN INDUSTRIES INC	2424 PORTER ST	LOS ANGELES	90021 2598 ROG	1 B	1	Coastal	5/22/1991
51779 AQ000202	MULTI-FINELINE ELECTRONIX INC	1301-31 N DYNAMICS ST	ANAHEIM	92806 1901 PM10	2 B	17	Coastal	5/22/1991
78364 AQ000213	PACIFIC ENERGY RESOURCES	1065 W PIER E ST	LONG BEACH	90802 ROG	1 B	4	Coastal	5/22/1991
3057 AQ000215	THOROCK METALS COMPANY INC	431 E WEBER AVE	COMPTON	90222 1424 PM10	5 B	12	Coastal	5/28/1991
18773 AQ000218	SPECTRA-TONE PAINT CORP	9635-43 KLINGERMAN ST	SOUTH EL MONTE	91733 PM10	2 B	11	Inland	6/3/1991
5875 AQ000219	MONIER LIFETILE	3511 N RIVERSIDE AVE	RIALTO	92376 1599 CO	1 B	34	Inland	6/3/1991
5875 AQ000220	MONIER LIFETILE	3511 N RIVERSIDE AVE	RIALTO	92376 1599 PM10	8 B	34	Inland	6/3/1991
47169 AQ000226	LUSTRO CORP OF CA	25525 STANFORD AVE	VALENCIA	91355 ROG	2 B	13	Coastal	6/3/1991
12213 AQ000228	SIZE CONTROL PLATING CO INC	13349 E TEMPLE AVE	LA PUENTE	91746 1580 PM10	2 B	10	Inland	6/3/1991
25577 AQ000244	LEA MFG CO, CALIFORNIA DIV, AKA LEA-CAL	4420 DISTRICT BLVD	VERNON	90058 3188 PM10	1 B	5	Coastal	6/3/1991
10955 AQ000267	DANCO METAL SURFACING, ANOMIL ENT., INC.	36-44 LA PORTE ST	ARCADIA	91006 PM10	1 B	9	Inland	6/4/1991
3887 AQ000268	JAN-KENS ENAMELING CO INC	715 E CYPRESS AVE	MONROVIA	91016 4254 ROG	2 B	9	Inland	6/4/1991
8582 AQ000272	SO CAL GAS CO/PLAYA DEL REY STORAGE FACI	8141 GULANA AVE	PLAYA DEL REY	90293 7930 ROG	2 B	3	Coastal	6/4/1991
5818 AQ000284	AMERICAN BROADCASTING CO	4151 PROSPECT AVE	LOS ANGELES	90027 4524 ROG	2 B	1	Coastal	6/4/1991
24647 AQ000301	J. B. I. INC	18521- 18601S SANTA FE AVE	COMPTON	90221 5624 PM10	4 B	4	Coastal	6/4/1991
42840 AQ000310	S. A. K. IND INC	148 E OLIVE ST	MONROVIA	91016 3408 ROG	3 B	9	Inland	6/4/1991
13488 AQ000316	GCG CORP	608 RUBERTA AVE	GLENDALE	91201 2335 NOX	4 B	7	Coastal	6/4/1991
23194 AQ000331	CITY OF HOPE MEDICAL CENTER	1500 E DUARTE RD	DUARTE	91010 3012 SOX	1 B	9	Inland	6/4/1991
6345 AQ000334	V & M PLATING CO	14024 S AVALON BLVD	LOS ANGELES	90061 2692 PM10	1 B	12	Coastal	6/4/1991
16978 AQ000338	CLOUGHERTY PACKING CO, FARMER JOHN MEA	3049 E VERNON AVE	VERNON	90058 1882 ROG	3 B	1	Coastal	6/4/1991
16978 AQ000341	CLOUGHERTY PACKING CO, FARMER JOHN MEA	3049 E VERNON AVE	VERNON	90058 1882 CO	1 B	1	Coastal	6/4/1991
16978 AQ000342	CLOUGHERTY PACKING CO, FARMER JOHN MEA	3049 E VERNON AVE	VERNON	90058 1882 PM10	5 B	1	Coastal	6/4/1991
23700 AQ000343	MACCO CONSTRUCTORS INC	1070 E LOMITA BLVD	WILMINGTON	90744 1609 SOX	13 B	1	Coastal	6/4/1991
8980 AQ000361	ARCO (EIS USE)	1801 E SEPULVEDA BLVD	CARSON	90745 ROG	2 B	4	Coastal	6/4/1991
8980 AQ000363	ARCO (EIS USE)	1801 E SEPULVEDA BLVD	CARSON	90745 SOX	9 B	4	Coastal	6/10/1991
8980 AQ000364	ARCO (EIS USE)	1801 E SEPULVEDA BLVD	CARSON	90745 CO	2 B	4	Coastal	6/10/1991
8980 AQ000365	ARCO (EIS USE)	1801 E SEPULVEDA BLVD	CARSON	90745 PM10	1 B	4	Coastal	6/10/1991
14928 AQ000374	ENERGY & ENVIRONMENTAL RESEARCH CORP	8001 IRVINE BLVD	SANTA ANA	92705 ROG	1 B	4	Coastal	6/10/1991
1159 AQ000394	TEXACO'S MONTEBELLO TECHNOLOGY CENTER	329 N DURFEE AVE	SOUTH EL MONTE	91733 PM10	1 B	17	Coastal	6/15/1991
800211 AQ000490	WESTERN MEDICAL CTR (EIS USE)	1001 N TUSTIN	SANTA ANA	92705 3577 SOX	12 B	11	Inland	6/15/1991
800187 AQ000500	AMF TIRE EQUIP, DIV AMF VOIT (EIS USE)	3715 SUNFLOWER AVE	SANTA ANA	92704 ROG	3 B	17	Coastal	7/4/1991
69530 AQ000504	DAN COPP CRUSHING CORP.	VARIOUS LOCATIONS IN SCA	ANAHEIM	92807 CO	3 B	17	Coastal	7/4/1991
800088 AQ000512	3M COMPANY	18750 MINNESOTA RD	CORONA	92882 PM10	1 B	1	Coastal	7/4/1991
800245 AQ000525	FAULT BLOCK III UNIT, WILMINGTON OIL FLD	420 HENRY FORD AVE	WILMINGTON	90744 CO	10 B	22	Inland	7/6/1991
800084 AQ000526	MARLEX OIL & REF INC (EIS USE)	1825 E SPRING ST	LONG BEACH	90806 1919 SOX	5 B	4	Coastal	7/6/1991
8873 AQ000551	ATCHISON,TOPEKA & SANTA FE RAILWAY CO	470 N L ST	SAN BERNARDINO	92411 PM10	5 B	4	Coastal	7/6/1991
39790 AQ000553	R-C ENVIRONMENTAL SERVICES & TECH.	1306 E EDINGER SUITE B	SANTA ANA	92705 PM10	4 B	34	Inland	7/10/1991
800016 AQ000559	BAKER COMMODITIES INC	3848- 4100 BANDINI BLVD	VERNON	90023 4532 CO	1 B	17	Coastal	7/10/1991
78638 AQ000587	ARCO OIL & GAS CO, ARCO CO DIV	2685 PICO CANYON RD	NEWHALL	91321 NOX	4 B	1	Coastal	7/10/1991
10510 AQ000588	GREGG INDUSTRIES INC	10460 HICKSON ST	EL MONTE	91731 PM10	70 P	13	Coastal	7/30/1991
54771 AQ000602	LAS VIRGENES MUNICIPAL WATER DISTRICT	23915 W AGOURA RD	AGOURA HILLS	91301 ROG	2 B	11	Inland	7/30/1991
54771 AQ000603	LAS VIRGENES MUNICIPAL WATER DISTRICT	23915 W AGOURA RD	AGOURA HILLS	91301 NOX	5 B	2	Coastal	8/1/1991
50575 AQ000604	GRAPHIDYNE CORP	3600 S HILL ST	LOS ANGELES	90007 ROG	3 B	2	Coastal	8/1/1991
800051 AQ000623	ARCO TERMINAL SERVICES CORPORATION	5905 PARAMOUNT BLVD	LONG BEACH	90805 NOX	4 S	1	Coastal	8/1/1991
800051 AQ000624	ARCO TERMINAL SERVICES CORPORATION	5905 PARAMOUNT BLVD	LONG BEACH	90805 PM10	12 B	4	Coastal	8/16/1991
81756 AQ000632	DART CONTAINER CORP OF CALIFORNIA	150 S MAPLE ST	CORONA	92880 ROG	1 B	4	Coastal	8/16/1991
6042 AQ000670	BARKEN'S HARDCHROME INC	239 E GREENLEAF BLVD	COMPTON	90220 4992 PM10	408 P	7	Coastal	8/21/1991
88481 AQ000675	US GOV'T AIR FORCE DEPT,MARCH AIR F BASE	24501 S FIGUEROA ST	CARSON	90745 CO	1 B	12	Coastal	10/17/1991
89032 AQ000686	US GOV'T, AIR FORCE DEPT, MARCH AFB	2700 TWEEDY BLVD	SOUTH GATE	90280 NOX	4 P	4	Coastal	10/24/1991
89033 AQ000687	US GOV'T, AIR FORCE DEPT, MARCH AFB	WILSHIRE & SAWTELLE	LOS ANGELES	90073 SOX	15 P	12	Coastal	12/3/1991
14966 AQ000688	U S GOV'T, V A MEDICAL CENTER, WEST L A	11301 WILSHIRE BLVD	LOS ANGELES	90073 SOX	20 P	2	Coastal	12/3/1991
800016 AQ000693	BAKER COMMODITIES INC	3848- 4100 BANDINI BLVD	VERNON	90023 4532 PM10	39 R	2	Coastal	12/3/1991
89632 AQ000716	U S GOVT AIR FORCE DEPT, MAFB	20101 GOLDEN WEST ST	HUNTINGTON BEACH	92648 NOX	4 R	1	Coastal	12/10/1991
38440 AQ000734	COOPER & BRAIN - BREA	1390 SITE DR	BREA	92821 ROG	49 P	18	Coastal	1/27/1992
18074 AQ000748	FOASBERG LAUNDRY & CLEANERS INC	640 E WARDLOW RD	LONG BEACH	90807 4696 ROG	3 B	4	Coastal	2/1/1992
8220 AQ000763	PROVIDENCE ST JOSEPH MED CTR	501 S BUENA VISTA ST	BURBANK	91505 4866 SOX	1 B	4	Coastal	2/3/1992
8220 AQ000764	PROVIDENCE ST JOSEPH MED CTR	501 S BUENA VISTA ST	BURBANK	91505 4866 CO	4 B	7	Coastal	2/6/1992
12170 AQ000777	VACCO INDUSTRIES	10350 VACCO ST	SOUTH EL MONTE	91733 3399 PM10	1 B	7	Coastal	2/6/1992
					1 B	9	Inland	2/24/1992

269	AQ000782	HERCULES INCORPORATED PLANT NO.2	3583 HAYDEN AVE	CULVER CITY	90232	2412	NOX	1	S	2	Coastal	2/25/1992
87798	AQ000787	US GOVT, AIR FORCE DEPT, MARCH AFB	1601 W 7TH ST	LONG BEACH	90813		CO	115	P	4	Coastal	2/27/1992
88481	AQ000788	US GOV'T AIR FORCE DEPT,MARCH AIR F BASE	24501 S FIGUEROA ST	CARSON	90745		NOX	1	P	4	Coastal	2/27/1992
19726	AQ000794	FAULT BLOCK II UNIT, WILMINGTON OIL FLD	420 HENRY FORD AVE	WILMINGTON	90744		ROG	4	B	4	Coastal	2/27/1992
87798	AQ000803	US GOVT, AIR FORCE DEPT, MARCH AFB	1601 W 7TH ST	LONG BEACH	90813		ROG	10	P	4	Coastal	3/12/1992
3873	AQ000809	LOCKHEED ADVANCED DEVELOPMENT CO	1705 VICTORY B 180/111	BURBANK	91506		CO	1	B	7	Coastal	4/8/1992
3873	AQ000810	LOCKHEED ADVANCED DEVELOPMENT CO	1705 VICTORY B 180/111	BURBANK	91506		PM10	3	B	7	Coastal	4/8/1992
79087	AQ000819	LEWIS CLEANERS	4945 WARNER AVE	HUNTINGTON BEACH	92649	4406	ROG	1	B	18	Coastal	4/8/1992
9729	AQ000841	PGP INDUSTRIES INC	13429 ALONDRA BLVD/1560	SANTA FE SPRINGS	90670	5696	PM10	1	B	5	Coastal	6/3/1992
58556	AQ000854	CROWN COACH INC	13799 MONTE VISTA AVE	CHINO	91710	5513	SOX	2	S	33	Inland	8/25/1992
58556	AQ000855	CROWN COACH INC	13799 MONTE VISTA AVE	CHINO	91710	5513	CO	17	S	33	Inland	8/25/1992
62223	AQ000858	CONDI,A DIV.OF AMERICAN SEATING CO.	1965 E VISTA BELLA WAY	COMPTON	90220	6106	ROG	1	B	4	Coastal	10/14/1992
94236	AQ000859	COMPLIANT SPRAY PAINTING INC	9758 KLINGERMAN ST	SOUTH EL MONTE	91733		ROG	2	P	11	Inland	10/21/1992
95338	AQ000914	ARCO PRODUCTS CO, LOS ANGELES REFINERY	17923 S SANTA FE AVE	COMPTON	90220		PM10	14	P	4	Coastal	3/16/1993
800153	AQ000957	US GOVT, NAVY DEPT LB SHIPYARD	LONG BEACH NAVAL SHIPYAR	LONG BEACH	90822	5077	SOX	5	B	4	Coastal	6/29/1993
800153	AQ000958	US GOVT, NAVY DEPT LB SHIPYARD	LONG BEACH NAVAL SHIPYAR	LONG BEACH	90822	5077	PM10	10	B	4	Coastal	6/29/1993
29110	AQ000990	ORANGE COUNTY SANITATION DISTRICT	22212 BROOKHURST ST	HUNTINGTON BEACH	92646	8457	ROG	30	B	18	Coastal	9/20/1993
29110	AQ000991	ORANGE COUNTY SANITATION DISTRICT	22212 BROOKHURST ST	HUNTINGTON BEACH	92646	8457	SOX	154	B	18	Coastal	9/20/1993
800124	AQ001009	SO CAL EDISON CO	2685 SEASIDE BLVD	LONG BEACH	90802		ROG	13	R	4	Coastal	10/21/1993
40477	AQ001019	OSCAR MAYER FOODS CORP	3301 E VERNON AVE	VERNON	90058	1875	CO	1	S	1	Coastal	11/2/1993
800264	AQ001034	EDGINGTON OIL COMPANY	2400 E ARTESIA BLVD	LONG BEACH	90805		CO	1	B	4	Coastal	12/14/1993
104015	AQ001105	AERA ENERGY LLC	4024 VALLEY VIEW AVE	YORBA LINDA	92886		ROG	260	R	16	Coastal	3/9/1994
7980	AQ001144	MICROMETALS INC	1190 N HAWK CIR	ANAHEIM	92807	1788	ROG	4	R	16	Coastal	5/3/1994
83086	AQ001146	QUAD/GRAPHICS	1174 N GROVE ST	ANAHEIM	92806		ROG	5	S	16	Coastal	5/4/1994
59560	AQ001156	OR. CO., SANITATION DISTRICT NO.1	4100 E WASHINGTON BLVD	LOS ANGELES	90023	4406	ROG	149	P	1	Coastal	5/9/1994
1718	AQ001159	NATTER MFG, A FAIRCHILD IND CO	9440 9620-22 GIDLEY ST	TEMPLE CITY	91780		CO	1	S	9	Inland	5/9/1994
104017	AQ001171	AERA ENERGY LLC	20101 GOLDENWEST ST	HUNTINGTON BEACH	92648	2628	PM10	18	R	18	Coastal	6/1/1994
101521	AQ001173	ULTRAMAR INC	420 HENRY FORD AVE	WILMINGTON	90744		PM10	102	P	4	Coastal	6/1/1994
93418	AQ001176	GRANITE CONSTRUCTION COMPANY	38-155 MONROE ST	INDIO	92201		ROG	1	P	30	Inland	6/8/1994
93418	AQ001177	GRANITE CONSTRUCTION COMPANY	38-155 MONROE ST	INDIO	92201		SOX	2	P	30	Inland	6/8/1994
90882	AQ001190	SOUTHERN CALIFORNIA EDISON	BRIDGE AND RAMONA EXPRE	SAN JACINTO	92367		ROG	1	S	28	Inland	6/16/1994
90882	AQ001192	SOUTHERN CALIFORNIA EDISON	BRIDGE AND RAMONA EXPRE	SAN JACINTO	92367		SOX	1	S	28	Inland	6/16/1994
4477	AQ001193	SO CAL EDISON CO	1 PEBBLY BEACH RD	AVALON	90704		CO	3	S	28	Inland	6/16/1994
90881	AQ001195	SOUTHERN CALIFORNIA EDISON	ON RESERVIOR	LAKEVIEW	92367		ROG	1	S	24	Inland	6/16/1994
90881	AQ001197	SOUTHERN CALIFORNIA EDISON	ON RESERVIOR	LAKEVIEW	92367		SOX	5	S	24	Inland	6/16/1994
90881	AQ001198	SOUTHERN CALIFORNIA EDISON	ON RESERVIOR	LAKEVIEW	92367		CO	58	S	24	Inland	6/16/1994
90879	AQ001200	SOUTHERN CALIFORNIA EDISON	29250 LAKEVIEW AVE	NUEVO	92567		ROG	1	S	24	Inland	6/16/1994
90879	AQ001203	SOUTHERN CALIFORNIA EDISON	29250 LAKEVIEW AVE	NUEVO	92567		CO	8	S	24	Inland	6/16/1994
90880	AQ001205	SOUTHERN CALIFORNIA EDISON	MARVIN	LAKEVIEW	92367		ROG	2	S	24	Inland	6/16/1994
90880	AQ001207	SOUTHERN CALIFORNIA EDISON	MARVIN	LAKEVIEW	92367		SOX	3	S	24	Inland	6/16/1994
90880	AQ001208	SOUTHERN CALIFORNIA EDISON	MARVIN	LAKEVIEW	92367		CO	8	S	24	Inland	6/16/1994
91182	AQ001210	SOUTHERN CALIFORNIA EDISON COMPANY	1 MILE SOUTH OF HWY 74	ROMOLAND	92585		ROG	1	S	24	Inland	6/16/1994
91182	AQ001212	SOUTHERN CALIFORNIA EDISON COMPANY	1 MILE SOUTH OF HWY 74	ROMOLAND	92585		SOX	4	S	24	Inland	6/16/1994
91182	AQ001213	SOUTHERN CALIFORNIA EDISON COMPANY	1 MILE SOUTH OF HWY 74	ROMOLAND	92585		CO	14	S	24	Inland	6/16/1994
90883	AQ001216	SOUTHERN CALIFORNIA EDISON	1/4 MI E ALLESANDRO/MN/R	SAN JACINTO	92582		SOX	5	S	28	Inland	6/16/1994
4477	AQ001218	SO CAL EDISON CO	1 PEBBLY BEACH RD	AVALON	90704		PM10	4	S	28	Inland	6/16/1994
91179	AQ001226	SOUTHERN CALIFORNIA EDISON COMPANY	HOME RESERVOIR/HWY 371	ANZA	92583		SOX	5	S	27	Inland	6/16/1994
4477	AQ001227	SO CAL EDISON CO	1 PEBBLY BEACH RD	AVALON	90704		CO	17	S	27	Inland	6/16/1994
4477	AQ001228	SO CAL EDISON CO	1 PEBBLY BEACH RD	AVALON	90704		PM10	4	S	27	Inland	6/16/1994
91178	AQ001231	SOUTHERN CALIFORNIA EDISON COMPANY	EVERETT RESERVOIR/HWY 37	ANZA	92583		SOX	2	S	27	Inland	6/16/1994
4477	AQ001232	SO CAL EDISON CO	1 PEBBLY BEACH RD	AVALON	90704		CO	16	S	27	Inland	6/16/1994
4477	AQ001237	SO CAL EDISON CO	1 PEBBLY BEACH RD	AVALON	90704		CO	64	S	27	Inland	6/16/1994
89453	AQ001240	SO CALIFORNIA EDISON, MITCHEL RESERVOIR	LINCOLN/MITCHEL RD	ANZA	92539		SOX	6	S	27	Inland	6/16/1994
90953	AQ001250	SOUTHERN CALIFORNIA EDISON	1 MI NW OF 17TH ST	UPLAND	91786		NOX	2	S	32	Inland	6/16/1994
4477	AQ001251	SO CAL EDISON CO	1 PEBBLY BEACH RD	AVALON	90704		CO	4	S	32	Inland	6/16/1994
90884	AQ001252	SOUTHERN CALIFORNIA EDISON	906 INDUSTRIAL WAY	SAN JACINTO	92582		ROG	8	S	28	Inland	6/16/1994
4477	AQ001254	SO CAL EDISON CO	1 PEBBLY BEACH RD	AVALON	90704		CO	6	S	28	Inland	6/16/1994
90165	AQ001257	SOUTHERN CALIFORNIA EDISON CO	4921 SANTA ANITA	EL MONTE	91731		CO	6	S	9	Inland	6/16/1994

90164 AQ001260	SOUTHERN CALIFORNIA EDISON CO	11828 RANCHITO ST	EL MONTE	91732 CO	6 S	9	Inland	6/16/1994
89176 AQ001265	SOUTHERN CALIFORNIA EDISON CO	1404 E CORAK ST	BALDWIN PARK	91706 NOX	2 S	9	Inland	6/16/1994
89176 AQ001266	SOUTHERN CALIFORNIA EDISON CO	1404 E CORAK ST	BALDWIN PARK	91706 CO	3 S	9	Inland	6/16/1994
88194 AQ001270	SOUTHERN CALIFORNIA EDISON CO	14700 RIVER RD	CORONA	92880 CO	1 S	22	Inland	6/16/1994
89376 AQ001273	SOUTHERN CALIFORNIA EDISON CO	END OF CENTER ST	RIVERSIDE	92507 CO	2 S	23	Inland	6/16/1994
90878 AQ001274	SOUTHERN CALIFORNIA EDISON	6871 MARTIN RD	RIALTO	92376 ROG	4 S	34	Inland	6/16/1994
90878 AQ001276	SOUTHERN CALIFORNIA EDISON	6871 MARTIN RD	RIALTO	92376 CO	3 S	34	Inland	6/16/1994
4477 AQ001278	SO CAL EDISON CO	1 PEBBLY BEACH RD	AVALON	90704 CO	1 S	33	Inland	6/16/1994
4477 AQ001281	SO CAL EDISON CO	1 PEBBLY BEACH RD	AVALON	90704 CO	1 S	33	Inland	6/16/1994
83515 AQ001282	SOUTHERN CALIFORNIA EDISON	2 & OAK GLEN RD	YUCAIPA	92399 ROG	3 S	35	Inland	6/16/1994
4477 AQ001284	SO CAL EDISON CO	1 PEBBLY BEACH RD	AVALON	90704 CO	2 S	35	Inland	6/16/1994
88196 AQ001285	SOUTHERN CALIFORNIA EDISON CO	1/2 MI EAST OF LAKEVIEW/RJ	SAN JACINTO	92581 SOX	1 S	24	Inland	6/16/1994
88196 AQ001286	SOUTHERN CALIFORNIA EDISON CO	1/2 MI EAST OF LAKEVIEW/RJ	SAN JACINTO	92581 CO	3 S	24	Inland	6/16/1994
90166 AQ001289	SOUTHERN CALIFORNIA EDISON CO	NW CRNR ROMONA EXPWY/PC	SAN JACINTO	92582 SOX	1 S	28	Inland	6/16/1994
4477 AQ001293	SO CAL EDISON CO	1 PEBBLY BEACH RD	AVALON	90704 CO	1 S	28	Inland	6/16/1994
4477 AQ001294	SO CAL EDISON CO	1 PEBBLY BEACH RD	AVALON	90704 PM10	1 S	28	Inland	6/16/1994
90885 AQ001295	SOUTHERN CALIFORNIA EDISON	35750 RAMONA EXPRESSWA	SAN JACINTO	92582 ROG	3 S	28	Inland	6/16/1994
4477 AQ001298	SO CAL EDISON CO	1 PEBBLY BEACH RD	AVALON	90704 CO	9 S	28	Inland	6/16/1994
4477 AQ001303	SO CAL EDISON CO	1 PEBBLY BEACH RD	AVALON	90704 CO	9 S	35	Inland	6/16/1994
4477 AQ001306	SO CAL EDISON CO	1 PEBBLY BEACH RD	AVALON	90704 CO	3 S	34	Inland	6/16/1994
90161 AQ001307	SOUTHERN CALIFORNIA EDISON CO	NW CORNER OF TAYLOR/MAI	GRAND TERRACE	92324 ROG	6 S	23	Inland	6/16/1994
90161 AQ001309	SOUTHERN CALIFORNIA EDISON CO	NW CORNER OF TAYLOR/MAI	GRAND TERRACE	92324 CO	5 S	23	Inland	6/16/1994
346 AQ001317	FRITO-LAY NORTH AMERICA, INC.	9535 ARCHIBALD AVE	RANCHO CUCAMONGA	91730 5737 CO	1 P	3	Coastal	6/21/1994
84721 AQ001320	HUNTINGTON BEACH CO	20031 GOLDENWEST ST	HUNTINGTON BEACH	92648 NOX	6 S	18	Coastal	6/21/1994
84721 AQ001321	HUNTINGTON BEACH CO	20031 GOLDENWEST ST	HUNTINGTON BEACH	92648 CO	10 S	18	Coastal	6/21/1994
91097 AQ001325	ULTRAMAR INC	850 S SEPULVEDA BLVD	EL SEGUNDO	90245 CO	151 R	3	Coastal	6/23/1994
95156 AQ001326	ULTRAMAR INC	6251 N PARAMOUNT BLVD	LONG BEACH	90805 PM10	20 R	4	Coastal	6/23/1994
98566 AQ001327	ULTRAMAR INC	21000 S FIGUEROA ST	CARSON	90745 ROG	21 R	7	Coastal	6/23/1994
78362 AQ001329	ARCO PRODUCTS CO	6739 W OLYMPIC BLVD	LOS ANGELES	90048 5335 ROG	2 S	1	Coastal	6/27/1994
83233 AQ001330	ARCO PRODUCTS CO	6100 ATLANTIC BLVD	MAYWOOD	90270 ROG	3 S	5	Coastal	6/27/1994
88454 AQ001332	ATLANTIC RICHFIELD CO	108 W LINCOLN BLVD	ORANGE	92865 ROG	6 S	17	Coastal	6/27/1994
1561 AQ001333	TEXACO EXPLORATION AND PRODUCTION, INC	BUENA	PLACENTIA	92670 ROG	1 S	16	Coastal	6/27/1994
99802 AQ001334	ARCO PRODUCTS COMPANY	VARIOUS LOCATIONS IN SCA	PASADENA	91107 ROG	6 S	5	Coastal	6/27/1994
94964 AQ001336	ARCO PRODUCTS CO	504 MARTIN LUTHER KING BI	LOS ANGELES	90037 ROG	9 S	1	Coastal	6/27/1994
37356 AQ001338	ARCO DLR, HOSKIN HOGAN	9922 S	LOS ANGELES	90003 ROG	8 S	3	Coastal	6/28/1994
2096 AQ001343	AUTO WAREHOUSING L A INC	760 EARLE ST	TERMINAL ISLAND	90731 7352 ROG	3 B	4	Coastal	7/28/1994
15744 AQ001349	MOLE-RICHARDSON CO	937 N SYCAMORE AVE	HOLLYWOOD	90038 2384 ROG	2 R	1	Coastal	8/1/1994
23451 AQ001378	HINDERLITER HEAT TREATING INC	1025 N PAULINE ST	ANAHEIM	92801 2553 ROG	1 R	17	Coastal	9/22/1994
91183 AQ001410	SOUTHERN CALIFORNIA EDISON	2001 PACIFIC COAST HWY	SEAL BEACH	90740 ROG	8 R	3	Coastal	11/4/1994
3361 AQ001418	BEHR PROCESS CORP	1603 W ALTON AVE	SANTA ANA	92704 7258 PM10	1 R	17	Coastal	1/12/1995
59560 AQ001421	OR. CO., SANITATION DISTRICT NO.1	4100 E WASHINGTON BLVD	LOS ANGELES	90023 4406 ROG	155 X	1	Coastal	1/23/1995
800305 AQ001439	UCLA	705 SO DR	LOS ANGELES	90024 8315 ROG	3 B	2	Coastal	4/19/1995
800305 AQ001440	UCLA	705 SO DR	LOS ANGELES	90024 8315 NOX	75 B	2	Coastal	4/19/1995
800305 AQ001441	UCLA	705 SO DR	LOS ANGELES	90024 8315 SOX	106 B	2	Coastal	4/19/1995
800305 AQ001442	UCLA	705 SO DR	LOS ANGELES	90024 8315 CO	40 B	2	Coastal	4/19/1995
800305 AQ001443	UCLA	705 SO DR	LOS ANGELES	90024 8315 PM10	20 B	2	Coastal	4/19/1995
66224 AQ001465	PRO LITHOGRAPHICS, G. COON PRNTG	3000 W MAGNOLIA BLVD	BURBANK	91505 3043 ROG	2 S	7	Coastal	5/15/1995
10055 AQ001488	G-P GYPSUM CORP	1401 PIER D ST	LONG BEACH	90802 1091 PM10	12 R	4	Coastal	8/30/1995
101246 AQ001490	ARCO PRODUCTS CO	14493 CULVER DR	IRVINE	92714 ROG	11 S	20	Coastal	10/31/1995
101974 AQ001491	ATLANTIC RICHFIELD CO,ARCO PRODUCTS CO	21704 S FIGUEROA ST	CARSON	90745 ROG	7 S	4	Coastal	10/31/1995
17834 AQ001554	NORTHROP GRUMMAN CORP, AIRCRAFT DIV	3201 W 131ST ST	HAWTHORNE	90245 ROG	4 S	3	Coastal	4/1/1996
800144 AQ001581	UNION OIL CO OF CAL (NSR USE ONLY)	1660 W ANAHEIM ST 1480 W	WILMINGTON	90744 2304 ROG	3 S	34	Inland	4/26/1996
95351 AQ001584	UNOCAL CORPORATION	21008 E ARROW HIGHWAY	COVINA	91722 2216 ROG	2 S	9	Inland	4/26/1996
800144 AQ001585	UNION OIL CO OF CAL (NSR USE ONLY)	1660 W ANAHEIM ST 1480 W	WILMINGTON	90744 2304 ROG	3 S	1	Coastal	4/26/1996
800144 AQ001586	UNION OIL CO OF CAL (NSR USE ONLY)	1660 W ANAHEIM ST 1480 W	WILMINGTON	90744 2304 ROG	1 S	23	Inland	4/26/1996
88178 AQ001592	UNION OIL OF CALIFORNIA	301 N PALM CANYON DR	PALM SPRINGS	92262 ROG	1 S	30	Inland	4/26/1996
98420 AQ001597	UNOCAL CORP	10565 VALLEY BLVD	EL MONTE	91731 ROG	3 S	9	Inland	4/26/1996
800144 AQ001601	UNION OIL CO OF CAL (NSR USE ONLY)	1660 W ANAHEIM ST 1480 W	WILMINGTON	90744 2304 ROG	3 S	34	Inland	4/26/1996

88182	AQ001603	UNION OIL OF CALIFORNIA		7304 S PAINTER AVE	WHITTIER	90606	ROG	2	S	11	Inland	4/26/1996
83376	AQ001616	HENRYS UNOCAL 76		9972 BOLSA AVE	WESTMINSTER	92683 6002	ROG	7	S	17	Coastal	4/26/1996
99107	AQ001621	UNOCAL CORP		9408 RUSH ST	EL MONTE	91733	ROG	2	S	11	Inland	4/26/1996
99101	AQ001623	UNOCAL CORP		1320 N ALTADENA DR	PASADENA	91107	ROG	2	S	8	Inland	4/26/1996
99105	AQ001625	UNOCAL CORP		20373 VALLEY BLVD	WALNUT	91789	ROG	3	S	10	Inland	4/26/1996
99106	AQ001626	UNOCAL CORP		9977 E LAS TUNAS DR	TEMPLE CITY	91780	ROG	3	S	9	Inland	4/26/1996
800144	AQ001633	UNION OIL CO OF CAL (NSR USE ONLY)		1660 W ANAHEIM ST 1480 W	WILMINGTON	90744 2304	ROG	3	S	1	Coastal	4/26/1996
800144	AQ001634	UNION OIL CO OF CAL (NSR USE ONLY)		1660 W ANAHEIM ST 1480 W	WILMINGTON	90744 2304	ROG	4	S	34	Inland	4/26/1996
93480	AQ001636	UNOCAL CORPORATION		420 N AZUSA AVE	COVINA	91722	ROG	2	S	9	Inland	4/26/1996
98682	AQ001650	UNOCAL CORP		4550 LARK ELLEN AVE SS 60!	COVINA	91722	ROG	3	S	9	Inland	4/26/1996
800144	AQ001661	UNION OIL CO OF CAL (NSR USE ONLY)		1660 W ANAHEIM ST 1480 W	WILMINGTON	90744 2304	ROG	1	S	23	Inland	4/26/1996
800144	AQ001662	UNION OIL CO OF CAL (NSR USE ONLY)		1660 W ANAHEIM ST 1480 W	WILMINGTON	90744 2304	ROG	3	S	8	Inland	4/26/1996
800144	AQ001666	UNION OIL CO OF CAL (NSR USE ONLY)		1660 W ANAHEIM ST 1480 W	WILMINGTON	90744 2304	ROG	3	S	33	Inland	4/26/1996
101074	AQ001668	UNOCAL CORP		700 FOOTHILL BLVD	LA CANADA FLINTRID(	91011 3404	ROG	2	S	8	Inland	4/26/1996
38929	AQ001671	LUNADA BAY AUTOMOTIVE		2133 PALOS VERDES DR WE!	PALOS VERDES ESTAT	90274 2704	ROG	2	S	3	Coastal	4/26/1996
99446	AQ001684	UNOCAL CORP		240 S GARFIELD AVE	ALHAMBRA	91801 3833	ROG	2	S	8	Inland	4/27/1996
800271	AQ001767	INTL RECTIFIER CORP		222-348 KANSAS & 1521 GR/	EL SEGUNDO	90245	ROG	4	R	5	Coastal	7/16/1996
15507	AQ001791	CALIFORNIA STATE UNIVERSITY, FULLERTON		800 N STATE COLLEGE BLVD	FULLERTON	92831	ROG	1	S	16	Coastal	10/18/1996
15507	AQ001792	CALIFORNIA STATE UNIVERSITY, FULLERTON		800 N STATE COLLEGE BLVD	FULLERTON	92831	NOX	6	S	16	Coastal	10/18/1996
15507	AQ001793	CALIFORNIA STATE UNIVERSITY, FULLERTON		800 N STATE COLLEGE BLVD	FULLERTON	92831	PM10	2	S	16	Coastal	10/18/1996
61201	AQ001851	JAMES HARDIE BUILDING PRODUCTS INC		10901 ELM AVE	FONTANA	92337 7348	ROG	1	P	7	Coastal	1/2/1997
18294	AQ001912	NORTHROP GRUMMAN CORP, AIRCRAFT DIV		500-800 N DOUGLAS ST	EL SEGUNDO	90245	ROG	28	R	5	Coastal	2/26/1997
57756	AQ001925	TEXACO REFINING & MARKETING INC	GNRL	2101 E PACIFIC COAST HWY	WILMINGTON	90744 2994	ROG	15	S	4	Coastal	4/1/1997
3968	AQ001928	TABC, INC		6375 PARAMOUNT BLVD	LONG BEACH	90805 3301	ROG	2	P	5	Coastal	4/1/1997
11119	AQ001993	THE GAS CO./ SEMPRA ENERGY		8101 S ROSEMEAD BLVD	PICO RIVERA	90660	ROG	1	R	5	Coastal	6/6/1997
800362	AQ002000	CONOCOPHILLIPS COMPANY		1520 E SEPULVEDA BLVD	CARSON	90745	ROG	2	P	17	Coastal	6/9/1997
800362	AQ002001	CONOCOPHILLIPS COMPANY		1520 E SEPULVEDA BLVD	CARSON	90745	ROG	3	P	18	Coastal	6/9/1997
800362	AQ002002	CONOCOPHILLIPS COMPANY		1520 E SEPULVEDA BLVD	CARSON	90745	ROG	3	P	5	Coastal	6/9/1997
800362	AQ002003	CONOCOPHILLIPS COMPANY		1520 E SEPULVEDA BLVD	CARSON	90745	ROG	6	P	20	Coastal	6/9/1997
800363	AQ002031	CONOCOPHILLIPS COMPANY		1660 W ANAHEIM ST	WILMINGTON	90744	ROG	3	P	17	Coastal	6/9/1997
800363	AQ002032	CONOCOPHILLIPS COMPANY		1660 W ANAHEIM ST	WILMINGTON	90744	ROG	3	P	18	Coastal	6/9/1997
800363	AQ002033	CONOCOPHILLIPS COMPANY		1660 W ANAHEIM ST	WILMINGTON	90744	ROG	2	P	5	Coastal	6/9/1997
800363	AQ002034	CONOCOPHILLIPS COMPANY		1660 W ANAHEIM ST	WILMINGTON	90744	ROG	2	P	17	Coastal	6/9/1997
800363	AQ002035	CONOCOPHILLIPS COMPANY		1660 W ANAHEIM ST	WILMINGTON	90744	ROG	2	P	1	Coastal	6/9/1997
800363	AQ002036	CONOCOPHILLIPS COMPANY		1660 W ANAHEIM ST	WILMINGTON	90744	ROG	2	P	3	Coastal	6/9/1997
102333	AQ002053	PORTION PAC, INC		9140 LURLINE AVE	CHATSWORTH	91311 5994	ROG	3	P	11	Inland	6/20/1997
21872	AQ002058	TROJAN BATTERY CO		9440 ANN ST	SANTA FE SPRINGS	90670 2614	NOX	2	R	13	Coastal	7/1/1997
13930	AQ002061	COMMERCIAL ENAMELING CO		6200-04 S ALAMEDA ST	HUNTINGTON PARK	90255 3503	CO	30	S	12	Coastal	7/1/1997
37881	AQ002100	VERTIS, INC.		3200 POMONA BLVD	POMONA	91768 3232	NOX	3	R	13	Coastal	8/12/1997
100154	AQ002128	COLMAC ENERGY INC		62-300 GENE WELMAS DR	MECCA	92254 0758	NOX	1	P	13	Coastal	9/9/1997
100154	AQ002129	COLMAC ENERGY INC		62-300 GENE WELMAS DR	MECCA	92254 0758	NOX	10	P	12	Coastal	9/9/1997
800040	AQ002165	DOW CHEM U.S.A. (NSR USE)		305 HENRY FORD AVE	LONG BEACH	90802 1037	ROG	1	R	4	Coastal	10/23/1997
100154	AQ002172	COLMAC ENERGY INC		62-300 GENE WELMAS DR	MECCA	92254 0758	NOX	3	P	31	Inland	11/18/1997
800144	AQ002194	UNION OIL CO OF CAL (NSR USE ONLY)		1660 W ANAHEIM ST 1480 W	WILMINGTON	90744 2304	ROG	1	S	9	Inland	12/9/1997
27433	AQ002197	UNION OIL CO OF CAL		450 S BIXBY	LOS ANGELES	90017	ROG	3	S	1	Coastal	12/9/1997
800183	AQ002229	PARAMOUNT PETR CORP (EIS USE)		14700-08 DOWNEY AVE	PARAMOUNT	90723 4526	CO	3	B	5	Coastal	1/14/1998
346	AQ002251	FRITO-LAY NORTH AMERICA, INC.		9535 ARCHIBALD AVE	RANCHO CUCAMONGA	91730 5737	ROG	3	R	3	Coastal	2/18/1998
104017	AQ002273	AERA ENERGY LLC		20101 GOLDENWEST ST	HUNTINGTON BEACH	92648 2628	SOX	36	R	18	Coastal	2/24/1998
104221	AQ002323	LEADWAY PLASTICS CORP		9408 STEWART & GRAY RD	DOWNEY	90241	ROG	10	P	19	Coastal	3/25/1998
50829	AQ002413	NATL RV INC		3411 N PERRIS BLVD	PERRIS	92571 3100	ROG	40	P	11	Inland	6/3/1998
46268	AQ002419	CALIFORNIA STEEL INDUSTRIES INC		14000 SAN BERNARDINO AVI	FONTANA	92335 5259	CO	4	R	18	Coastal	6/9/1998
46268	AQ002423	CALIFORNIA STEEL INDUSTRIES INC		14000 SAN BERNARDINO AVI	FONTANA	92335 5259	ROG	1	R	18	Coastal	6/9/1998
57756	AQ002430	TEXACO REFINING & MARKETING INC	GNRL	2101 E PACIFIC COAST HWY	WILMINGTON	90744 2994	ROG	20	S	4	Coastal	7/8/1998
47232	AQ002437	ARCO CQC KILN		1175 CARRACK AVE	WILMINGTON	90744	PM10	11	P	3	Coastal	7/16/1998
16639	AQ002458	SHULTZ STEEL CO		5321 FIRESTONE BLVD	SOUTH GATE	90280 3699	CO	10	P	4	Coastal	8/20/1998
4063	AQ002481	DAMERON ALLOY FOUNDRIES INC		927 S SANTA FE AVE	COMPTON	90221	PM10	3	R	12	Coastal	9/9/1998
115618	AQ002498	BEAR OIL COMPANY LLC		24913 REDLANDS BLVD	LOMA LINDA	92350	ROG	15	P	7	Coastal	10/29/1998
18241	AQ002499	PACIFIC STEEL TREATING CO		6829 FARMDALE AVE	NORTH HOLLYWOOD	91605 6292	ROG	1	R	7	Coastal	11/10/1998

38519 AQ002503	LAGUNA HILLS CARWASH, B SCHERRER CORP	24795 ALICIA PKY	LAGUNA HILLS	92653 ROG	1 R	5	Coastal	11/18/1998
800362 AQ002528	CONOCOPHILLIPS COMPANY	1520 E SEPULVEDA BLVD	CARSON	90745 CO	82 R	16	Coastal	12/18/1998
800362 AQ002530	CONOCOPHILLIPS COMPANY	1520 E SEPULVEDA BLVD	CARSON	90745 PM10	19 R	1	Coastal	12/18/1998
87798 AQ002563	US GOVT, AIR FORCE DEPT, MARCH AFB	1601 W 7TH ST	LONG BEACH	90813 NOX	25 R	4	Coastal	2/11/1999
15794 AQ002577	NISSIN FOODS (USA) CO., INC.	2001 W ROSECRANS AVE	GARDENA	90249 2994 ROG	3 P	12	Coastal	2/26/1999
46268 AQ002617	CALIFORNIA STEEL INDUSTRIES INC	14000 SAN BERNARDINO AVI	FONTANA	92335 5259 PM10	2 R	34	Inland	4/1/1999
118690 AQ002683	MAGNETEK, INC.	8966 MASON AVE	CHATSWORTH	91311 ROG	1 R	3	Coastal	6/11/1999
117006 AQ002716	EQUILON ENTERPRISES, LLC	20945 S WILMINGTON AVE	CARSON	90749 PM10	20 R	4	Coastal	7/23/1999
37601 AQ002724	CENVEO ANDERSON LITHOGRAPH	3217 S GARFIELD AVE	LOS ANGELES	90040 3219 NOX	1 P	7	Coastal	8/3/1999
37601 AQ002726	CENVEO ANDERSON LITHOGRAPH	3217 S GARFIELD AVE	LOS ANGELES	90040 3219 NOX	2 P	3	Coastal	8/5/1999
800150 AQ002747	US GOVT, AF DEPT, MARCH AIR RESERVE BASE	MARCH AFB	RIVERSIDE	92518 PM10	10 R	12	Coastal	8/11/1999
8547 AQ002788	QUEMETCO INC	720 S 7TH AVE	CITY OF INDUSTRY	91746 3124 PM10	1 R	5	Coastal	9/17/1999
800089 AQ002818	EXXONMOBIL OIL CORPORATION	3700 W 190TH ST	TORRANCE	90504 5790 PM10	3 P	4	Coastal	10/7/1999
16639 AQ002835	SHULTZ STEEL CO	5321 FIRESTONE BLVD	SOUTH GATE	90280 3699 PM10	2 R	12	Inland	10/20/1999
16639 AQ002837	SHULTZ STEEL CO	5321 FIRESTONE BLVD	SOUTH GATE	90280 3699 ROG	4 R	1	Coastal	10/20/1999
800026 AQ002842	ULTRAMAR INC (NSR USE ONLY)	2402 E ANAHEIM ST	WILMINGTON	90744 PM10	18 R	4	Coastal	10/29/1999
800363 AQ002899	CONOCOPHILLIPS COMPANY	1660 W ANAHEIM ST	WILMINGTON	90744 ROG	1 R	16	Coastal	1/4/2000
800363 AQ002900	CONOCOPHILLIPS COMPANY	1660 W ANAHEIM ST	WILMINGTON	90744 ROG	1 R	16	Coastal	1/4/2000
800363 AQ002901	CONOCOPHILLIPS COMPANY	1660 W ANAHEIM ST	WILMINGTON	90744 ROG	1 R	18	Coastal	1/4/2000
800363 AQ002902	CONOCOPHILLIPS COMPANY	1660 W ANAHEIM ST	WILMINGTON	90744 ROG	1 R	18	Coastal	1/4/2000
800363 AQ002903	CONOCOPHILLIPS COMPANY	1660 W ANAHEIM ST	WILMINGTON	90744 ROG	1 R	4	Coastal	1/6/2000
109879 AQ002977	BESTFOODS BAKING CO	480 S VAIL AVE	MONTEBELLO	90640 ROG	4 P	16	Coastal	2/25/2000
109879 AQ002979	BESTFOODS BAKING CO	480 S VAIL AVE	MONTEBELLO	90640 ROG	5 P	1	Coastal	2/25/2000
109879 AQ002980	BESTFOODS BAKING CO	480 S VAIL AVE	MONTEBELLO	90640 ROG	5 P	2	Coastal	2/25/2000
109879 AQ002981	BESTFOODS BAKING CO	480 S VAIL AVE	MONTEBELLO	90640 ROG	5 P	1	Coastal	2/25/2000
109879 AQ002982	BESTFOODS BAKING CO	480 S VAIL AVE	MONTEBELLO	90640 ROG	3 P	16	Coastal	2/25/2000
109879 AQ002983	BESTFOODS BAKING CO	480 S VAIL AVE	MONTEBELLO	90640 ROG	3 P	2	Coastal	2/25/2000
109879 AQ002984	BESTFOODS BAKING CO	480 S VAIL AVE	MONTEBELLO	90640 ROG	3 P	5	Coastal	2/25/2000
109879 AQ002985	BESTFOODS BAKING CO	480 S VAIL AVE	MONTEBELLO	90640 ROG	3 P	16	Coastal	2/25/2000
109879 AQ002986	BESTFOODS BAKING CO	480 S VAIL AVE	MONTEBELLO	90640 ROG	3 P	3	Coastal	2/25/2000
109879 AQ002987	BESTFOODS BAKING CO	480 S VAIL AVE	MONTEBELLO	90640 ROG	4 P	5	Coastal	2/25/2000
109879 AQ002988	BESTFOODS BAKING CO	480 S VAIL AVE	MONTEBELLO	90640 ROG	4 P	4	Coastal	2/25/2000
109879 AQ002989	BESTFOODS BAKING CO	480 S VAIL AVE	MONTEBELLO	90640 ROG	4 P	1	Coastal	2/25/2000
110982 AQ002990	COMMONWEALTH ALUMINUM CONCAST	2211 E CARSON ST	LONG BEACH	90810 PM10	1 R	4	Coastal	3/7/2000
110982 AQ002992	COMMONWEALTH ALUMINUM CONCAST	2211 E CARSON ST	LONG BEACH	90810 ROG	1 R	12	Coastal	3/7/2000
100154 AQ002996	COLMAC ENERGY INC	62-300 GENE WELMAS DR	MECCA	92254 0758 NOX	6 P	14	Inland	3/8/2000
100154 AQ002997	COLMAC ENERGY INC	62-300 GENE WELMAS DR	MECCA	92254 0758 NOX	2 P	5	Inland	3/8/2000
100154 AQ002998	COLMAC ENERGY INC	62-300 GENE WELMAS DR	MECCA	92254 0758 NOX	1 P	35	Inland	3/8/2000
100154 AQ002999	COLMAC ENERGY INC	62-300 GENE WELMAS DR	MECCA	92254 0758 NOX	2 P	34	Inland	3/8/2000
100154 AQ003000	COLMAC ENERGY INC	62-300 GENE WELMAS DR	MECCA	92254 0758 NOX	1 P	11	Inland	3/8/2000
100154 AQ003001	COLMAC ENERGY INC	62-300 GENE WELMAS DR	MECCA	92254 0758 NOX	4 P	9	Inland	3/8/2000
100154 AQ003002	COLMAC ENERGY INC	62-300 GENE WELMAS DR	MECCA	92254 0758 NOX	4 P	9	Inland	3/8/2000
100154 AQ003003	COLMAC ENERGY INC	62-300 GENE WELMAS DR	MECCA	92254 0758 NOX	4 P	28	Inland	3/8/2000
100154 AQ003004	COLMAC ENERGY INC	62-300 GENE WELMAS DR	MECCA	92254 0758 NOX	4 P	14	Inland	3/8/2000
100154 AQ003005	COLMAC ENERGY INC	62-300 GENE WELMAS DR	MECCA	92254 0758 NOX	4 P	14	Inland	3/8/2000
37601 AQ003027	CENVEO ANDERSON LITHOGRAPH	3217 S GARFIELD AVE	LOS ANGELES	90040 3219 NOX	24 R	4	Coastal	3/21/2000
18455 AQ003034	ROYALTY CARPET MILLS INC	17352 DERIAN AVE	IRVINE	92614 ROG	3 P	1	Coastal	3/24/2000
800236 AQ003130	LA CO. SANITATION DIST	24501 S FIGUEROA ST	CARSON	90745 6311 SOX	1 R	4	Coastal	7/25/2000
800028 AQ003145	CHEVRON CHEM CO, PETROCHEM DIV (EIS USE	3344 E MEDFORD ST	LOS ANGELES	90063 2582 CO	75 R	1	Coastal	8/8/2000
103888 AQ003147	SARGENT FLETCHER INC	9400 E FLAIR DR	EL MONTE	91731 2909 CO	1 P	1	Coastal	8/8/2000
103888 AQ003156	SARGENT FLETCHER INC	9400 E FLAIR DR	EL MONTE	91731 2909 ROG	1 P	5	Coastal	8/8/2000
800030 AQ003171	CHEVRON PRODUCTS CO.	324 W EL SEGUNDO BLVD	EL SEGUNDO	90245 3680 CO	37 R	3	Coastal	9/1/2000
346 AQ003184	FRITO-LAY NORTH AMERICA, INC.	9535 ARCHIBALD AVE	RANCHO CUCAMONGA	91730 5737 CO	10 P	18	Coastal	9/29/2000
800259 AQ003192	THE BOEING COMPANY	6620-33 CANOGA AVE	CANOGA PARK	91303 ROG	5 R	1	Coastal	10/5/2000
1206 AQ003198	ROYAL RUBBER & MFG CO	5951 E FIRESTONE BLVD	SOUTH GATE	90280 3795 ROG	1 R	5	Coastal	10/10/2000
800363 AQ003210	CONOCOPHILLIPS COMPANY	1660 W ANAHEIM ST	WILMINGTON	90744 ROG	2 S	2	Coastal	10/25/2000
114860 AQ003211	ARCO/PRESTIGE STATIONS, INC	8204 E GARVEY BLVD	ROSEMEAD	91770 2552 ROG	5 S	11	Inland	10/25/2000
55526 AQ003212	ARCO DLR, EDUARDO V BUNDANG	14614 DALEWOOD AVE	BALDWIN PARK	91706 6010 ROG	5 S	9	Inland	10/25/2000

800363 AQ003249	CONOCOPHILLIPS COMPANY	1660 W ANAHEIM ST	WILMINGTON	90744	ROG	3 S	1	Coastal	11/9/2000
800363 AQ003257	CONOCOPHILLIPS COMPANY	1660 W ANAHEIM ST	WILMINGTON	90744	ROG	4 S	5	Coastal	11/15/2000
800363 AQ003263	CONOCOPHILLIPS COMPANY	1660 W ANAHEIM ST	WILMINGTON	90744	ROG	5 S	5	Coastal	11/16/2000
128954 AQ003332	NRG POWER MARKETING, INC.	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	SOX	13 P	4	Coastal	12/2/2000
128954 AQ003333	NRG POWER MARKETING, INC.	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	SOX	17 P	7	Coastal	12/2/2000
128954 AQ003336	NRG POWER MARKETING, INC.	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	SOX	19 P	4	Coastal	12/2/2000
74503 AQ003341	3D SYSTEMS INC	26081 AVENUE HALL	VALENCIA	91355 1241	ROG	5 P	3	Coastal	12/2/2000
45953 AQ003344	HAYES LEMMERZ INTERNATIONAL CAL INC	14500 FIRESTONE BLVD	LA MIRADA	90638 5964	ROG	7 R	5	Coastal	12/12/2000
124808 AQ003349	INNOVENE POLYPROPYLENE LLC	2384 E 223RD ST	CARSON	90745	PM10	2 P	3	Coastal	12/19/2000
124808 AQ003350	INNOVENE POLYPROPYLENE LLC	2384 E 223RD ST	CARSON	90745	PM10	4 P	3	Coastal	12/19/2000
128954 AQ003352	NRG POWER MARKETING, INC.	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	PM10	6 P	17	Coastal	12/21/2000
16978 AQ003364	CLOUGHERTY PACKING CO, FARMER JOHN MEA	3049 E VERNON AVE	VERNON	90058 1882	ROG	4 P	6	Coastal	1/3/2001
115389 AQ003392	AES HUNTINGTON BEACH, LLC	21730 NEWLAND ST	HUNTINGTON BEACH	92646	ROG	4 P	7	Coastal	1/18/2001
115389 AQ003393	AES HUNTINGTON BEACH, LLC	21730 NEWLAND ST	HUNTINGTON BEACH	92646	ROG	4 P	20	Coastal	1/18/2001
115389 AQ003394	AES HUNTINGTON BEACH, LLC	21730 NEWLAND ST	HUNTINGTON BEACH	92646	ROG	4 P	1	Coastal	1/18/2001
115389 AQ003395	AES HUNTINGTON BEACH, LLC	21730 NEWLAND ST	HUNTINGTON BEACH	92646	ROG	4 P	1	Coastal	1/18/2001
115389 AQ003408	AES HUNTINGTON BEACH, LLC	21730 NEWLAND ST	HUNTINGTON BEACH	92646	ROG	2 P	20	Coastal	1/18/2001
124808 AQ003445	INNOVENE POLYPROPYLENE LLC	2384 E 223RD ST	CARSON	90745	PM10	2 P	3	Coastal	2/2/2001
128954 AQ003462	NRG POWER MARKETING, INC.	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	PM10	2 P	4	Coastal	2/7/2001
800170 AQ003469	LA CITY, DWP HARBOR GENERATING STATION	161 N ISLAND AVE	WILMINGTON	90744 6303	ROG	18 P	7	Coastal	2/7/2001
800170 AQ003470	LA CITY, DWP HARBOR GENERATING STATION	161 N ISLAND AVE	WILMINGTON	90744 6303	ROG	15 P	4	Coastal	2/7/2001
800170 AQ003471	LA CITY, DWP HARBOR GENERATING STATION	161 N ISLAND AVE	WILMINGTON	90744 6303	ROG	6 P	4	Coastal	2/7/2001
779 AQ003510	TRW INC	33000 AVENIDA PICO (CTS)	SAN CLEMENTE	92672	CO	2 R	7	Coastal	2/16/2001
128954 AQ003550	NRG POWER MARKETING, INC.	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	PM10	2 P	4	Coastal	3/21/2001
101843 AQ003551	MCWHORTER TECHNOLOGIES INC	2801 LYNWOOD RD	LYNWOOD	90262 4093	ROG	2 R	1	Coastal	3/21/2001
110924 AQ003564	WESTWAY TERMINAL COMPANY	BERTHS 70-71 SIGNAL ST	SAN PEDRO	90731	ROG	6 P	17	Coastal	4/3/2001
128954 AQ003568	NRG POWER MARKETING, INC.	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	PM10	3 P	13	Coastal	4/3/2001
114191 AQ003635	ARCO DLR,MOSTAFA RAHGOZAR,SS#1076	9500 DE SOTO AVE	CHATSWORTH	91311 5010	ROG	6 R	6	Coastal	5/10/2001
800074 AQ003637	LA CITY, DWP HAYNES GENERATING STATION	6801 2ND ST	LONG BEACH	90803 4324	SOX	5 P	3	Coastal	5/11/2001
800170 AQ003649	LA CITY, DWP HARBOR GENERATING STATION	161 N ISLAND AVE	WILMINGTON	90744 6303	ROG	20 R	3	Coastal	5/18/2001
800170 AQ003661	LA CITY, DWP HARBOR GENERATING STATION	161 N ISLAND AVE	WILMINGTON	90744 6303	ROG	154 R	1	Coastal	5/18/2001
800193 AQ003673	LA CITY, DWP VALLEY GENERATING STATION	11801 SHELDON ST	SUN VALLEY	91352 1420	SOX	2 R	4	Coastal	5/18/2001
104058 AQ003677	FONTANA PAPER MILLS	1840 E 29TH ST	SIGNAL HILL	90806	ROG	9 R	4	Coastal	5/19/2001
58057 AQ003679	ELECTROFILM MANUFACTURING CO	27727 AVENUE SCOTT	VALENCIA	91355 1264	ROG	8 R	13	Coastal	5/19/2001
800002 AQ003681	ALLIED SIGNAL,GARRETT CORP (EIS USE)	19800 S VAN NESS BLVD #20	TORRANCE	90501	ROG	9 R	3	Coastal	5/19/2001
20983 AQ003683	TRI LITE MFG CO INC	19780 PACIFIC GATEWAY DR	TORRANCE	90502 1137	ROG	8 R	3	Coastal	5/19/2001
106600 AQ003685	BURKE INDUSTRIES INC, SFS DIVISION	13767 FREEWAY DR	SANTA FE SPRINGS	90670	ROG	11 R	19	Coastal	5/19/2001
20106 AQ003687	MALLIN CO INC	2665 LEONIS BLVD	VERNON	90058 2282	ROG	19 R	1	Coastal	5/19/2001
35302 AQ003697	OWENS CORNING	1501 N TAMARIND AVE	COMPTON	90222 4130	ROG	51 R	1	Coastal	5/19/2001
15872 AQ003701	SO CAL EDISON CO	12700 TAYLOR ST	COLTON	92324	ROG	43 R	34	Inland	5/19/2001
2235 AQ003705	DEL MAR WINDOW COVERINGS,(LEVOLOR HOM	7400 HAZARD AVE.	WESTMINSTER	92683	ROG	6 R	17	Coastal	5/19/2001
800041 AQ003707	DOW CHEM U.S.A. (NSR USE)	305 S CRENSHAW BLVD	TORRANCE	90503 1791	ROG	37 R	16	Coastal	5/19/2001
1041 AQ003709	H. P. METAL FINISHING CO	5954 MAYWOOD AVE	HUNTINGTON PARK	90255 3258	ROG	6 R	12	Coastal	5/19/2001
18501 AQ003711	AIR CARGO EQUIPMENT CORP	17923 S SANTA FE AVE	COMPTON	90220	ROG	10 R	4	Coastal	5/19/2001
35882 AQ003717	HERTZ RENT-A-CAR	9029 AIRPORT BLVD	LOS ANGELES	90045 4589	ROG	7 R	3	Coastal	5/19/2001
18294 AQ003720	NORTHROP GRUMMAN CORP, AIRCRAFT DIV	500-800 N DOUGLAS ST	EL SEGUNDO	90245	ROG	151 R	5	Coastal	5/19/2001
115663 AQ003722	EL SEGUNDO POWER, LLC	301 VISTA DEL MAR	EL SEGUNDO	90245	ROG	95 R	7	Coastal	5/19/2001
3968 AQ003724	TABC, INC	6375 PARAMOUNT BLVD	LONG BEACH	90805 3301	ROG	89 R	4	Coastal	5/19/2001
89153 AQ003726	GATX RAIL CORP	1640 S SINCLAIR	ANAHEIM	92806	ROG	5 R	17	Coastal	5/19/2001
53853 AQ003732	SHELL OIL CO GNRL	20945 S WILMINGTON AVE	CARSON	90745	ROG	5 R	4	Coastal	5/19/2001
17697 AQ003734	WHITCOMB PLATING INC	649-655 S ALDERTON AVE	CITY OF INDUSTRY	91744	ROG	10 R	10	Inland	5/19/2001
15915 AQ003736	CONTINENTAL MFG CO, DIV CONTICO INTL INC	15605 CORNET AVE	SANTA FE SPRINGS	90670 5513	ROG	11 R	5	Coastal	5/19/2001
24788 AQ003740	SWIFT-COR TOOL ENGINEERING	15700 FIGUEROA ST	GARDENA	90248	ROG	11 R	3	Coastal	5/19/2001
22684 AQ003744	VARCO SYSTEMS	759 N ECKHOFF ST	ORANGE	92868	ROG	11 R	17	Coastal	5/19/2001
800009 AQ003746	AMERON PROTECTIVE COAT DIV (EIS&NSR USE	201 N BERRY ST	BREA	92821	ROG	40 R	2	Coastal	5/19/2001
27992 AQ003748	SAFETY-KLEEN (LOS ANGELES)., INC.	5756 ALBA ST	LOS ANGELES	90058 3808	ROG	7 R	1	Coastal	5/19/2001
104221 AQ003752	LEADWAY PLASTICS CORP	9408 STEWART & GRAY RD	DOWNEY	90241	ROG	4 R	4	Coastal	5/19/2001
84721 AQ003754	HUNTINGTON BEACH CO	20031 GOLDENWEST ST	HUNTINGTON BEACH	92648	ROG	38 R	18	Coastal	5/19/2001

46646	AQ003756	ARLON, MATERIALS FOR ELECTRONICS DIV		9433 HYSSOP DR	RANCHO CUCAMONGA	91730 6107	ROG	32	R	33	Inland	5/19/2001
15544	AQ003764	REICHHOLD INC		237 S MOTOR AVE	AZUSA	91702 3228	ROG	36	R	9	Inland	5/19/2001
11692	AQ003770	BERT-CO INDUSTRIES, BERT-CO GRAPHICS DB		1819- 1855 GLENDALE BLVD	LOS ANGELES	90026 1729	ROG	27	R	1	Coastal	5/19/2001
13655	AQ003772	M. J. WOOD		132 & 144 N SHERMAN AVE	CORONA		ROG	25	R	22	Inland	5/19/2001
5560	AQ003774	SPARKLETTS DRINKING WATER CORP		1449 N AVENUE 46	LOS ANGELES	90041 3410	ROG	23	R	1	Coastal	5/19/2001
24644	AQ003776	SHERWIN-WILLIAMS CO, SPRAYON PROD DIV		3818 E CORONADO ST	ANAHEIM	92807 1694	ROG	35	R	1	Coastal	5/19/2001
5646	AQ003778	HITCO CARBON COMPOSITES INC		1600 W 135TH ST	GARDENA	90249 2506	ROG	23	R	17	Coastal	5/19/2001
88556	AQ003784	MINSON CORPORATION		2665 LEONIS BLVD	LOS ANGELES	90058 2282	ROG	19	R	1	Coastal	5/19/2001
13084	AQ003790	BAXTER HEALTHCARE CORP, PHARMASEAL DIV		4401 FOXDALE AVE	IRWINDALE	91706 2161	ROG	19	R	9	Inland	5/19/2001
16865	AQ003794	AMVAC CHEMICAL CORP	GNRL	4100 E WASHINGTON BLVD	LOS ANGELES	90023 4406	ROG	19	R	1	Coastal	5/19/2001
18455	AQ003804	ROYALTY CARPET MILLS INC		17352 DERIAN AVE	IRVINE	92614	ROG	1	R	2	Coastal	5/19/2001
47847	AQ003814	VALLEY PRINTERS INC		2180 IOWA AVE	RIVERSIDE	92507 2424	ROG	15	R	23	Inland	5/19/2001
3061	AQ003818	HILLCREST BEVERLY OIL CORP		9996 W PICO BLVD	WEST LOS ANGELES	90064	ROG	5	R	3	Coastal	5/19/2001
51693	AQ003820	RELIANCE UPHOLSTERY SUPPLY CO INC		15700 AVALON BLVD	COMPTON	90220 3209	ROG	5	R	12	Coastal	5/19/2001
3089	AQ003822	PASCOE BUILDING SYS		1301 E LEXINGTON	POMONA	91766	ROG	9	R	10	Inland	5/19/2001
89064	AQ003832	TIMES MIRROR CO		11031-41 VAN OWEN ST	NORTH HOLLYWOOD	91605	ROG	109	R	7	Coastal	5/19/2001
115389	AQ003834	AES HUNTINGTON BEACH, LLC		21730 NEWLAND ST	HUNTINGTON BEACH	92646	ROG	2	R	20	Coastal	5/19/2001
43902	AQ003838	FILM PROCESSING CORP		3602 CRENSHAW BLVD	LOS ANGELES	90016 4820	ROG	137	R	1	Coastal	5/19/2001
18508	AQ003840	AIR PROD & CHEM INC		3305 E 26TH ST	LOS ANGELES	90023 4501	ROG	6	R	1	Coastal	5/19/2001
115618	AQ003850	BEAR OIL COMPANY LLC		24913 REDLANDS BLVD	LOMA LINDA	92350	ROG	10	R	3	Coastal	5/19/2001
109879	AQ003852	BESTFOODS BAKING CO		480 S VAIL AVE	MONTEBELLO	90640	ROG	7	R	1	Coastal	5/19/2001
3912	AQ003858	PASHA INDUSTRIES INC	038908	756 CARRACK AVE	LONG BEACH	90813 2658	ROG	14	R	4	Coastal	5/20/2001
57111	AQ003860	ODYSSEY ENGINEERING, INC.		27820 FREMONT CT UNIT 1	VALENCIA	91355 1141	ROG	15	R	13	Coastal	5/20/2001
46969	AQ003862	STA-RITE IND INC		3301 N GILMAN RD	EL MONTE	91732	ROG	15	R	11	Inland	5/20/2001
4231	AQ003864	ARMCO INC		1524 BORDER AVE	TORRANCE	90501	ROG	8	R	3	Coastal	5/20/2001
55879	AQ003866	RINGIER AMERICA, INC		1600 E ORANGETHORPE AVE	FULLERTON	92831	ROG	10	R	16	Coastal	5/20/2001
11272	AQ003868	STEWART FILMSCREEN CORP		1161 W SEPULVEDA & 2311 A	TORRANCE	90502 2797	ROG	86	R	3	Coastal	5/20/2001
60157	AQ003870	MAXWELL COMMUNICATION CORPORATION		11031-41 VANOWEN ST	NORTH HOLLYWOOD	91605	ROG	12	R	7	Coastal	5/20/2001
2605	AQ003874	3M PHARMACEUTICALS		19901 NORDHOFF ST	NORTHRIDGE	91324 3213	ROG	76	R	1	Coastal	5/20/2001
800022	AQ003876	CALNEV PIPE LINE, LLC		2051 W SLOVER AVE	BLOOMINGTON	92324	ROG	74	R	4	Coastal	5/20/2001
20502	AQ003878	UMC PETROLEUM CORP		14737 SAN FERNANDO RD	SYLMAR	91342	ROG	86	R	6	Coastal	5/20/2001
36792	AQ003880	PHILIPS COMPONENTS, DISCRETE PROD DIV		4561 COLORADO BLVD	LOS ANGELES	90039 1140	ROG	12	R	1	Coastal	5/20/2001
40724	AQ003884	THIEM IND INC		1918 W ARTESIA BLVD	TORRANCE	90504 3598	ROG	17	R	3	Coastal	5/20/2001
1177	AQ003886	TEXACO INC, P.C.P.L.		17292 GOTHARD ST	HUNTINGTON BEACH	90746	ROG	6	R	18	Coastal	5/20/2001
12879	AQ003888	CYTEC ENGINEERED MATERIALS, INC		21444 GOLDEN TRIANGLE RC	SAUGUS	91350 2911	ROG	67	R	13	Coastal	5/20/2001
69216	AQ003892	CREATIVE WEB SYS		2029 E CASHDAN DR	COMPTON	90220 6438	ROG	25	R	3	Coastal	5/20/2001
44916	AQ003894	HEAD WEST INC		1829-69 W EL SEGUNDO	COMPTON	90222	ROG	66	R	12	Coastal	5/20/2001
20528	AQ003896	BRISTOL FIBERLITE IND		401 E GOETZ AVE	SANTA ANA	92705	ROG	17	R	17	Coastal	5/20/2001
61319	AQ003898	GOOD STUFF FOOD CO INC		1801-183 BLAKE AVE	LOS ANGELES	90039	ROG	11	R	1	Coastal	5/20/2001
7591	AQ003904	THE BOEING COMPANY		8900 DE SOTO AVE	CANOGA PARK	91304 1960	ROG	4	R	12	Coastal	5/20/2001
14014	AQ003908	AB PLASTICS CORP		15730 S FIGUEROA ST	GARDENA	90248 2429	ROG	26	R	3	Coastal	5/20/2001
52719	AQ003910	BROWNWOOD FURNITURE, INC.		9805 6TH ST UNIT 104	RANCHO CUCAMONGA	91730 5751	ROG	12	R	16	Coastal	5/20/2001
20409	AQ003912	COAST INDUSTRIAL SUPPLY CO INC		15959 PIUMA AVE	CERRITOS	90701 1595	ROG	42	R	5	Coastal	5/20/2001
59765	AQ003914	ARAMARK UNIFORM SERVICES		4422 4440E DUNHAM ST	LOS ANGELES	90023	ROG	18	R	1	Coastal	5/20/2001
800197	AQ003916	JENSEN INDUSTRIES INC.		1946 E 46TH	VERNON	90058 2004	ROG	12	R	1	Coastal	5/20/2001
800098	AQ003918	NEWHALL REF CO INC (EIS USE)		22674 N CLAMPIT RD	NEWHALL	91321	ROG	48	R	13	Coastal	5/20/2001
24618	AQ003924	NUWAY LINEN & INDUSTRIAL RENTAL SERVICE		1351 ORIZABA AVE	LONG BEACH	90804 2439	ROG	13	R	4	Coastal	5/20/2001
6753	AQ003928	WHITTAKER CORP.		22116 W SOLEDAD CANYON F	SAUGUS	91350	ROG	63	R	13	Coastal	5/20/2001
83602	AQ003930	DRESHER INC, HARRIS HUB DIV		4900 VALLEY BLVD	LOS ANGELES	90032 3317	ROG	13	R	1	Coastal	5/20/2001
70276	AQ003934	COUNTY SANITATION DISTRICTS OF ORANGE (		2200 S YALE ST	SANTA ANA	92704 4427	ROG	366	R	17	Coastal	5/20/2001
62451	AQ003936	MICRODOT DIV - KAYNAR TECH INC		190 W CROWTHER AVE	PLACENTIA	92870	ROG	18	R	16	Coastal	5/20/2001
79397	AQ003938	OWENS-BROCKWAY GLASS CONTAINER INC		1331 E PHILADELPHIA ST	POMONA	91766 5564	ROG	13	R	10	Inland	5/20/2001
800264	AQ003946	EDGINGTON OIL COMPANY		2400 E ARTESIA BLVD	LONG BEACH	90805	ROG	239	R	4	Coastal	5/20/2001
6262	AQ003956	THE HON CO		2323 E FIRESTONE BLVD	SOUTH GATE	90280 2699	ROG	86	R	12	Coastal	5/20/2001
58055	AQ003958	JSP INTERNATIONAL		4062 GEORGIA BLVD	SAN BERNARDINO	92407 1852	ROG	98	R	16	Coastal	5/20/2001
45953	AQ003962	HAYES LEMMERZ INTERNATIONAL CAL INC		14500 FIRESTONE BLVD	LA MIRADA	90638 5964	ROG	9	R	1	Coastal	5/20/2001
800363	AQ003970	CONOCOPHILLIPS COMPANY		1660 W ANAHEIM ST	WILMINGTON	90744	ROG	80	R	4	Coastal	5/20/2001
800330	AQ003976	THUMS LONG BEACH		1105 HARBOR SCENIC DR PII	LONG BEACH	90802	ROG	15	R	1	Coastal	5/20/2001

800150	AQ003984	US GOVT, AF DEPT, MARCH AIR RESERVE BASE	MARCH AFB	RIVERSIDE	92518	ROG	114	R	23	Inland	5/20/2001
11766	AQ003988	BP EXP & OIL INC, BP MARINE AMERICAS DIV	1363 N GAFFEY ST	SAN PEDRO	90731	ROG	15	R	3	Coastal	5/20/2001
113572	AQ003990	PACIFIC PIPELINE SYSTEM, INC.	111 N FIRST ST	BURBANK	91502	ROG	14	R	4	Coastal	5/20/2001
59526	AQ003992	BFM ENERGY PRODUCTS CORP	2040 E DYER RD	SANTA ANA	92705 5777	ROG	15	R	17	Coastal	5/20/2001
12761	AQ003994	ANTHONY MFG CORP	1000 W SIERRA MADRE AVE	AZUSA	91702 1752	ROG	14	R	9	Inland	5/20/2001
800182	AQ004029	RIVERSIDE CEMENT CO (EIS USE)	1500 RUBIDOUX BLVD	RIVERSIDE	92509 1841	PM10	21	R	23	Inland	5/29/2001
115389	AQ004040	AES HUNTINGTON BEACH, LLC	21730 NEWLAND ST	HUNTINGTON BEACH	92646	ROG	4	R	17	Coastal	6/7/2001
2942	AQ004061	BARRY CONTROLS 093399	2323 VALLEY ST	BURBANK	91505 1336	PM10	10	R	7	Coastal	7/11/2001
800026	AQ004080	ULTRAMAR INC (NSR USE ONLY)	2402 E ANAHEIM ST	WILMINGTON	90744	CO	79	R	3	Coastal	7/18/2001
94237	AQ004084	ULTRAMAR INC	1401 WATER ST	LONG BEACH	90802	PM10	5	R	4	Coastal	7/22/2001
44758	AQ004085	LA CITY, DWP	111 N HOPE ST	LOS ANGELES	90012	PM10	15	P	4	Coastal	7/22/2001
1757	AQ004086	ATLANTIC RICHFIELD COMPANY	300 PIER T BERTH 121	LONG BEACH	90801	ROG	2	R	7	Coastal	7/25/2001
94203	AQ004092	ALLIED SIGNAL CORP	12950 SAN FERNANDO RD	SYLMAR	91350	ROG	8	R	7	Coastal	7/27/2001
106009	AQ004102	VENOCO INC	9865 OLYMPIC BLVD	BEVERLY HILLS	90212 3760	ROG	1	P	7	Coastal	7/27/2001
108701	AQ004116	SAINT-GOBAIN CONTAINERS, INC.	4000 ARDEN DR	EL MONTE	91731 1806	ROG	5	P	17	Coastal	7/31/2001
35302	AQ004119	OWENS CORNING	1501 N TAMARIND AVE	COMPTON	90222 4130	PM10	14	R	1	Coastal	7/31/2001
94203	AQ004121	ALLIED SIGNAL CORP	12950 SAN FERNANDO RD	SYLMAR	91350	ROG	12	R	7	Coastal	8/2/2001
800393	AQ004125	VALERO WILMINGTON ASPHALT PLANT	1651 ALAMEDA ST	WILMINGTON	90744	ROG	25	P	4	Coastal	8/3/2001
3417	AQ004128	AIR PROD & CHEM INC	23300 S ALAMEDA ST	CARSON	90810 1921	ROG	1	R	4	Coastal	8/3/2001
800393	AQ004130	VALERO WILMINGTON ASPHALT PLANT	1651 ALAMEDA ST	WILMINGTON	90744	ROG	24	R	3	Coastal	8/3/2001
61372	AQ004132	ARCO DLR, VAHAN PAPAZIAN	3291 W FLORIDA	HEMET	92545 3638	ROG	6	S	28	Inland	8/7/2001
68766	AQ004139	ARCO DLR/ARCO #5181, PSI #671	572 S MT VERNON AVE	SAN BERNARDINO	92410	ROG	5	S	2	Coastal	8/10/2001
112664	AQ004141	ARCO/PRESTIGE STATIONS, INC. #9522	3550 ROSECRANS BLVD	HAWTHORNE	90250 8230	ROG	4	S	17	Coastal	8/10/2001
42059	AQ004142	ARCO PROD CO/PRESTIGE STATIONS #5202	12502 HARBOR BLVD	GARDEN GROVE	92640	ROG	1	S	10	Inland	8/10/2001
65281	AQ004143	ARCO DLR, R C SERVICE GAS STN #6176	1001 E AMAR RD	WEST COVINA	91792 1300	ROG	6	S	17	Coastal	8/10/2001
112692	AQ004144	ARCO/PRESTIGE STATIONS, INC. #9737	14472 BROOKHURST ST	GARDEN GROVE	92640	ROG	6	S	1	Coastal	8/10/2001
128954	AQ004145	NRG POWER MARKETING, INC.	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	PM10	1	P	1	Coastal	8/14/2001
3417	AQ004153	AIR PROD & CHEM INC	23300 S ALAMEDA ST	CARSON	90810 1921	PM10	1	R	4	Coastal	8/21/2001
60342	AQ004186	UNITED STATES CAN CO	5650 E GRACE PL	COMMERCE	90022 4119	ROG	46	R	1	Coastal	9/20/2001
3134	AQ004188	THUMS LONG BEACH CO, UNIT NO.05	ISLAND WHITE	SAN PEDRO	90801	ROG	5	P	1	Coastal	9/20/2001
110982	AQ004194	COMMONWEALTH ALUMINUM CONCAST	2211 E CARSON ST	LONG BEACH	90810	ROG	1	P	10	Inland	9/26/2001
110982	AQ004195	COMMONWEALTH ALUMINUM CONCAST	2211 E CARSON ST	LONG BEACH	90810	ROG	3	P	10	Inland	9/26/2001
128940	AQ004202	INTERGEN NORTH AMERICAN DEVELOPMENT CI	VARIOUS LOCATIONS IN SCA	VERNON	90058	ROG	2	P	11	Inland	9/27/2001
3721	AQ004209	DART CONTAINER CORP OF CALIFORNIA	150 S MAPLE ST.	CORONA	92880 1704	ROG	650	R	6	Coastal	10/2/2001
129520	AQ004211	MINKA-LAVERY/AMBIENCE LIGHTING	2640 DEL AMO BLVD	CARSON	90221	ROG	54	P	4	Coastal	10/4/2001
14855	AQ004254	MILLER BREWING CO	15801 E 1ST ST	IRWINDALE	91706 2069	PM10	7	R	9	Inland	10/26/2001
800335	AQ004259	LA CITY, DEPT OF AIRPORT	275 CENTER WAY	LOS ANGELES	90045 5834	ROG	1	R	3	Coastal	10/30/2001
2982	AQ004263	SO CAL EDISON CO UNIT NO. 1	2500 E VICTORIA ST	COMPTON	90220	ROG	57	R	5	Coastal	11/6/2001
8582	AQ004277	SO CAL GAS CO/PLAYA DEL REY STORAGE FACI	8141 GULANA AVE	PLAYA DEL REY	90293 7930	PM10	2	P	1	Coastal	11/14/2001
123032	AQ004287	CALPINE CORP	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	CO	144	P	34	Inland	11/15/2001
123032	AQ004293	CALPINE CORP	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	CO	3	P	34	Inland	11/15/2001
68117	AQ004301	TIDELANDS OIL PRODUCTION COMPANY ETAL	552 PIER T AVE	LONG BEACH	90802 6211	CO	7	S	4	Coastal	11/16/2001
68117	AQ004302	TIDELANDS OIL PRODUCTION COMPANY ETAL	552 PIER T AVE	LONG BEACH	90802 6211	ROG	7	S	4	Coastal	11/16/2001
68117	AQ004303	TIDELANDS OIL PRODUCTION COMPANY ETAL	552 PIER T AVE	LONG BEACH	90802 6211	CO	3	S	4	Coastal	11/16/2001
68117	AQ004304	TIDELANDS OIL PRODUCTION COMPANY ETAL	552 PIER T AVE	LONG BEACH	90802 6211	ROG	4	S	4	Coastal	11/16/2001
68117	AQ004305	TIDELANDS OIL PRODUCTION COMPANY ETAL	552 PIER T AVE	LONG BEACH	90802 6211	ROG	10	S	4	Coastal	11/16/2001
68117	AQ004306	TIDELANDS OIL PRODUCTION COMPANY ETAL	552 PIER T AVE	LONG BEACH	90802 6211	CO	8	S	4	Coastal	11/16/2001
124374	AQ004313	NATIONAL RV INC.	100 SINCLAIR	PERRIS	92571	ROG	131	R	11	Inland	12/8/2001
128954	AQ004322	NRG POWER MARKETING, INC.	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	PM10	5	P	1	Coastal	12/27/2001
128954	AQ004323	NRG POWER MARKETING, INC.	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	PM10	3	P	12	Coastal	12/27/2001
128954	AQ004326	NRG POWER MARKETING, INC.	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	PM10	2	P	18	Coastal	12/27/2001
11501	AQ004328	MILUM TEXTILE SERV CO	443 S RAYMOND AVE	PASADENA	91105 2630	ROG	8	R	8	Inland	1/4/2002
46179	AQ004330	GOOD BEDROOMS INC	220 W MANVILLE	COMPTON	90220	ROG	11	R	4	Coastal	1/4/2002
14217	AQ004332	MODERN FAUCET MFG COMPANY	1700 E 58TH PL	LOS ANGELES	90001 1491	ROG	7	R	1	Coastal	1/4/2002
800026	AQ004336	ULTRAMAR INC (NSR USE ONLY)	2402 E ANAHEIM ST	WILMINGTON	90744	ROG	78	R	1	Coastal	1/4/2002
800144	AQ004338	UNION OIL CO OF CAL (NSR USE ONLY)	1660 W ANAHEIM ST 1480 W	WILMINGTON	90744 2304	ROG	2	R	8	Inland	1/4/2002
800144	AQ004340	UNION OIL CO OF CAL (NSR USE ONLY)	1660 W ANAHEIM ST 1480 W	WILMINGTON	90744 2304	ROG	3	R	8	Inland	1/4/2002
800144	AQ004342	UNION OIL CO OF CAL (NSR USE ONLY)	1660 W ANAHEIM ST 1480 W	WILMINGTON	90744 2304	ROG	2	R	8	Inland	1/4/2002

127299	AQ004352	WILDFLOWER ENERGY LP/INDIGO ENERGY FAC	63500	19TH AVE	NORTH PALM SPRING!	92258	NOX	30	P	34	Inland	1/15/2002
127299	AQ004353	WILDFLOWER ENERGY LP/INDIGO ENERGY FAC	63500	19TH AVE	NORTH PALM SPRING!	92258	NOX	66	P	30	Inland	1/15/2002
128179	AQ004360	PALM SPRINGS OIL COMPANY	7511	E ROSECRANS AVE	PARAMOUNT	90723	ROG	2	S	5	Coastal	1/15/2002
47232	AQ004361	ARCO CQC KILN	1175	CARRACK AVE	WILMINGTON	90744	ROG	14	R	12	Coastal	1/17/2002
800396	AQ004364	BP WEST COAST PROD. ARCO VINVALE TERMIN	8601	S GARFIELD AVE	SOUTH GATE	90280 3709	ROG	6	P	12	Coastal	1/17/2002
800170	AQ004369	LA CITY, DWP HARBOR GENERATING STATION	161	N ISLAND AVE	WILMINGTON	90744 6303	CO	98	R	5	Coastal	1/25/2002
40095	AQ004372	LONZA INC	1922	- 2031E 64TH & 65TH S	LOS ANGELES	90001 2100	ROG	5	R	1	Coastal	1/26/2002
800030	AQ004374	CHEVRON PRODUCTS CO.	324	W EL SEGUNDO BLVD	EL SEGUNDO	90245 3680	ROG	22	R	3	Coastal	1/29/2002
800026	AQ004383	ULTRAMAR INC (NSR USE ONLY)	2402	E ANAHEIM ST	WILMINGTON	90744	ROG	9	P	1	Coastal	1/31/2002
800026	AQ004384	ULTRAMAR INC (NSR USE ONLY)	2402	E ANAHEIM ST	WILMINGTON	90744	ROG	16	P	4	Coastal	1/31/2002
800026	AQ004394	ULTRAMAR INC (NSR USE ONLY)	2402	E ANAHEIM ST	WILMINGTON	90744	ROG	21	P	3	Coastal	1/31/2002
800193	AQ004396	LA CITY, DWP VALLEY GENERATING STATION	11801	SHELDON ST	SUN VALLEY	91352 1420	CO	2	R	5	Coastal	2/1/2002
21887	AQ004401	KIMBERLY-CLARK WORLDWIDE INC.-FLTN MILL	2001	E ORANGETHORPE AVE	FULLERTON	92831	PM10	1	P	7	Coastal	2/19/2002
1757	AQ004406	ATLANTIC RICHFIELD COMPANY	300	PIER T BERTH 121	LONG BEACH	90801	ROG	1	R	12	Coastal	3/1/2002
125474	AQ004408	VERTEX MICROWAVE PRODUCT, VERTEX RSI/D	3111	FUJITA ST	TORRANCE	90505	PM10	3	P	3	Coastal	3/1/2002
123032	AQ004417	CALPINE CORP	VARIOUS	LOCATIONS IN SCA(	DIAMOND BAR	91765	CO	2	P	34	Inland	3/21/2002
800397	AQ004432	BP WEST COAST PROD.,ARCO COLTON	2395	RIVERSIDE AVE	BLOOMINGTON	92316	ROG	2	P	34	Coastal	3/29/2002
800183	AQ004451	PARAMOUNT PETR CORP (EIS USE)	14700-08	DOWNEY AVE	PARAMOUNT	90723 4526	SOX	4	P	7	Coastal	4/5/2002
127299	AQ004467	WILDFLOWER ENERGY LP/INDIGO ENERGY FAC	63500	19TH AVE	NORTH PALM SPRING!	92258	NOX	6	P	9	Inland	4/26/2002
123032	AQ004495	CALPINE CORP	VARIOUS	LOCATIONS IN SCA(	DIAMOND BAR	91765	ROG	38	R	12	Coastal	5/9/2002
800330	AQ004496	THUMS LONG BEACH	1105	HARBOR SCENIC DR PII	LONG BEACH	90802	ROG	5	P	12	Coastal	5/9/2002
800075	AQ004499	LA CITY, DWP SCATTERGOOD GENERATING STI	12700	VISTA DEL MAR	PLAYA DEL REY	90293 8599	SOX	50	P	18	Coastal	5/10/2002
93560	AQ004500	CHEVRON USA PRODUCTS CO #201596	40635	WINCHESTER RD	TEMECULA	92591 5505	ROG	2	R	32	Inland	5/16/2002
24887	AQ004536	PACIFIC TUBE CO	5710	SMITHWAY ST	LOS ANGELES	90040 1585	ROG	2	S	12	Coastal	6/11/2002
135426	AQ004539	BP WEST COAST PRODUCTS LLC	4	CENTERPOINTE DR	LA PALMA	90623	ROG	6	S	12	Coastal	6/12/2002
135426	AQ004541	BP WEST COAST PRODUCTS LLC	4	CENTERPOINTE DR	LA PALMA	90623	ROG	9	S	18	Coastal	6/12/2002
135426	AQ004542	BP WEST COAST PRODUCTS LLC	4	CENTERPOINTE DR	LA PALMA	90623	ROG	5	S	32	Inland	6/12/2002
135426	AQ004544	BP WEST COAST PRODUCTS LLC	4	CENTERPOINTE DR	LA PALMA	90623	ROG	7	S	1	Coastal	6/12/2002
135426	AQ004545	BP WEST COAST PRODUCTS LLC	4	CENTERPOINTE DR	LA PALMA	90623	ROG	9	S	34	Inland	6/12/2002
48522	AQ004553	INTERNATIONAL RECTIFIER HEXFET AMERICA	41915	BUSINESS PARK DR	TEMECULA	92590 3603	ROG	1	R	1	Coastal	6/24/2002
110924	AQ004555	WESTWAY TERMINAL COMPANY	BERTHS	70-71 SIGNAL ST	SAN PEDRO	90731	ROG	2	R	12	Coastal	6/25/2002
60849	AQ004558	ARCO DLR	5777	HOLLYWOOD BLVD	LOS ANGELES	90028	ROG	1	R	1	Coastal	6/26/2002
130231	AQ004561	CORAL ENERGY RESOURCES, LP	VARIOUS	LOCATIONS IN SCA(	DIAMOND BAR	91765	ROG	14	R	34	Inland	6/28/2002
78148	AQ004564	LAXFUEL CORP UNIT NO.12	9900	LAXFUEL RD	LOS ANGELES	90045	ROG	4	R	1	Coastal	7/9/2002
133070	AQ004578	AVALON LABORATORIES, INC.	2610	E HOMESTEAD	RANCHO DOMINGUEZ	90220	ROG	5	P	6	Coastal	7/31/2002
128954	AQ004580	NRG POWER MARKETING, INC.	VARIOUS	LOCATIONS IN SCA(	DIAMOND BAR	91765	ROG	20	R	3	Coastal	7/31/2002
119907	AQ004608	BERRY PETROLEUM COMPANY	25121	N SIERRA HWY	SANTA CLARITA	91321 2007	PM10	1	R	4	Coastal	8/9/2002
119907	AQ004610	BERRY PETROLEUM COMPANY	25121	N SIERRA HWY	SANTA CLARITA	91321 2007	ROG	6	R	1	Coastal	8/9/2002
119907	AQ004612	BERRY PETROLEUM COMPANY	25121	N SIERRA HWY	SANTA CLARITA	91321 2007	SOX	1	R	4	Coastal	8/9/2002
17301	AQ004614	ORANGE COUNTY SANITATION DISTRICT	10844	ELLIS AVE	FOUNTAIN VALLEY	92708 7018	ROG	57	R	18	Coastal	8/9/2002
17301	AQ004619	ORANGE COUNTY SANITATION DISTRICT	10844	ELLIS AVE	FOUNTAIN VALLEY	92708 7018	ROG	4	R	18	Coastal	8/9/2002
133632	AQ004621	COMMANDER NAVY REGION SOUTHWEST	VARIOUS	LOCATIONS IN SCA(	COMMERCE	90040	NOX	6	P	5	Coastal	8/16/2002
8851	AQ004629	BECKMAN COULTER, INC.	4300	N HARBOR BLVD	FULLERTON	92835 1091	ROG	15	P	4	Coastal	8/30/2002
127749	AQ004631	ULTRAMAR, INC	1220	N ALAMEDA ST	WILMINGTON	90744 2847	ROG	1	R	2	Coastal	9/3/2002
127749	AQ004633	ULTRAMAR, INC	1220	N ALAMEDA ST	WILMINGTON	90744 2847	ROG	1	R	2	Coastal	9/3/2002
127749	AQ004635	ULTRAMAR, INC	1220	N ALAMEDA ST	WILMINGTON	90744 2847	ROG	1	R	2	Coastal	9/3/2002
127749	AQ004637	ULTRAMAR, INC	1220	N ALAMEDA ST	WILMINGTON	90744 2847	ROG	1	R	2	Coastal	9/3/2002
127749	AQ004639	ULTRAMAR, INC	1220	N ALAMEDA ST	WILMINGTON	90744 2847	ROG	1	R	2	Coastal	9/3/2002
127749	AQ004641	ULTRAMAR, INC	1220	N ALAMEDA ST	WILMINGTON	90744 2847	ROG	1	R	2	Coastal	9/3/2002
127749	AQ004643	ULTRAMAR, INC	1220	N ALAMEDA ST	WILMINGTON	90744 2847	ROG	1	R	2	Coastal	9/3/2002
127749	AQ004647	ULTRAMAR, INC	1220	N ALAMEDA ST	WILMINGTON	90744 2847	ROG	43	R	1	Coastal	9/6/2002
127749	AQ004649	ULTRAMAR, INC	1220	N ALAMEDA ST	WILMINGTON	90744 2847	ROG	56	R	1	Coastal	9/6/2002
127749	AQ004650	ULTRAMAR, INC	1220	N ALAMEDA ST	WILMINGTON	90744 2847	ROG	1	R	2	Coastal	9/11/2002
127648	AQ004651	ULTRAMAR INC/MARINE TANK FARM	130	W A ST	WILMINGTON	90744	ROG	1	R	2	Coastal	9/11/2002
56906	AQ004657	ROYALWEVE CARPET MILLS INC	2310	E 52ND ST	LOS ANGELES	90058 0285	CO	1	S	2	Coastal	9/12/2002
56906	AQ004658	ROYALWEVE CARPET MILLS INC	2310	E 52ND ST	LOS ANGELES	90058 0285	NOX	12	S	2	Coastal	9/12/2002
56906	AQ004659	ROYALWEVE CARPET MILLS INC	2310	E 52ND ST	LOS ANGELES	90058 0285	PM10	5	S	2	Coastal	9/12/2002
56906	AQ004660	ROYALWEVE CARPET MILLS INC	2310	E 52ND ST	LOS ANGELES	90058 0285	ROG	1	S	2	Coastal	9/12/2002

128954 AQ004686	NRG POWER MARKETING, INC.	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765 ROG	25 R	3	Coastal	9/25/2002	
45489 AQ004692	GUIDANT INC	26531 YNEZ RD	TEMECULA	92591 4628 NOX	1 R	4	Coastal	9/27/2002	
45489 AQ004694	GUIDANT INC	26531 YNEZ RD	TEMECULA	92591 4628 ROG	1 R	4	Coastal	9/27/2002	
105903 AQ004707	PRIME WHEEL	17704 S BROADWAY ST	CARSON	90746 ROG	14 R	16	Coastal	10/3/2002	
110672 AQ004711	PRIMARY COLOR PRINTING, LLC	5750 HANNUM AVE	CULVER CITY	90230 ROG	4 R	4	Coastal	10/10/2002	
82675 AQ004713	RUDOLPH FOODS WEST INC	1010 S SIERRA AVE	SAN BERNARDINO	92408 ROG	1 R	4	Coastal	10/11/2002	
800051 AQ004724	ARCO TERMINAL SERVICES CORPORATION	5905 PARAMOUNT BLVD	LONG BEACH	90805 ROG	5 R	12	Coastal	10/17/2002	
800074 AQ004748	LA CITY, DWP HAYNES GENERATING STATION	6801 2ND ST	LONG BEACH	90803 4324 CO	9 R	18	Coastal	11/12/2002	
800074 AQ004754	LA CITY, DWP HAYNES GENERATING STATION	6801 2ND ST	LONG BEACH	90803 4324 CO	2 R	1	Coastal	11/12/2002	
800074 AQ004756	LA CITY, DWP HAYNES GENERATING STATION	6801 2ND ST	LONG BEACH	90803 4324 PM10	31 R	17	Coastal	11/12/2002	
77014 AQ004791	SARA LEE FRESH, INC	5200 S ALAMEDA ST	VERNON	90058 3420 ROG	33 P	1	Coastal	12/11/2002	
121737 AQ004796	MOUNTAINVIEW POWER COMPANY LLC	25770 SAN BERNARDINO AVI	SAN BERNARDINO	92408 CO	4 R	11	Inland	12/12/2002	
121737 AQ004797	MOUNTAINVIEW POWER COMPANY LLC	25770 SAN BERNARDINO AVI	SAN BERNARDINO	92408 CO	3 R	11	Inland	12/12/2002	
101977 AQ004849	SIGNAL HILL PETROLEUM INC	2901 ORANGE AVE	LONG BEACH	90806 ROG	5 P	1	Coastal	1/21/2003	
137897 AQ004850	EQUILON ENTERPRISE LLC	4437 SEPULVEDA	TORRANCE	90503 ROG	2 S	3	Coastal	1/28/2003	
800089 AQ004857	EXXONMOBIL OIL CORPORATION	3700 W 190TH ST	TORRANCE	90504 5790 ROG	21 R	1	Coastal	1/29/2003	
69407 AQ004863	GULFSTREAM AEROSPACE CORP	4150 DONALD DOUGLAS DR	LONG BEACH	90808 ROG	2 P	1	Coastal	1/30/2003	
17971 AQ004879	ELECTROPLY INC	140 WASHINGTON ST	EL SEGUNDO	90245 4344 ROG	10 R	3	Coastal	2/20/2003	
132506 AQ004881	ARCO FAC #05110, BP WEST COAST PRODS LL	5731 FIRESTONE BLVD #511	SOUTH GATE	90280 3703 ROG	2 R	1	Coastal	2/20/2003	
135426 AQ004883	BP WEST COAST PRODUCTS LLC	4 CENTERPOINTE DR	LA PALMA	90623 ROG	7 S	4	Coastal	2/28/2003	
800409 AQ004885	NORTHROP GRUMMAN SPACE & MISSION SYSTI	1 SPACE PARK BLDGS. D1,3	REDONDO BEACH	90278 ROG	11 P	1	Coastal	3/5/2003	
131003 AQ004891	BP WEST COAST PROD. LLC, CARSON REFINER	1801 E SEPULVEDA BLVD	CARSON	90745 6121 CO	1 P	5	Coastal	3/6/2003	
131003 AQ004892	BP WEST COAST PROD. LLC, CARSON REFINER	1801 E SEPULVEDA BLVD	CARSON	90745 6121 CO	77 P	5	Coastal	3/7/2003	
131003 AQ004893	BP WEST COAST PROD. LLC, CARSON REFINER	1801 E SEPULVEDA BLVD	CARSON	90745 6121 CO	11 P	5	Coastal	3/7/2003	
131003 AQ004894	BP WEST COAST PROD. LLC, CARSON REFINER	1801 E SEPULVEDA BLVD	CARSON	90745 6121 PM10	114 P	4	Coastal	3/7/2003	
114458 AQ004898	ALL AMERICAN ASPHALT	454 N MCPHERSON AVE	ORANGE	92869 NOX	15 S	17	Coastal	3/12/2003	
131003 AQ004907	BP WEST COAST PROD. LLC, CARSON REFINER	1801 E SEPULVEDA BLVD	CARSON	90745 6121 PM10	4 P	4	Coastal	3/21/2003	
131003 AQ004908	BP WEST COAST PROD. LLC, CARSON REFINER	1801 E SEPULVEDA BLVD	CARSON	90745 6121 PM10	4 P	4	Coastal	3/21/2003	
131003 AQ004909	BP WEST COAST PROD. LLC, CARSON REFINER	1801 E SEPULVEDA BLVD	CARSON	90745 6121 PM10	4 P	4	Coastal	3/21/2003	
131003 AQ004910	BP WEST COAST PROD. LLC, CARSON REFINER	1801 E SEPULVEDA BLVD	CARSON	90745 6121 PM10	4 P	4	Coastal	3/21/2003	
131003 AQ004911	BP WEST COAST PROD. LLC, CARSON REFINER	1801 E SEPULVEDA BLVD	CARSON	90745 6121 PM10	3 P	4	Coastal	3/28/2003	
131003 AQ004912	BP WEST COAST PROD. LLC, CARSON REFINER	1801 E SEPULVEDA BLVD	CARSON	90745 6121 ROG	1 P	1	Coastal	3/28/2003	
131003 AQ004913	BP WEST COAST PROD. LLC, CARSON REFINER	1801 E SEPULVEDA BLVD	CARSON	90745 6121 ROG	6 P	19	Coastal	3/28/2003	
131003 AQ004914	BP WEST COAST PROD. LLC, CARSON REFINER	1801 E SEPULVEDA BLVD	CARSON	90745 6121 ROG	20 P	19	Coastal	3/28/2003	
800030 AQ004923	CHEVRON PRODUCTS CO.	324 W EL SEGUNDO BLVD	EL SEGUNDO	90245 3680 ROG	197 P	1	Coastal	4/2/2003	
2044 AQ004931	G B MFG INC/CALIF ACRYLIC, DBA CAL SPAS	1462 & 1481E NINTH ST	POMONA	91766 3833 ROG	25 P	2	Coastal	4/8/2003	
800030 AQ004936	CHEVRON PRODUCTS CO.	324 W EL SEGUNDO BLVD	EL SEGUNDO	90245 3680 ROG	38 P	1	Coastal	4/9/2003	
800030 AQ004940	CHEVRON PRODUCTS CO.	324 W EL SEGUNDO BLVD	EL SEGUNDO	90245 3680 PM10	14 P	5	Coastal	4/9/2003	
65382 AQ004954	SFPP, L. P. 'S COLTON TERMINAL	2359 S RIVERSIDE AVE	BLOOMINGTON	92316 2931 ROG	1 R	17	Coastal	4/17/2003	
129460 AQ004959	WORLD OIL MARKETING CO #102	2002 DEL AMO BLVD	LONG BEACH	90807 ROG	1 P	1	Coastal	4/22/2003	
129460 AQ004960	WORLD OIL MARKETING CO #102	2002 DEL AMO BLVD	LONG BEACH	90807 ROG	1 P	5	Coastal	4/22/2003	
129460 AQ004961	WORLD OIL MARKETING CO #102	2002 DEL AMO BLVD	LONG BEACH	90807 ROG	1 P	5	Coastal	4/22/2003	
129460 AQ004965	WORLD OIL MARKETING CO #102	2002 DEL AMO BLVD	LONG BEACH	90807 ROG	4 P	5	Coastal	4/22/2003	
800080 AQ004978	LUNDAY-THAGARD OIL CO	9301 GARFIELD AVE	SOUTH GATE	90280 3898 ROG	1 P	1	Coastal	5/13/2003	
14502 AQ004982	VERNON CITY, LIGHT & POWER DEPT	2715 E 50TH ST	VERNON	90058 2901 ROG	37 R	1	Coastal	5/27/2003	
14502 AQ004984	VERNON CITY, LIGHT & POWER DEPT	2715 E 50TH ST	VERNON	90058 2901 CO	1 R	1	Coastal	5/27/2003	
800038 AQ004986	DOUGLAS PRODUCTS DIVISION	3855 LAKEWOOD & 2401 WA	LONG BEACH	90846 0001 CO	1 R	2	Coastal	5/29/2003	
15794 AQ004996	NISSIN FOODS (USA) CO., INC.	2001 W ROSECRANS AVE	GARDENA	90249 2994 NOX	6 R	4	Coastal	6/19/2003	
8582 AQ005011	SO CAL GAS CO/PLAYA DEL REY STORAGE FACI	8141 GULANA AVE	PLAYA DEL REY	90293 7930 ROG	1 P	1	Coastal	7/8/2003	
14926 AQ005017	SEMPRA ENERGY (THE GAS CO)	1801 S ATLANTIC BLVD	MONTEREY PARK	91754 5298 CO	202 R	1	Coastal	7/8/2003	
8582 AQ005018	SO CAL GAS CO/PLAYA DEL REY STORAGE FACI	8141 GULANA AVE	PLAYA DEL REY	90293 7930 CO	7 P	1	Coastal	7/8/2003	
133536 AQ005019	HIGH DESERT POWER TRUST	19000 PERIMETER RD	VICTORVILLE	92394 ROG	501 P	1	Coastal	7/8/2003	
136994 AQ005020	HIGH DESERT II, LLC	19000 PERIMETER RD	VICTORVILLE	92394 7958 ROG	136 P	1	Coastal	7/9/2003	
136994 AQ005021	HIGH DESERT II, LLC	19000 PERIMETER RD	VICTORVILLE	92394 7958 ROG	64 P	2	Coastal	7/9/2003	
4242 AQ005022	SAN DIEGO GAS & ELECTRIC	14601 VIRGINIA ST	MORENO VALLEY	92555 8100 ROG	28 R	24	Inland	7/10/2003	
133536 AQ005029	HIGH DESERT POWER TRUST	19000 PERIMETER RD	VICTORVILLE	92394 ROG	348 P	1	Coastal	7/14/2003	
136994 AQ005030	HIGH DESERT II, LLC	19000 PERIMETER RD	VICTORVILLE	92394 7958 ROG	727 P	1	Coastal	7/14/2003	
800193 AQ005031	LA CITY, DWP VALLEY GENERATING STATION	11801 SHELDON ST	SUN VALLEY	91352 1420 ROG	6 P	2	Coastal	7/15/2003	

800170 AQ005033	LA CITY, DWP HARBOR GENERATING STATION	161 N ISLAND AVE	WILMINGTON	90744 6303 ROG	8 R	1	Coastal	7/18/2003
44758 AQ005036	LA CITY, DWP	111 N HOPE ST	LOS ANGELES	90012 CO	70 R	3	Coastal	7/18/2003
111464 AQ005042	COMPOSITE STRUCTURES LLC	801 ROYAL OAK DR	MONROVIA	91016 ROG	20 R	1	Coastal	8/5/2003
137380 AQ005058	BP WEST COAST PRODUCTS LLC	6454 FOOTHILL BLVD	TUJUNGA	91042 2729 ROG	14 S	8	Inland	8/13/2003
800079 AQ005064	PETRO DIAMOND TERMINAL CO	1920 LUGGER BERTH 83 WAY	LONG BEACH	90813 2634 ROG	1 R	2	Coastal	8/13/2003
128243 AQ005068	MAGNOLIA POWER PROJECT,SCPPA	164 W MAGNOLIA BLVD	BURBANK	91502 1720 ROG	22 R	2	Coastal	8/13/2003
130231 AQ005079	CORAL ENERGY RESOURCES, LP	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765 ROG	23 R	34	Inland	8/21/2003
104017 AQ005086	AERA ENERGY LLC	20101 GOLDENWEST ST	HUNTINGTON BEACH	92648 2628 CO	310 R	18	Coastal	9/5/2003
800026 AQ005088	ULTRAMAR INC (NSR USE ONLY)	2402 E ANAHEIM ST	WILMINGTON	90744 ROG	23 R	1	Coastal	9/5/2003
800038 AQ005112	DOUGLAS PRODUCTS DIVISION	3855 LAKEWOOD & 2401 WA	LONG BEACH	90846 0001 ROG	8 R	4	Coastal	9/23/2003
136516 AQ005116	BLACKSAND PARTNERS LP	500 N KRAEMER BLVD	BREA	92821 ROG	3 P	16	Coastal	9/26/2003
136516 AQ005117	BLACKSAND PARTNERS LP	500 N KRAEMER BLVD	BREA	92821 PM10	1 P	16	Coastal	9/26/2003
800026 AQ005122	ULTRAMAR INC (NSR USE ONLY)	2402 E ANAHEIM ST	WILMINGTON	90744 ROG	12 R	4	Coastal	9/30/2003
87659 AQ005134	GOLDEN WEST HOMES	3100 N PERRIS BLVD	PERRIS	92571 ROG	24 R	1	Coastal	10/14/2003
135892 AQ005136	LAGRAPHICO, INC	3800 VANOWEN ST	BURBANK	91505 ROG	21 R	2	Coastal	10/17/2003
124528 AQ005138	GRAPHIC PRESS INC	6100 MALT AVE	LOS ANGELES	90040 ROG	1 R	2	Coastal	10/17/2003
130231 AQ005142	CORAL ENERGY RESOURCES, LP	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765 ROG	16 P	1	Coastal	10/23/2003
800362 AQ005155	CONOCOPHILLIPS COMPANY	1520 E SEPULVEDA BLVD	CARSON	90745 ROG	1 R	18	Coastal	11/7/2003
121727 AQ005157	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805 NOX	157 P	4	Coastal	11/13/2003
121727 AQ005158	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805 NOX	77 P	4	Coastal	11/13/2003
121727 AQ005159	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805 NOX	115 P	4	Coastal	11/13/2003
121727 AQ005160	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805 NOX	44 P	4	Coastal	11/13/2003
121727 AQ005161	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805 NOX	21 P	4	Coastal	11/13/2003
121727 AQ005162	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805 NOX	17 P	3	Coastal	11/13/2003
121727 AQ005163	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805 NOX	6 P	4	Coastal	11/13/2003
121727 AQ005164	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805 NOX	5 P	4	Coastal	11/13/2003
121727 AQ005165	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805 NOX	4 P	12	Coastal	11/13/2003
121727 AQ005166	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805 NOX	1 P	1	Coastal	11/13/2003
138810 AQ005200	EQUILON ENTERPRISES LLC	19706 VENTURA BLVD	WOODLAND HILLS	91364 2622 ROG	2 S	1	Coastal	12/17/2003
8936 AQ005205	FLEETWOOD MOTOR HOMES OF CAL INC	5300 VIA RICARDO	RIVERSIDE	92509 2413 ROG	5 R	34	Inland	12/24/2003
88201 AQ005210	ADOHR FARMS INC	1620 N SPRING ST	LOS ANGELES	90012 CO	2 R	1	Coastal	1/7/2004
3968 AQ005213	TABC, INC	6375 PARAMOUNT BLVD	LONG BEACH	90805 3301 PM10	7 R	1	Coastal	1/8/2004
100154 AQ005216	COLMAC ENERGY INC	62-300 GENE WELMAS DR	MECCA	92254 0758 NOX	27 P	4	Coastal	1/14/2004
100154 AQ005218	COLMAC ENERGY INC	62-300 GENE WELMAS DR	MECCA	92254 0758 NOX	40 P	4	Coastal	1/20/2004
6362 AQ005222	JACUZZI WHIRLPOOL BATH INC	3000 W SEGERSTROM AVE	SANTA ANA	92704 6526 ROG	5 S	16	Coastal	1/23/2004
6362 AQ005223	JACUZZI WHIRLPOOL BATH INC	3000 W SEGERSTROM AVE	SANTA ANA	92704 6526 ROG	5 S	17	Coastal	1/23/2004
6362 AQ005224	JACUZZI WHIRLPOOL BATH INC	3000 W SEGERSTROM AVE	SANTA ANA	92704 6526 ROG	4 S	17	Coastal	1/23/2004
100154 AQ005228	COLMAC ENERGY INC	62-300 GENE WELMAS DR	MECCA	92254 0758 NOX	70 P	24	Coastal	1/29/2004
100154 AQ005229	COLMAC ENERGY INC	62-300 GENE WELMAS DR	MECCA	92254 0758 NOX	17 P	4	Coastal	1/29/2004
138122 AQ005230	EQUILON ENTER., SHELL OIL PRODUCTS US	11755 E IMPERIAL HWY	NORWALK	90650 ROG	4 S	1	Coastal	1/29/2004
138128 AQ005231	ARCO PRODUCTS COMPANY	1589 N ORANGE GROVE	POMONA	91767 ROG	6 S	5	Coastal	1/29/2004
138121 AQ005233	EQUILON ENTER., SHELL OIL PROD US, DBA	12313 W JEFFERSON	CULVER CITY	90230 ROG	2 S	2	Coastal	1/29/2004
108532 AQ005235	TIDELANDS OIL PRODUCTION CO	1348 W 9TH ST	LONG BEACH	90813 CO	72 S	4	Coastal	2/11/2004
800372 AQ005258	EQUILON ENTER. LLC, SHELL OIL PROD. US	20945 S WILMINGTON	CARSON	90810 ROG	21 R	1	Coastal	3/11/2004
800396 AQ005262	BP WEST COAST PROD. ARCO VINVALE TERMIN	8601 S GARFIELD AVE	SOUTH GATE	90280 3709 ROG	363 R	5	Coastal	3/17/2004
800370 AQ005272	EQUILON ENTER., LLC, SHELL OIL PROD. U S	2101 E PACIFIC COAST HWY	WILMINGTON	90744 2914 ROG	5 R	1	Coastal	3/23/2004
42630 AQ005280	PRAXAIR INC	5705 AIRPORT DR	ONTARIO	91761 8611 ROG	1 R	4	Coastal	4/1/2004
800079 AQ005298	PETRO DIAMOND TERMINAL CO	1920 LUGGER BERTH 83 WAY	LONG BEACH	90813 2634 ROG	19 P	1	Coastal	4/13/2004
116931 AQ005306	EQUILON ENT LLC, SHELL OIL PROD. U S	2457 REDONDO AVE	SIGNAL HILL	90806 ROG	161 R	1	Coastal	4/16/2004
123032 AQ005311	CALPINE CORP	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765 SOX	14 P	9	Inland	4/20/2004
134587 AQ005327	NESTLE USA - PREPARED FOODS DIVISION INC	9601 CANOGA AVE	CHATSWORTH	91311 ROG	31 R	3	Coastal	4/30/2004
137722 AQ005329	VOPAK TERMINAL LONG BEACH INC,A DELAWA	3601 DOCK ST	SAN PEDRO	90731 7540 ROG	13 R	7	Coastal	4/30/2004
120494 AQ005331	COSTCO WHOLESALE #411	17900 NEWHOPE ST	FOUNTAIN VALLEY	92708 ROG	10 P	1	Coastal	5/4/2004
120494 AQ005334	COSTCO WHOLESALE #411	17900 NEWHOPE ST	FOUNTAIN VALLEY	92708 ROG	56 P	1	Coastal	5/4/2004
800370 AQ005344	EQUILON ENTER., LLC, SHELL OIL PROD. U S	2101 E PACIFIC COAST HWY	WILMINGTON	90744 2914 ROG	1 R	1	Coastal	5/6/2004
116383 AQ005348	EQUILON ENTERPRISES, LLC, L.A. TERMINAL	2015 LONG BEACH AVE	LOS ANGELES	90058 ROG	8 S	1	Coastal	5/11/2004
121727 AQ005349	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805 SOX	3 P	12	Coastal	5/11/2004
800030 AQ005350	CHEVRON PRODUCTS CO.	324 W EL SEGUNDO BLVD	EL SEGUNDO	90245 3680 ROG	32 R	1	Coastal	5/11/2004

116383 AQ005354	EQUILON ENTERPRISES, LLC, L.A. TERMINAL	2015 LONG BEACH AVE	LOS ANGELES	90058	ROG	7 S	1	Coastal	5/11/2004
116383 AQ005355	EQUILON ENTERPRISES, LLC, L.A. TERMINAL	2015 LONG BEACH AVE	LOS ANGELES	90058	ROG	4 S	1	Coastal	5/11/2004
116383 AQ005356	EQUILON ENTERPRISES, LLC, L.A. TERMINAL	2015 LONG BEACH AVE	LOS ANGELES	90058	ROG	4 S	1	Coastal	5/12/2004
116383 AQ005357	EQUILON ENTERPRISES, LLC, L.A. TERMINAL	2015 LONG BEACH AVE	LOS ANGELES	90058	ROG	4 S	1	Coastal	5/12/2004
116383 AQ005358	EQUILON ENTERPRISES, LLC, L.A. TERMINAL	2015 LONG BEACH AVE	LOS ANGELES	90058	ROG	8 S	1	Coastal	5/12/2004
121727 AQ005359	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805	SOX	1 P	13	Coastal	5/12/2004
121727 AQ005360	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805	SOX	1 P	4	Coastal	5/12/2004
121727 AQ005361	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805	SOX	10 P	7	Coastal	5/12/2004
121727 AQ005362	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805	SOX	10 P	18	Coastal	5/12/2004
121727 AQ005363	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805	SOX	75 P	1	Coastal	5/12/2004
121727 AQ005364	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805	SOX	47 P	4	Coastal	5/12/2004
128954 AQ005366	NRG POWER MARKETING, INC.	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	ROG	10 R	3	Coastal	5/14/2004
114925 AQ005373	MAGNESS PETROLEUM COMPANY	625 E ANAHEIM ST	WILMINGTON	90744 4652	ROG	2 R	1	Coastal	5/21/2004
21482 AQ005375	VOPAK TERMINAL LOS ANGELES, INC.	2200 PACIFIC COAST HWY	WILMINGTON	90744 2921	ROG	250 P	2	Coastal	5/21/2004
15544 AQ005383	REICHHOLD INC	237 S MOTOR AVE	AZUSA	91702 3228	ROG	1 P	33	Inland	5/25/2004
106810 AQ005393	INTERSTATE BRANDS CORP	2801 S TOWNE AVE	POMONA	91766 6208	ROG	10 R	33	Inland	5/28/2004
128552 AQ005396	COSTCO WHOLESALE INC	17550 CASTLETON RD	CITY OF INDUSTRY	91745	ROG	7 R	5	Coastal	5/28/2004
800367 AQ005414	IPS CORP	17109 S MAIN ST	GARDENA	90248	ROG	25 P	2	Coastal	6/16/2004
112976 AQ005422	SOUTHWEST GREASE BUSINESS EXXON CO US.	19530 S ALAMEDA ST	RANCHO DOMINGUEZ	90221	ROG	2 S	4	Coastal	6/25/2004
112976 AQ005423	SOUTHWEST GREASE BUSINESS EXXON CO US.	19530 S ALAMEDA ST	RANCHO DOMINGUEZ	90221	ROG	2 S	4	Coastal	6/25/2004
132633 AQ005427	ARCO FAC #05996, BP WEST COAST PRODS LL	11768 FOOTHILL BLVD	RANCHO CUCAMONGA	91730	ROG	1 R	16	Coastal	6/29/2004
141236 AQ005433	CHINA TIMES PRINTING, INC	333 W MISSION RD	SAN GABRIEL	91776	ROG	16 P	3	Coastal	7/6/2004
800171 AQ005436	EXXONMOBIL OIL CORPORATION (EIS USE)	2619 E 37TH ST	VERNON	90058	ROG	21 R	1	Coastal	7/13/2004
121727 AQ005440	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805	PM10	4 P	7	Coastal	7/13/2004
121727 AQ005445	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805	PM10	1 P	17	Coastal	7/20/2004
800080 AQ005449	LUNDAY-THAGARD OIL CO	9301 GARFIELD AVE	SOUTH GATE	90280 3898	ROG	3 P	2	Coastal	7/20/2004
121727 AQ005452	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805	PM10	4 P	16	Coastal	7/22/2004
121727 AQ005453	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805	PM10	4 P	16	Coastal	7/22/2004
121727 AQ005458	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805	ROG	30 P	1	Coastal	7/28/2004
800030 AQ005461	CHEVRON PRODUCTS CO.	324 W EL SEGUNDO BLVD	EL SEGUNDO	90245 3680	ROG	12 R	3	Coastal	8/11/2004
800037 AQ005469	DEMENNO/KERDOON	2000 N ALAMEDA ST	COMPTON	90222	ROG	1 R	4	Coastal	8/12/2004
133632 AQ005473	COMMANDER NAVY REGION SOUTHWEST	VARIOUS LOCATIONS IN SCA	COMMERCE	90040	ROG	14 P	33	Inland	8/13/2004
116572 AQ005477	EQUILON DLR, GARDEN GROVE SHELL #1, J HL	10971 CHAPMAN	GARDEN GROVE	92840	ROG	1 R	1	Coastal	8/26/2004
131819 AQ005482	MODEM GRAPHICS, INC	18600 E SAN JOSE AVE	CITY OF INDUSTRY	91748	ROG	9 P	4	Coastal	9/2/2004
25318 AQ005485	PREMIER INDUSTRIES INC., INSULFOAM	5635 SCHAEFER AVE	CHINO	91710 9048	ROG	2 P	11	Inland	9/3/2004
800067 AQ005486	BOEING SATELLITE SYSTEMS INC	IMPERIAL MAPLE NASH & SEL	EL SEGUNDO	90245	ROG	102 P	12	Coastal	9/3/2004
141453 AQ005488	EQUILON ENTERPRISES LLC	3010 S BUNDY DR	LOS ANGELES	90066	ROG	3 S	1	Coastal	9/7/2004
141891 AQ005489	AES PACIFIC, INC.	12700 TAYLOR ST	GRAND TERRACE	92313	PM10	7 P	11	Inland	9/9/2004
141891 AQ005490	AES PACIFIC, INC.	12700 TAYLOR ST	GRAND TERRACE	92313	PM10	3 P	22	Inland	9/9/2004
17301 AQ005493	ORANGE COUNTY SANITATION DISTRICT	10844 ELLIS AVE	FOUNTAIN VALLEY	92708 7018	ROG	4 R	18	Coastal	10/1/2004
105903 AQ005495	PRIME WHEEL	17704 S BROADWAY ST	CARSON	90746	NOX	7 R	4	Coastal	10/5/2004
133987 AQ005502	PLAINS EXPLORATION & PRODUCTION CO, LP	5640 S FAIRFAX AVE	LOS ANGELES	90056	ROG	37 P	18	Coastal	10/15/2004
123032 AQ005511	CALPINE CORP	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	CO	26 P	16	Coastal	10/29/2004
141891 AQ005512	AES PACIFIC, INC.	12700 TAYLOR ST	GRAND TERRACE	92313	PM10	2 P	11	Inland	10/29/2004
104017 AQ005518	AERA ENERGY LLC	20101 GOLDENWEST ST	HUNTINGTON BEACH	92648 2628	CO	18 R	2	Coastal	11/5/2004
800408 AQ005520	NORTHROP GRUMMAN SPACE & MISSION SYST	3301 1700 AVIATION & ROSE	MANHATTAN BEACH	90266	ROG	9 R	3	Coastal	11/5/2004
141987 AQ005523	EQUILON ENTERPRISES LLC	4647 LAUREL CANYON	NORTH HOLLYWOOD	91607	ROG	2 S	7	Coastal	11/18/2004
800183 AQ005524	PARAMOUNT PETR CORP (EIS USE)	14700-08 DOWNEY AVE	PARAMOUNT	90723 4526	CO	26 P	16	Coastal	11/19/2004
800183 AQ005525	PARAMOUNT PETR CORP (EIS USE)	14700-08 DOWNEY AVE	PARAMOUNT	90723 4526	CO	28 P	18	Coastal	11/19/2004
121727 AQ005526	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805	NOX	4 P	4	Coastal	11/24/2004
121727 AQ005527	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805	NOX	14 P	3	Coastal	11/24/2004
121727 AQ005528	PACIFIC PIPELINE SYSTEM LLC	5900 CHERRY AVE	LONG BEACH	90805	NOX	4 P	13	Coastal	11/24/2004
132451 AQ005538	WEYERHAEUSER COMPANY	19615 S SUSANA RD	COMPTON	90221	ROG	50 P	1	Coastal	12/3/2004
800183 AQ005556	PARAMOUNT PETR CORP (EIS USE)	14700-08 DOWNEY AVE	PARAMOUNT	90723 4526	CO	4 P	3	Coastal	12/14/2004
800367 AQ005557	IPS CORP	17109 S MAIN ST	GARDENA	90248	ROG	2 R	4	Coastal	12/15/2004
800074 AQ005560	LA CITY, DWP HAYNES GENERATING STATION	6801 2ND ST	LONG BEACH	90803 4324	CO	23 R	3	Coastal	12/16/2004
123032 AQ005578	CALPINE CORP	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	CO	623 R	16	Coastal	1/5/2005
123032 AQ005580	CALPINE CORP	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	CO	24 P	34	Inland	1/6/2005

123032	AQ005581	CALPINE CORP	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	CO	4 P	34	Inland	1/6/2005
139869	AQ005586	COSTCO WHOLESALE CORP	10901 WALKER ST	CYPRESS	90630 5014	ROG	1 R	4	Coastal	1/11/2005
141891	AQ005589	AES PACIFIC, INC.	12700 TAYLOR ST	GRAND TERRACE	92313	SOX	1 P	5	Coastal	1/18/2005
8582	AQ005590	SO CAL GAS CO/PLAYA DEL REY STORAGE FACI	8141 GULANA AVE	PLAYA DEL REY	90293 7930	ROG	41 P	5	Coastal	1/18/2005
800030	AQ005597	CHEVRON PRODUCTS CO.	324 W EL SEGUNDO BLVD	EL SEGUNDO	90245 3680	ROG	1 R	1	Coastal	1/19/2005
800183	AQ005599	PARAMOUNT PETR CORP (EIS USE)	14700-08 DOWNEY AVE	PARAMOUNT	90723 4526	CO	4 P	16	Coastal	1/20/2005
800183	AQ005600	PARAMOUNT PETR CORP (EIS USE)	14700-08 DOWNEY AVE	PARAMOUNT	90723 4526	CO	2 P	1	Coastal	1/20/2005
128590	AQ005607	MULTIFUELS LP	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	ROG	5 R	33	Inland	1/20/2005
142185	AQ005609	BP WEST COAST PRODUCTS LLC	104 N SAN JACINTO	HEMET	92543	ROG	6 S	28	Inland	1/21/2005
124182	AQ005617	AGED TIMBER CO	12432 FOOTHILL BLVD	SYLMAR	91342	ROG	1 R	1	Coastal	1/21/2005
114458	AQ005623	ALL AMERICAN ASPHALT	454 N MCPHERSON AVE	ORANGE	92869	PM10	10 R	17	Coastal	1/28/2005
141012	AQ005624	MILLER BREWERIES WEST LP	15801 E 1ST ST	IRWINDALE	91706 2069	ROG	1 R	33	Inland	1/28/2005
800149	AQ005628	US BORAX INC	300 FALCON ST	WILMINGTON	90744 6495	PM10	34 R	4	Coastal	2/3/2005
104017	AQ005631	AERA ENERGY LLC	20101 GOLDENWEST ST	HUNTINGTON BEACH	92648 2628	CO	282 R	18	Coastal	2/10/2005
800183	AQ005632	PARAMOUNT PETR CORP (EIS USE)	14700-08 DOWNEY AVE	PARAMOUNT	90723 4526	CO	28 P	18	Coastal	2/10/2005
17953	AQ005636	PACIFIC CLAY PRODUCTS INC	14741- 14641 LAKE ST	LAKE ELSINORE	92530 1610	PM10	2 P	11	Inland	2/15/2005
128078	AQ005637	WOODWORK CREATIONS	134 MALBERT ST	PERRIS	92570	ROG	4 R	11	Inland	2/16/2005
23410	AQ005642	CAL METAL PROCESSING CO	1518 - 1530W SLAUSON AVE	LOS ANGELES	90047	ROG	4 R	1	Coastal	2/18/2005
800183	AQ005654	PARAMOUNT PETR CORP (EIS USE)	14700-08 DOWNEY AVE	PARAMOUNT	90723 4526	PM10	4 R	5	Coastal	2/18/2005
104017	AQ005660	AERA ENERGY LLC	20101 GOLDENWEST ST	HUNTINGTON BEACH	92648 2628	ROG	437 R	18	Coastal	2/22/2005
23196	AQ005663	SUNKIST GROWERS, INC	616 E SUNKIST	ONTARIO	91761 1750	ROG	187 R	33	Inland	2/23/2005
108701	AQ005668	SAINT-GOBAIN CONTAINERS, INC.	4000 ARDEN DR	EL MONTE	91731 1806	PM10	5 R	9	Inland	2/24/2005
141891	AQ005672	AES PACIFIC, INC.	12700 TAYLOR ST	GRAND TERRACE	92313	SOX	18 P	1	Inland	3/1/2005
141891	AQ005673	AES PACIFIC, INC.	12700 TAYLOR ST	GRAND TERRACE	92313	SOX	20 P	34	Inland	3/1/2005
800026	AQ005674	ULTRAMAR INC (NSR USE ONLY)	2402 E ANAHEIM ST	WILMINGTON	90744	ROG	2 R	7	Coastal	3/2/2005
142183	AQ005677	BP WEST COAST PRODUCTS LLC	101 E WHITTIER BLVD	MONTEBELLO	90640	ROG	6 S	5	Coastal	3/3/2005
101337	AQ005679	NATIONAL OFFSETS	6251 PARAMOUNT BLVD	LONG BEACH	90248	NOX	3 P	1	Coastal	3/8/2005
104017	AQ005680	AERA ENERGY LLC	20101 GOLDENWEST ST	HUNTINGTON BEACH	92648 2628	CO	28 P	16	Coastal	3/8/2005
124808	AQ005683	INNOVENE POLYPROPYLENE LLC	2384 E 223RD ST	CARSON	90745	ROG	30 P	1	Coastal	3/8/2005
800079	AQ005686	PETRO DIAMOND TERMINAL CO	1920 LUGGER BERTH 83 WA	LONG BEACH	90813 2634	ROG	30 P	1	Coastal	3/9/2005
54264	AQ005687	CHEVRON USA INC	6018751 S VAIL AVE	MONTEBELLO	90640 4951	ROG	9 P	6	Coastal	3/11/2005
123032	AQ005692	CALPINE CORP	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	ROG	1888 R	1	Coastal	3/11/2005
128940	AQ005696	INTERGEN NORTH AMERICAN DEVELOPMENT CI	VARIOUS LOCATIONS IN SCA	VERNON	90058	ROG	37 R	11	Inland	3/22/2005
25318	AQ005697	PREMIER INDUSTRIES INC., INSULFOAM	5635 SCHAEFER AVE	CHINO	91710 9048	ROG	2 P	11	Inland	3/22/2005
128940	AQ005700	INTERGEN NORTH AMERICAN DEVELOPMENT CI	VARIOUS LOCATIONS IN SCA	VERNON	90058	ROG	5 R	23	Inland	3/24/2005
141891	AQ005706	AES PACIFIC, INC.	12700 TAYLOR ST	GRAND TERRACE	92313	SOX	4 P	1	Coastal	4/1/2005
52517	AQ005709	REXAM PLC, REXAM BEVERAGE CAN COMPANY	20730 PRAIRIE ST	CHATSWORTH	91311 6010	ROG	2 R	6	Coastal	4/8/2005
101337	AQ005718	NATIONAL OFFSETS	6251 PARAMOUNT BLVD	LONG BEACH	90248	SOX	10 P	10	Inland	4/21/2005
125281	AQ005719	ALCO CAD-NICKEL PLATING, MODERN PLATING	5400 W 104TH	LOS ANGELES	90045 0007	ROG	5 P	1	Coastal	4/22/2005
13930	AQ005726	COMMERCIAL ENAMELING CO	6200-04 S ALAMEDA ST	HUNTINGTON PARK	90255 3503	PM10	4 R	12	Coastal	5/5/2005
110982	AQ005729	COMMONWEALTH ALUMINUM CONCAST	2211 E CARSON ST	LONG BEACH	90810	PM10	2 R	4	Coastal	5/5/2005
141891	AQ005731	AES PACIFIC, INC.	12700 TAYLOR ST	GRAND TERRACE	92313	ROG	19 P	7	Coastal	5/19/2005
18943	AQ005732	KINDER MORGAN LIQUIDS TERMINALS, LLC	2000 E SEPULVEDA BLVD	CARSON	90810 1937	ROG	152 R	1	Coastal	5/20/2005
5170	AQ005734	KINDER MORGAN LIQUIDS TERMINALS LLC	2000 E SEPULVEDA BLVD	CARSON	90745	ROG	92 R	1	Coastal	5/20/2005
800365	AQ005736	CONOCOPHILLIPS CO. L A TERMINAL	13500 S BROADWAY	LOS ANGELES	90061 1008	ROG	15 R	1	Coastal	5/24/2005
120708	AQ005747	RONALD FRIEDMAN	6467 COLGATE AVE	LOS ANGELES	90048	ROG	38 R	1	Coastal	6/10/2005
800372	AQ005749	EQUILON ENTER. LLC, SHELL OIL PROD. US	20945 S WILMINGTON	CARSON	90810	ROG	9 R	4	Coastal	6/15/2005
141891	AQ005753	AES PACIFIC, INC.	12700 TAYLOR ST	GRAND TERRACE	92313	SOX	40 P	9	Inland	6/21/2005
54219	AQ005754	AZ COUNTERTOPS, INC.	1524-25 W BROOKS ST	ONTARIO	91762 3619	ROG	44 P	24	Inland	6/21/2005
54219	AQ005755	AZ COUNTERTOPS, INC.	1524-25 W BROOKS ST	ONTARIO	91762 3619	ROG	3 P	24	Inland	6/22/2005
140540	AQ005756	CALIFORNIA LNG PROJECT CORPORATION	800 PIER T AVE BERTH T126	LONG BEACH	90802 6271	PM10	1 P	17	Coastal	6/24/2005
139986	AQ005761	ENERGY INITIATIVES GROUP LP	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	ROG	41 P	12	Coastal	6/29/2005
25513	AQ005762	SIX FLAGS THEMES PKS INC,SIX FLAGS MAGIC	26101 MAGIC MOUNTAIN PK	VALENCIA	91355 1095	ROG	1 P	1	Coastal	7/12/2005
128590	AQ005764	MULTIFUELS LP	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	ROG	11 R	24	Coastal	7/14/2005
139796	AQ005765	CITY OF RIVERSIDE PUBLIC UTILITIES DEPT	JURUPA & PAYTON AVE	RIVERSIDE	92504	ROG	9 P	24	Coastal	7/14/2005
133987	AQ005769	PLAINS EXPLORATION & PRODUCTION CO, LP	5640 S FAIRFAX AVE	LOS ANGELES	90056	ROG	27 R	18	Coastal	7/21/2005
800370	AQ005771	EQUILON ENTER., LLC, SHELL OIL PROD. U S	2101 E PACIFIC COAST HWY	WILMINGTON	90744 2914	ROG	37 R	1	Coastal	7/22/2005
139986	AQ005774	ENERGY INITIATIVES GROUP LP	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	ROG	21 R	3	Coastal	7/27/2005

136757	AQ005776	TRAVIS AMERICAN	15651 MOSHER AVE	TUSTIN	92780 6426	ROG	5	R	4	Coastal	7/27/2005	
139986	AQ005777	ENERGY INITIATIVES GROUP LP	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	ROG	59	P	4	Coastal	7/27/2005	
133632	AQ005778	COMMANDER NAVY REGION SOUTHWEST	VARIOUS LOCATIONS IN SCA	COMMERCE	90040	ROG	12	P	3	Coastal	7/27/2005	
800417	AQ005782	PACIFIC TERMINALS LLC	2500 E VICTORIA ST	COMPTON	90220 6013	ROG	46	P	13	Coastal	7/28/2005	
50300	AQ005783	PARALLEL PRODUCTS	12281 ARROW ROUTE	RANCHO CUCAMONGA	91739 9601	ROG	1	R	33	Inland	7/28/2005	
12362	AQ005786	ACCESS BUSINESS GROUP LLC, NUTRILITE	19600 6TH ST	LAKEVIEW	92567 8401	ROG	522	R	24	Inland	7/29/2005	
128590	AQ005787	MULTIFUELS LP	VARIOUS LOCATIONS IN SCA	DIAMOND BAR	91765	ROG	35	P	24	Inland	7/29/2005	

LIST OF ACTIVE SCAQMD SHORT TERM EMISSION REDUCTION CREDITS (STERCs) - AUGUST 2005

FAC ID	STERC NBR	COMPANY NAME	ADDRESS	CITY	ZIP	EMIT	AMOUNT	ORIGIN	AMZ	COASTAL/INLAND	ISSUED	STERC VALID YEAR
89936	AQ005547-04	QUEBECOR WORLD	787 WANAMAKER AVE	ONTARIO	91761	ROG	10	ERC	33	Inland	12/9/2004	2004
89936	AQ005547-05	QUEBECOR WORLD	787 WANAMAKER AVE	ONTARIO	91761	ROG	10	ERC	33	Inland	12/9/2004	2005
89936	AQ005547-06	QUEBECOR WORLD	787 WANAMAKER AVE	ONTARIO	91761	ROG	10	ERC	33	Inland	12/9/2004	2006
89936	AQ005547-07	QUEBECOR WORLD	787 WANAMAKER AVE	ONTARIO	91761	ROG	10	ERC	33	Inland	12/9/2004	2007
89936	AQ005547-08	QUEBECOR WORLD	787 WANAMAKER AVE	ONTARIO	91761	ROG	10	ERC	33	Inland	12/9/2004	2008
89936	AQ005547-09	QUEBECOR WORLD	787 WANAMAKER AVE	ONTARIO	91761	ROG	10	ERC	33	Inland	12/9/2004	2009
89936	AQ005547-10	QUEBECOR WORLD	787 WANAMAKER AVE	ONTARIO	91761	ROG	10	ERC	33	Inland	12/9/2004	2010
89936	AQ005547-LT	QUEBECOR WORLD	787 WANAMAKER AVE	ONTARIO	91761	ROG	10	ERC	33	Inland	12/9/2004	2011
89936	AQ005548-04	QUEBECOR WORLD	787 WANAMAKER AVE	ONTARIO	91761	ROG	20	ERC	33	Inland	12/9/2004	2004
89936	AQ005548-05	QUEBECOR WORLD	787 WANAMAKER AVE	ONTARIO	91761	ROG	20	ERC	33	Inland	12/9/2004	2005
89936	AQ005548-06	QUEBECOR WORLD	787 WANAMAKER AVE	ONTARIO	91761	ROG	20	ERC	33	Inland	12/9/2004	2006
89936	AQ005548-07	QUEBECOR WORLD	787 WANAMAKER AVE	ONTARIO	91761	ROG	20	ERC	33	Inland	12/9/2004	2007
89936	AQ005548-08	QUEBECOR WORLD	787 WANAMAKER AVE	ONTARIO	91761	ROG	20	ERC	33	Inland	12/9/2004	2008
89936	AQ005548-09	QUEBECOR WORLD	787 WANAMAKER AVE	ONTARIO	91761	ROG	20	ERC	33	Inland	12/9/2004	2009
89936	AQ005548-10	QUEBECOR WORLD	787 WANAMAKER AVE	ONTARIO	91761	ROG	20	ERC	33	Inland	12/9/2004	2010
89936	AQ005548-LT	QUEBECOR WORLD	787 WANAMAKER AVE	ONTARIO	91761	ROG	20	ERC	33	Inland	12/9/2004	2011
107337	AQ005131-06	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	10	Inland	8/18/2004	2006
107337	AQ005131-07	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	10	Inland	8/18/2004	2007
107337	AQ005131-08	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	10	Inland	8/18/2004	2008
107337	AQ005131-09	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	10	Inland	8/18/2004	2009
107337	AQ005131-10	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	10	Inland	8/18/2004	2010
107337	AQ005131-LT	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	10	Inland	8/18/2004	2011
107337	AQ005376-06	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	4	Coastal	8/18/2004	2006
107337	AQ005376-07	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	4	Coastal	8/18/2004	2007
107337	AQ005376-08	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	4	Coastal	8/18/2004	2008
107337	AQ005376-09	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	4	Coastal	8/18/2004	2009
107337	AQ005376-10	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	4	Coastal	8/18/2004	2010
107337	AQ005376-LT	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	4	Coastal	8/18/2004	2011
107337	AQ005377-06	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	4	Coastal	8/18/2004	2006
107337	AQ005377-07	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	4	Coastal	8/18/2004	2007
107337	AQ005377-08	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	4	Coastal	8/18/2004	2008
107337	AQ005377-09	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	4	Coastal	8/18/2004	2009
107337	AQ005377-10	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	4	Coastal	8/18/2004	2010
107337	AQ005377-LT	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	4	Coastal	8/18/2004	2011
107337	AQ005024-06	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	134	ERC	9	Inland	8/18/2004	2006
107337	AQ005024-07	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	134	ERC	9	Inland	8/18/2004	2007
107337	AQ005024-08	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	134	ERC	9	Inland	8/18/2004	2008
107337	AQ005024-09	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	134	ERC	9	Inland	8/18/2004	2009
107337	AQ005024-10	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	134	ERC	9	Inland	8/18/2004	2010
107337	AQ005024-LT	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	134	ERC	9	Inland	8/18/2004	2011
107337	AQ005131-04	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	10	Inland	8/18/2004	2004
107337	AQ005131-05	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	10	Inland	8/18/2004	2005
107337	AQ005131-06	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	10	Inland	8/18/2004	2006
107337	AQ005131-07	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	10	Inland	8/18/2004	2007
107337	AQ005131-08	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	10	Inland	8/18/2004	2008
107337	AQ005131-09	MARKET-BASED SOLUTIONS	707 WILSHIRE BLVD. SUITE 5	LOS ANGELES	90017	ROG	25	ERC	10	Inland	8/18/2004	2009

107337	AQ005131-10	MARKET-BASED SOLUTIONS
107337	AQ005131-LT	MARKET-BASED SOLUTIONS
110895	AQ003816-04	RICHARD FRIEDMAN
110895	AQ003816-05	RICHARD FRIEDMAN
110895	AQ003816-06	RICHARD FRIEDMAN
110895	AQ003816-07	RICHARD FRIEDMAN
110895	AQ003816-08	RICHARD FRIEDMAN
110895	AQ003816-09	RICHARD FRIEDMAN
110895	AQ003816-10	RICHARD FRIEDMAN
110895	AQ003816-LT	RICHARD FRIEDMAN
110895	AQ002863-04	RICHARD FRIEDMAN
110895	AQ002863-05	RICHARD FRIEDMAN
110895	AQ002863-06	RICHARD FRIEDMAN
110895	AQ002863-07	RICHARD FRIEDMAN
110895	AQ002863-08	RICHARD FRIEDMAN
110895	AQ002863-09	RICHARD FRIEDMAN
110895	AQ002863-10	RICHARD FRIEDMAN
110895	AQ002863-LT	RICHARD FRIEDMAN
110895	AQ003159-04	RICHARD FRIEDMAN
110895	AQ003159-05	RICHARD FRIEDMAN
110895	AQ003159-06	RICHARD FRIEDMAN
110895	AQ003159-07	RICHARD FRIEDMAN
110895	AQ003159-08	RICHARD FRIEDMAN
110895	AQ003159-09	RICHARD FRIEDMAN
110895	AQ003159-10	RICHARD FRIEDMAN
110895	AQ003159-LT	RICHARD FRIEDMAN
110895	AQ003519-04	RICHARD FRIEDMAN
110895	AQ003519-05	RICHARD FRIEDMAN
110895	AQ003519-06	RICHARD FRIEDMAN
110895	AQ003519-07	RICHARD FRIEDMAN
110895	AQ003519-08	RICHARD FRIEDMAN
110895	AQ003519-09	RICHARD FRIEDMAN
110895	AQ003519-10	RICHARD FRIEDMAN
110895	AQ003519-LT	RICHARD FRIEDMAN
138120	AQ005283-04	BP WEST COAST PRODUCTS LLC
138120	AQ005283-05	BP WEST COAST PRODUCTS LLC
138120	AQ005283-06	BP WEST COAST PRODUCTS LLC
138120	AQ005283-07	BP WEST COAST PRODUCTS LLC
138120	AQ005283-08	BP WEST COAST PRODUCTS LLC
138120	AQ005283-09	BP WEST COAST PRODUCTS LLC
138120	AQ005283-10	BP WEST COAST PRODUCTS LLC
138120	AQ005283-LT	BP WEST COAST PRODUCTS LLC
138125	AQ005287-04	BP WEST COAST PRODUCTS, LLC
138125	AQ005287-05	BP WEST COAST PRODUCTS, LLC
138125	AQ005287-06	BP WEST COAST PRODUCTS, LLC
138125	AQ005287-07	BP WEST COAST PRODUCTS, LLC
138125	AQ005287-08	BP WEST COAST PRODUCTS, LLC
138125	AQ005287-09	BP WEST COAST PRODUCTS, LLC
138125	AQ005287-10	BP WEST COAST PRODUCTS, LLC
138125	AQ005287-LT	BP WEST COAST PRODUCTS, LLC
138130	AQ005434-04	BP WEST COAST PRODUCTS LLC
138130	AQ005434-05	BP WEST COAST PRODUCTS LLC
138130	AQ005434-06	BP WEST COAST PRODUCTS LLC
138130	AQ005434-07	BP WEST COAST PRODUCTS LLC
138130	AQ005434-08	BP WEST COAST PRODUCTS LLC
138130	AQ005434-09	BP WEST COAST PRODUCTS LLC
138130	AQ005434-10	BP WEST COAST PRODUCTS LLC
138130	AQ005434-LT	BP WEST COAST PRODUCTS LLC

707 WILSHIRE BLVD. SUITE 5	LOS ANGELES
707 WILSHIRE BLVD. SUITE 5	LOS ANGELES
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
441 28TH STREET	MANHATTAN BEACH
4371 CRENSHAW BLVD	LOS ANGELES
4371 CRENSHAW BLVD	LOS ANGELES
4371 CRENSHAW BLVD	LOS ANGELES
4371 CRENSHAW BLVD	LOS ANGELES
4371 CRENSHAW BLVD	LOS ANGELES
4371 CRENSHAW BLVD	LOS ANGELES
4371 CRENSHAW BLVD	LOS ANGELES
1761 CENTINELA AVE	INGLEWOOD
1761 CENTINELA AVE	INGLEWOOD
1761 CENTINELA AVE	INGLEWOOD
1761 CENTINELA AVE	INGLEWOOD
1761 CENTINELA AVE	INGLEWOOD
1761 CENTINELA AVE	INGLEWOOD
1761 CENTINELA AVE	INGLEWOOD
403 S D ST	PERRIS
403 S D ST	PERRIS
403 S D ST	PERRIS
403 S D ST	PERRIS
403 S D ST	PERRIS
403 S D ST	PERRIS
403 S D ST	PERRIS
403 S D ST	PERRIS

90017	ROG	25	ERC	10	Inland
90017	ROG	25	ERC	10	Inland
90266	ROG	149	ERC	1	Coastal
90266	ROG	149	ERC	1	Coastal
90266	ROG	149	ERC	1	Coastal
90266	ROG	149	ERC	1	Coastal
90266	ROG	149	ERC	1	Coastal
90266	ROG	149	ERC	1	Coastal
90266	ROG	149	ERC	1	Coastal
90266	ROG	149	ERC	1	Coastal
90266	ROG	32	ERC	1	Coastal
90266	ROG	32	ERC	1	Coastal
90266	ROG	32	ERC	1	Coastal
90266	ROG	32	ERC	1	Coastal
90266	ROG	32	ERC	1	Coastal
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90266	ROG	75	ERC	1	Coastal
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90266	ROG	75	ERC	1	Coastal
90008	ROG	5	ERC	1	Coastal
90008	ROG	5	ERC	1	Coastal
90008	ROG	5	ERC	1	Coastal
90008	ROG	5	ERC	1	Coastal
90008	ROG	5	ERC	1	Coastal
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90008	ROG	5	ERC	1	Coastal
90302	ROG	7	ERC	3	Coastal
90302	ROG	7	ERC	3	Coastal
90302	ROG	7	ERC	3	Coastal
90302	ROG	7	ERC	3	Coastal
90302	ROG	7	ERC	3	Coastal
90302	ROG	7	ERC	3	Coastal
90302	ROG	7	ERC	3	Coastal
92570	ROG	6	ERC	24	Inland
92570	ROG	6	ERC	24	Inland
92570	ROG	6	ERC	24	Inland
92570	ROG	6	ERC	24	Inland
92570	ROG	6	ERC	24	Inland
92570	ROG	6	ERC	24	Inland
92570	ROG	6	ERC	24	Inland

8/18/2004	2010
8/18/2004	2011
10/27/2004	2004
10/27/2004	2005
10/27/2004	2006
10/27/2004	2007
10/27/2004	2008
10/27/2004	2009
10/27/2004	2010
10/27/2004	2011
10/27/2004	2004
10/27/2004	2005
10/27/2004	2006
10/27/2004	2007
10/27/2004	2008
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4/2/2004	2004
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4/9/2004	2010
4/9/2004	2011
7/7/2004	2004
7/7/2004	2005
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7/7/2004	2008
7/7/2004	2009
7/7/2004	2010
7/7/2004	2011

138835	AQ005292-04	BP WEST COAST PRODUCTS LLC	885 E CALIFORNIA BLVD	PASADENA	91106	ROG	4	ERC	8	Inland	4/9/2004	2004
138835	AQ005292-05	BP WEST COAST PRODUCTS LLC	885 E CALIFORNIA BLVD	PASADENA	91106	ROG	4	ERC	8	Inland	4/9/2004	2005
138835	AQ005292-06	BP WEST COAST PRODUCTS LLC	885 E CALIFORNIA BLVD	PASADENA	91106	ROG	4	ERC	8	Inland	4/9/2004	2006
138835	AQ005292-07	BP WEST COAST PRODUCTS LLC	885 E CALIFORNIA BLVD	PASADENA	91106	ROG	4	ERC	8	Inland	4/9/2004	2007
138835	AQ005292-08	BP WEST COAST PRODUCTS LLC	885 E CALIFORNIA BLVD	PASADENA	91106	ROG	4	ERC	8	Inland	4/9/2004	2008
138835	AQ005292-09	BP WEST COAST PRODUCTS LLC	885 E CALIFORNIA BLVD	PASADENA	91106	ROG	4	ERC	8	Inland	4/9/2004	2009
138835	AQ005292-10	BP WEST COAST PRODUCTS LLC	885 E CALIFORNIA BLVD	PASADENA	91106	ROG	4	ERC	8	Inland	4/9/2004	2010
138835	AQ005292-LT	BP WEST COAST PRODUCTS LLC	885 E CALIFORNIA BLVD	PASADENA	91106	ROG	4	ERC	8	Inland	4/9/2004	2011
139920	AQ005293-04	BP WEST COAST PRODUCTS LLC	9533 FOOTHILL BLVD	RANCHO CUCAMONGA	91730	ROG	4	ERC	32	Inland	4/9/2004	2004
139920	AQ005293-05	BP WEST COAST PRODUCTS LLC	9533 FOOTHILL BLVD	RANCHO CUCAMONGA	91730	ROG	4	ERC	32	Inland	4/9/2004	2005
139920	AQ005293-06	BP WEST COAST PRODUCTS LLC	9533 FOOTHILL BLVD	RANCHO CUCAMONGA	91730	ROG	4	ERC	32	Inland	4/9/2004	2006
139920	AQ005293-07	BP WEST COAST PRODUCTS LLC	9533 FOOTHILL BLVD	RANCHO CUCAMONGA	91730	ROG	4	ERC	32	Inland	4/9/2004	2007
139920	AQ005293-08	BP WEST COAST PRODUCTS LLC	9533 FOOTHILL BLVD	RANCHO CUCAMONGA	91730	ROG	4	ERC	32	Inland	4/9/2004	2008
139920	AQ005293-09	BP WEST COAST PRODUCTS LLC	9533 FOOTHILL BLVD	RANCHO CUCAMONGA	91730	ROG	4	ERC	32	Inland	4/9/2004	2009
139920	AQ005293-10	BP WEST COAST PRODUCTS LLC	9533 FOOTHILL BLVD	RANCHO CUCAMONGA	91730	ROG	4	ERC	32	Inland	4/9/2004	2010
139920	AQ005293-LT	BP WEST COAST PRODUCTS LLC	9533 FOOTHILL BLVD	RANCHO CUCAMONGA	91730	ROG	4	ERC	32	Inland	4/9/2004	2011
142136	AQ005497-05	NATSOURCE LLC	140 BROADWAY	NEW YORK	10005	ROG	6	ERC	4	Coastal	10/6/2004	2005
142136	AQ005497-06	NATSOURCE LLC	140 BROADWAY	NEW YORK	10005	ROG	6	ERC	4	Coastal	10/6/2004	2006
142136	AQ005497-07	NATSOURCE LLC	140 BROADWAY	NEW YORK	10005	ROG	6	ERC	4	Coastal	10/6/2004	2007
142136	AQ005497-08	NATSOURCE LLC	140 BROADWAY	NEW YORK	10005	ROG	6	ERC	4	Coastal	10/6/2004	2008
142136	AQ005497-09	NATSOURCE LLC	140 BROADWAY	NEW YORK	10005	ROG	6	ERC	4	Coastal	10/6/2004	2009
142136	AQ005497-10	NATSOURCE LLC	140 BROADWAY	NEW YORK	10005	ROG	6	ERC	4	Coastal	10/6/2004	2010
142136	AQ005497-LT	NATSOURCE LLC	140 BROADWAY	NEW YORK	10005	ROG	6	ERC	4	Coastal	10/6/2004	2011
137790	AQ005766-05	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	27	ERC	17	Coastal	7/21/2005	2005
137790	AQ005766-06	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	27	ERC	17	Coastal	7/21/2005	2006
137790	AQ005766-07	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	27	ERC	17	Coastal	7/21/2005	2007
137790	AQ005766-08	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	27	ERC	17	Coastal	7/21/2005	2008
137790	AQ005766-09	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	27	ERC	17	Coastal	7/21/2005	2009
137790	AQ005766-10	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	27	ERC	17	Coastal	7/21/2005	2010
137790	AQ005766-11	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	27	ERC	17	Coastal	7/21/2005	2011
137790	AQ005766-LT	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	27	ERC	17	Coastal	7/21/2005	2012
137790	AQ005767-05	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	31	ERC	17	Coastal	7/21/2005	2005
137790	AQ005767-06	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	31	ERC	17	Coastal	7/21/2005	2006
137790	AQ005767-07	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	31	ERC	17	Coastal	7/21/2005	2007
137790	AQ005767-08	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	31	ERC	17	Coastal	7/21/2005	2008
137790	AQ005767-09	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	31	ERC	17	Coastal	7/21/2005	2009
137790	AQ005767-10	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	31	ERC	17	Coastal	7/21/2005	2010
137790	AQ005767-11	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	31	ERC	17	Coastal	7/21/2005	2011
137790	AQ005767-LT	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	31	ERC	17	Coastal	7/21/2005	2012
137790	AQ005768-05	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	5	ERC	17	Coastal	7/21/2005	2005
137790	AQ005768-06	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	5	ERC	17	Coastal	7/21/2005	2006
137790	AQ005768-07	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	5	ERC	17	Coastal	7/21/2005	2007
137790	AQ005768-08	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	5	ERC	17	Coastal	7/21/2005	2008
137790	AQ005768-09	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	5	ERC	17	Coastal	7/21/2005	2009
137790	AQ005768-10	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	5	ERC	17	Coastal	7/21/2005	2010
137790	AQ005768-11	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	5	ERC	17	Coastal	7/21/2005	2011
137790	AQ005768-LT	GRAPHIC PACKAGING INTL, INC.	814 LIVINGSTON COURT	MARIETTA	30067	ROG	5	ERC	17	Coastal	7/21/2005	2012

APPENDIX 8.1H

Cumulative Impacts Analysis Protocol

Potential cumulative air quality impacts that might be expected to occur resulting from WCEP and other reasonably foreseeable projects are both regional and localized in nature. These cumulative impacts will be evaluated as follows.

Regional Impacts

Regional air quality impacts are possible for pollutants such as ozone, which involve chemical and photochemical reactions in the atmosphere, downwind of an emission source that can take hours to occur. WCEP will provide emissions offsets (mitigation) for NO_x at the ratios specified in the SCAQMD regulations. Additional mitigation for other pollutants may be required by the CEC.

Although the relative importance of VOC and NO_x emissions in ozone formation differs from region to region, and from day to day, most air pollution control plans in California require roughly equivalent controls (on a ton per year basis) for these two pollutants. The change in emissions of the sum of these pollutants, equally weighted, will be used to provide a reasonable estimate of the impact of WCEP on ozone levels. The net change in emissions of ozone precursors from WCEP will be compared with emissions from all sources within Los Angeles County (Table 8.1H-1), and within the South Coast Air Basin (Table 8.1H-2) as a whole.

TABLE 8.1H-1
Estimated Los Angeles County Emissions Inventory for 2004 (tons/day)

Source Category	TOG	ROG	CO	NO_x	SO_x	PM	PM_{10}
Total Stationary Sources	333.89	95.32	69.37	49.18	23.72	26.24	14.97
Total Area Sources	133.1	107.4	84.4	19.8	0.24	270.3	139.3
Total Mobile Sources	296.4	271.4	2458.9	559.96	29.42	24.1	23.6
Total Natural Sources	46.77	40.55	64.99	1.94	0.6	9.37	6.56
County Total	810.2	514.7	2677.6	630.9	54	330	184.4

Source: CARB

TABLE 8.1H-2
Estimated South Coast Air Basin Emissions Inventory for 2004 (tons/day)

Source Category	TOG	ROG	CO	NO_x	SO_x	PM	PM_{10}
Total Stationary Sources	480.7	150.9	73.1	71.8	24.9	19.8	15.5
Total Area Sources	334.6	173.8	156.1	31.8	0.4	473.5	235.1
Total Mobile Sources	522.0	479.6	4217.9	941.3	37.6	40.7	39.9
Total Natural Sources	5.5	3.1	89.0	4.1	-	18.2	17.5
Basin Total	1342.8	807.4	4536.0	1048.9	62.9	552.1	307.9

Source: CARB

Air quality impacts of fine particulate, or PM_{10}, have the potential to be either regional or localized in nature. On a regional basis, an analysis similar to that presented above for ozone will be performed, looking at the three pollutants that can form PM_{10} in the atmosphere, i.e., VOC, SO_x, and NO_x as well as at directly emitted particulate matter. SCAQMD regulations require offsets to be provided for PM_{10} emissions from the project, as facility emissions will exceed the Rule 1304 offset threshold of 4 tons per year. In addition, full mitigation of PM_{10} will likely be required by the CEC.

As in the case of ozone precursors, emissions of PM_{10} precursors are expected to have approximately equivalent ambient impacts in forming PM_{10}, per ton of emissions on a regional basis. Table 8.1H-3 provides the comparison of emissions of the criteria pollutants from WCEP with emissions from all sources within Los Angeles County, and within the South Coast Air Basin as a whole.

TABLE 8.1H-3
Comparison of WCEP Project Emissions to Estimated Inventory for 2000

Category	TOG	ROG*	CO	NO_x	SO_x	PM	PM_{10}
WCEP Emissions (tons/yr)	NA	31.0	175.0	105.8	7.5	73.7	73.7
WCEP Emissions (tons/day)	NA	0.154	0.89	0.539	0.038	0.366	0.366
County Total (tons/day)	810.2	514.7	2677.6	630.9	54	330	184.4
Air Basin Total (tons/day)	1342.8	807.4	4536.0	1048.9	62.9	552.1	307.9
WCEP % of County Total	NA	0.02	0.03	0.09	0.07	0.11	0.20
WCEP % of Air Basin Total	NA	0.02	0.02	0.05	0.06	0.06	0.12

* WCEP VOC emissions compared to inventory ROG emissions.

Localized Impacts

Localized impacts from WCEP could result from emissions of carbon monoxide, oxides of nitrogen, sulfur oxides, and directly emitted PM_{10}. A dispersion modeling analysis of potential cumulative air quality impacts will be performed for all four of these pollutants.

The potential impact area where cumulative localized air quality impacts could occur has been identified by CEC staff as an area with a radius of 8 miles around the WCEP plant site. To evaluate the potential cumulative localized impacts of WCEP in conjunction with the impacts of existing facilities and facilities not yet in operation but are currently in process as an operating permit or licensing application , a dispersion modeling will be conducted if warranted. Based on the results of the air quality modeling analyses described in AFC Section 8.1 (Air Quality), "significant" air quality impacts, as that term is defined in federal air quality modeling guidelines, have not been determined for the WCEP project. If the project's impacts do not exceed the significance levels, no cumulative impacts would be expected to occur, and no further analysis would be required. Should data be developed which shows that the WCEP project emissions would result in "significant" impacts, then all projects identified within a search area with a radius of 8 miles beyond the project's impact area will be used for the cumulative impacts analysis. Within this search area, three categories of projects or sources will be evaluated for inclusion in the analysis:

- Projects that are existing and have been in operation prior to 1-1-2005 (emissions are included in the overall background air quality assessment).
- Projects for which air pollution permits to construct have been issued and that began operation after 1-1-2005.
- Projects for which air pollution permits to construct have been issued after 1-1-2005, but that are not yet in operation.

Projects that are existing and have been in operation prior to 1-1-2005 will be reflected in the ambient air quality data that has been used to represent background concentrations; consequently, no further analysis of the emissions from this category of facilities will be performed. The cumulative impacts analysis adds the modeled impacts of selected facilities to the maximum measured background air quality levels, thus ensuring that these existing projects are taken into account. All other projects will be identified by a request to the SCAQMD for an applicable source or facility listing.

The WCEP project is not expected to trigger PSD review. Notwithstanding the foregoing, a list of sources within the project region meeting the above noted criteria has been requested from the SCAQMD staff.

Given the potentially wide geographic area over which the dispersion modeling analysis may be performed, the ISCST3 model will be used to evaluate cumulative localized air quality impacts. The detailed modeling procedures, ISCST3 options, and meteorological data used in the cumulative impacts dispersion analysis will be the same as those described in the AFC Air Quality section. The receptor grid spacing will be determined in consultation with the SCAQMD for the area in which the detailed modeling analysis is to be performed.

Cumulative Impacts Dispersion Modeling

The dispersion modeling analysis of cumulative localized air quality impacts for the proposed project will be evaluated in combination with other reasonably foreseeable projects and air quality levels attributable to existing emission sources, and the impacts will be compared to state or federal air quality standards for significant impact. As discussed

above, the highest second-highest modeled concentrations will be used to demonstrate compliance with standards based on short-term averaging periods (24 hours or less).

Supporting information used in the analysis will include the following:

- 2004 estimated emissions inventory for Los Angeles County (Table 8.1H-1) and for the South Coast Area Air Basin (Table 8.1H-2);
- List of projects and their respective coordinate locations resulting from the screening analysis of permit files by the SCAQMD;
- Stack parameters for sources included in the cumulative air quality impacts dispersion modeling analysis; and
- Output files for the dispersion modeling analysis.

Table 8.1H-4 SCAQMD Emissions Trends and Forecasts

Table 8.1H-5 SCAQMD Natural Source Emissions Inventory Data

Table 8.1H-4 SCAQMD Emissions Trends and Forecasts

South Coast Air Basin

County Emission Trends and Forecasts

	NO_x Emissions (tons/day, annual average)										ROG Emissions (tons/day, annual average)									
County	1975	1980	1985	1990	1995	2000	2005	2010	2015	2020	1975	1980	1985	1990	1995	2000	2005	2010	2015	2020
Los Angeles	1234	1123	1171	1027	849	736	581	455	360	311	1953	1600	1538	1141	805	608	420	349	322	309
Orange	270	279	312	266	222	195	162	129	104	91	484	465	471	350	254	198	141	121	114	111
Riverside	88	99	111	151	133	137	118	94	69	55	125	125	134	133	110	93	72	64	63	64
San Bernardino	130	140	146	145	127	128	108	85	67	57	162	174	181	150	119	100	77	68	65	65
Air Basin Total	1723	1641	1741	1588	1331	1195	970	763	600	515	2725	2364	2324	1775	1288	998	710	602	563	549

	Directly Emitted PM_{10} Emissions (tons/day, annual average)										CO Emissions (tons/day, annual average)									
County	1975	1980	1985	1990	1995	2000	2005	2010	2015	2020	1975	1980	1985	1990	1995	2000	2005	2010	2015	2020
Los Angeles	139	136	151	185	163	144	142	143	145	147	11684	9018	8811	6609	4718	3406	2364	1793	1446	1223
Orange	32	38	44	58	54	54	54	55	55	56	2622	2407	2464	1922	1454	1048	770	612	514	457
Riverside	23	28	32	48	49	49	52	55	58	61	775	789	847	927	724	558	422	336	283	251
San Bernardino	43	44	47	53	59	46	48	50	51	53	1074	1169	1018	863	678	521	397	322	276	253
Air Basin Total	236	247	274	343	325	293	296	303	309	317	16154	13382	13140	10322	7574	5533	3953	3062	2519	2184

	Directly Emitted $PM_{2.5}$ Emissions (tons/day, annual average)									
County	1975	1980	1985	1990	1995	2000	2005	2010	2015	2020
Los Angeles	80	70	72	76	62	59	60	59	60	60
Orange	16	17	19	21	18	19	19	19	19	19
Riverside	9	10	11	15	15	16	17	18	19	20
San Bernardino	20	18	16	17	18	17	18	18	19	20
Air Basin Total	124	116	117	129	112	111	113	114	116	119

A portion of Los Angeles County lies within the Mojave Desert Air Basin. Portions of Riverside County lie within the Mojave Desert and Salton Sea Air Basins. A portion of San Bernardino County Lies within the Mojave Desert Air Basin.

Table 8.1H-5 SCAQMD Natural Source Emissions Inventory Data

South Coast Air Basin

Natural Source Emissions (tons/day, annual average)

Category	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	NH_3
Natural Sources Total	86	164	5	2	17	14	6
Biogenic Sources	76	0	0	0	0	0	3
Geogenic Sources	0	0	0	0	0	0	1
Wildfires	11	164	5	2	17	14	2

Table E-78

Los Angeles County

Category	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	NH_3
Natural Sources Total	34	65	2	1	7	6	2
Biogenic Sources	30	0	0	0	0	0	0
Geogenic Sources	0	0	0	0	0	0	1
Wildfires	4	65	2	1	7	6	1

Table E-79 A portion of Los Angeles County lies within the Mojave Desert Air Basin.

Orange County

Category	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	NH_3
Natural Sources Total	9	2	0	0	0	0	0
Biogenic Sources	9	0	0	0	0	0	0
Geogenic Sources	0	0	0	0	0	0	0
Wildfires	0	2	0	0	0	0	0

Table E-80

Riverside County

Category	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	NH_3
Natural Sources Total	24	38	1	0	4	3	1
Biogenic Sources	22	0	0	0	0	0	1
Geogenic Sources	0	0	0	0	0	0	0
Wildfires	2	38	1	0	4	3	0

Table E-81 Portions of Riverside County lie within the Mojave Desert and Salton Sea Air Basins.

San Bernardino County

Category	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	NH_3
Natural Sources Total	19	59	2	1	6	5	3
Biogenic Sources	15	0	0	0	0	0	2
Geogenic Sources	0	0	0	0	0	0	0
Wildfires	4	59	2	1	6	5	1

Table E-82 A portion of San Bernardino County lies within the Mojave Desert Air Basin.