

Table – 1A

Screening Emission Levels

THESE ARE NOT EMISSION LIMITS. Exceedances of these levels indicate that a screening risk assessment should be performed.

Original Date of Listing	Toxic Air Contaminant	CAS NO.	Screening Emission Level (lbs/yr) 25 meters	Screening Emission Level (lbs/yr) 50 meters	Screening Emission Level (lbs/yr) 100 meters
December 7, 1990	Acetaldehyde	75-07-0	12.25	32.11	95.70
December 7, 1990	Acrylamide	79-06-1	0.03	0.07	0.20
December 7, 1990	Acrylonitrile	107-13-1	0.11	0.30	0.89
December 7, 1990	Arsenic, inorganic	7440-38-2	0.004	0.010	0.029
June 1, 1990	Asbestos	1332-21-4	0.0005	0.0014	0.0041
June 1, 1990	Benzene	71-43-2	1.14	2.99	8.91
December 7, 1990	Benzidine	92-87-5	0.0002	0.0006	0.0018
December 7, 1990	Beryllium	7440-41-7	0.002	0.005	0.016
December 7, 1990	Bis(2-chloroethyl)ether	111-44-4	0.10	0.26	0.78
December 7, 1990	Bis(chloromethyl)ether	542-88-1	0.003	0.007	0.020
December 7, 1990	Butadiene, 1,3-	106-99-0	0.19	0.51	1.52
June 1, 1990	Cadmium	7440-43-9	0.008	0.021	0.062
June 1, 1990	Carbon tetrachloride	56-23-5	0.79	2.06	6.15
June 1, 1990	Chlorinated dioxins & dibenzofurans		1.28E-07	3.35E-07	1.00E-06
December 7, 1990	Chloroform	67-66-3	6.24	16.36	48.75
June 1, 1990	Chromium, hexavalent	18540-29-9	0.0002	0.0006	0.0018
December 7, 1990	Dichlorobenzidine, 3,3-	91-94-1	0.097	0.26	0.76
December 7, 1990	Dinitrotoluene, 2,4-	121-14-2	0.1740	0.4563	1.3600
December 7, 1990	Dioxane, 1,4-	123-91-1	4.29	11.26	33.56
December 7, 1990	Diphenylhydrazine	12-2-66-7	0.15	0.39	1.17
December 7, 1990	Epichlorohydrin	106-89-8	1.44	3.77	11.23
June 1, 1990	Ethylene dibromide	106-93-4	0.47	1.22	3.64
June 1, 1990	Ethylene dichloride (1,2 dichloroethane)	107-06-2	1.65	4.33	12.92
June 1, 1990	Ethylene oxide	75-21-8	0.38	0.99	2.94
December 7, 1990	Formaldehyde	50-00-0	5.51	14.45	43.07
December 7, 1990	Hexachlorobenzene	118-74-1	0.007	0.02	0.05
December 7, 1990	Hexachlorocyclohexane: technical grade	608-73-1	0.008	0.020	0.06
	alpha isomer	319-84-6	0.008	0.020	0.06
June 1, 1990	Methylene chloride	75-09-2	33.06	86.69	258.40

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December 7, 1990	Nickel: refinery dust subulfide	120-35-72-2	0.13 *	0.33 *	0.99 *
December 7, 1990	N-Nitroso- Compounds: n-Nitroso-n-ethylurea n-Nitroso-n-methylurea n-Nitrosodi-n-butylamine n-Nitrosodiethylamine n-Nitrosodimethylamine n-Nitrosodiphenylamine n-Nitrosopyrrolidine	759-73-9 684-93-5 924-16-3 55-18-5 62-75-9 86-30-6 930-55-2	0.001 0.0003 0.003 0.001 0.002 3.18 0.01	0.003 0.0007 0.007 0.002 0.005 8.34 0.04	0.008 0.0020 0.021 0.007 0.014 24.85 0.11
December 7, 1990	Polycyclic Aromatic Hydrocarbons (PAHs): Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Indenopyrene	56-55-3 50-32-8 205-99-2 207-08-9 218-01-9 53-70-3 193-39-5	0.0023 0.0023 0.0023 0.0023 0.0023 0.0023 0.0023	0.0059 0.0059 0.0059 0.0059 0.0059 0.0059 0.0059	0.0177 0.0177 0.0177 0.0177 0.0177 0.0177 0.0177
December 7, 1990	Polychlorinated biphenyls (PCBs)	1336-36-3	0.0008	0.0020	0.0060
December 7, 1990	Trichloroethylene	79-01-6	16.53	43.35	129.20
December 7, 1990	Trichlorophenol, 2,4,6-	88-06-2	0.46	1.20	3.59
December 7, 1990	Vinyl chloride	75-01-4	0.42	1.11	3.31

Notes:

Only compounds with unit risk factors are listed in the table.

Screening values are calculated using risk factors from the 1995 Risk Assessment Procedures document.

*For metal compounds, use the corresponding risk values from Table 8 and apply the metal fractions in the substances.

Example: For Nickel Acetate, use the corresponding risk value for nickel from Table 8 and apply nickel fraction in the substance.

Nickel = (59 lb of Ni/249 lb of Ni(OOCCH₃)₂·4HOH) x 100 = 23.7%

Table – 1B

Reserved

Table - 1C

Reserved

Table – 1D

Reserved

Table – 2A

**Point Source
Operating 12 hours/Day or Less**

Carcinogenic X/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{tons}/\text{yr.}]$)

Stack Height (ft)	Downwind Distance (meters)							
	25	50	75	100	200	300	500	1000
≥ 14 to 24	51.18	16.88	7.89	4.51	1.14	0.50	0.18	0.05
> 24 to 49	19.14	12.74	6.94	4.19	1.12	0.50	0.18	0.05
> 49	5.13	5.13	4.31	3.08	0.97	0.45	0.16	0.04

Table – 2B

Meteorological Correction Factors (MET)

<u>STATION</u>	<u>MET</u>	<u>STATION</u>	<u>MET</u>
Anaheim	0.84	Lynwood	0.58
Azusa	0.77	Malibu	0.84
Banning	0.52	Newhall	0.50
Burbank	0.57	Norco	0.73
Canoga Park	0.65	Palm Springs	0.55
Compton	0.63	Pasadena	0.74
Costa Mesa	0.69	Pico Rivera	0.70
Downtown L.A.	0.51	Pomona	0.86
El Toro	0.65	Redlands	0.86
Fontana	0.77	Reseda	0.68
Indio	0.69	Riverside	0.82
King Harbor	0.60	Santa Ana Canyon	0.89
La Canada	0.73	Upland	0.60
La Habra	0.78	Vernon	0.54
Lancaster	0.47	Walnut	0.60
Lennox	0.67	West L.A.	1.00
Long Beach	0.59	Whittier	0.63
Los Alamitos	0.60		

Table – 3A

**Point Source
Operating More Than 12 hours/day**

Carcinogenic X/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{tons}/\text{yr.}]$)

Stack Height (ft)	Downwind Distance (meters)							
	25	50	75	100	200	300	500	1000
≥ 14 to 24	49.68	23.07	12.50	7.74	2.24	1.06	0.42	0.12
> 24 to 49	10.70	10.70	7.46	5.32	1.92	0.97	0.40	0.12
> 49	2.38	2.38	2.38	2.12	1.27	0.75	0.33	0.10

Table – 3B

Meteorological Correction Factors (MET)

<u>STATION</u>	<u>MET</u>	<u>STATION</u>	<u>MET</u>
Anaheim	0.69	Lynwood	0.68
Azusa	0.64	Malibu	0.84
Banning	0.63	Newhall	0.92
Burbank	0.64	Norco	0.60
Canoga Park	0.71	Palm Springs	0.88
Compton	0.60	Pasadena	0.88
Costa Mesa	0.69	Pico Rivera	0.68
Downtown L.A.	0.60	Pomona	1.28
El Toro	0.65	Redlands	1.74
Fontana	1.19	Reseda	0.64
Indio	0.60	Riverside	0.81
King Harbor	0.53	Santa Ana Canyon	0.80
La Canada	1.33	Upland	0.71
La Habra	0.78	Vernon	0.92
Lancaster	0.76	Walnut	0.71
Lennox	0.68	West L.A.	1.00
Long Beach	1.00	Whittier	0.55
Los Alamitos	0.69		

Table – 4A

**Volume Source
Operating 12 hours/day or Less**

Carcinogenic X/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{tons}/\text{yr.}]$)

Source Dimensions		Downwind Distance (meters)							
Area (ft ²)	Height (ft)	25	50	75	100	200	300	500	1000
< 3,000	≤ 20	41.45	13.68	6.70	3.95	1.06	0.48	0.17	0.04
3,000 to 10,000	≤ 20	36.93	12.83	6.41	3.82	1.04	0.47	0.17	0.04
3,000 to 10,000	> 20	26.52	10.54	5.58	3.44	0.98	0.46	0.17	0.04
>10,000 to 30,000	> 20	21.59	9.51	5.20	3.26	0.96	0.46	0.17	0.04
> 30,000	> 20	-	8.19	4.65	2.98	0.91	0.43	0.16	0.04

Table – 4B

Meteorological Correction Factors (MET)

<u>STATION</u>	<u>MET</u>	<u>STATION</u>	<u>MET</u>
Anaheim	0.86	Lynwood	0.63
Azusa	0.80	Malibu	0.88
Banning	0.54	Newhall	0.53
Burbank	0.60	Norco	0.75
Canoga Park	0.68	Palm Springs	0.60
Compton	0.63	Pasadena	0.75
Costa Mesa	0.71	Pico Rivera	0.70
Downtown L.A.	0.51	Pomona	0.91
El Toro	0.68	Redlands	0.90
Fontana	0.80	Reseda	0.71
Indio	0.72	Riverside	0.82
King Harbor	0.63	Santa Ana Canyon	0.92
La Canada	0.76	Upland	0.62
La Habra	0.81	Vernon	0.55
Lancaster	0.49	Walnut	0.63
Lennox	0.66	West L.A.	1.00
Long Beach	0.58	Whittier	0.66
Los Alamitos	0.64		

Table – 5A

**Volume Source
Operating More Than 12 hours/day**

Carcinogenic X/Q Values ($[\mu\text{g}/\text{m}^3]/[\text{tons}/\text{yr.}]$)

Source Dimensions		Downwind Distance (meters)							
Area (ft ²)	Height(ft)	25	50	75	100	200	300	500	1000
< 3,000	≤ 20	60.49	22.40	11.68	7.18	2.12	1.02	0.41	0.12
3,000 to 10,000	≤ 20	55.80	21.35	11.30	7.01	2.09	1.01	0.40	0.12
3,000 to 10,000	> 20	35.18	15.50	8.87	5.78	1.89	0.94	0.39	0.12
>10,000 to 30,000	> 20	29.58	14.43	8.41	5.55	1.85	0.93	0.39	0.12
> 30,000	> 20	--	13.05	7.81	5.22	1.79	0.91	0.38	0.12

Table – 5B

Meteorological Correction Factors (MET)

<u>STATION</u>	<u>MET</u>	<u>STATION</u>	<u>MET</u>
Anaheim	0.56	Lynwood	0.69
Azusa	0.64	Malibu	0.86
Banning	0.65	Newhall	0.93
Burbank	0.66	Norco	0.58
Canoga Park	0.73	Palm Springs	0.89
Compton	0.55	Pasadena	0.91
Costa Mesa	0.63	Pico Rivera	0.66
Downtown L.A.	0.63	Pomona	1.27
El Toro	0.66	Redlands	1.76
Fontana	1.22	Reseda	0.59
Indio	0.56	Riverside	0.78
King Harbor	0.46	Santa Ana Canyon	0.81
La Canada	1.34	Upland	0.76
La Habra	0.79	Vernon	0.91
Lancaster	0.78	Walnut	0.74
Lennox	0.66	West L.A.	1.00
Long Beach	0.99	Whittier	0.53
Los Alamitos	0.73		

Table – 6

Reserved

Table – 7

Reserved

Table – 8

Unit Risk Factor (U) and Multi Pathway Adjustment Factors (MP)

Toxic Air Contaminant	Unit Risk Factor	MP (MICR)
Acetaldehyde	2.70E-06	1.00
Acrylamide	1.30E-03	1.00
Acrylonitrile	2.90E-04	1.00
Arsenic, inorganic	3.30E-03	2.70
Asbestos	6.30E-02	1.00
Benzene	2.90E-05	1.00
Benzidine	1.40E-01	1.00
Beryllium	2.40E-03	6.90
Bis(2-chloroethyl)ether	3.30E-04	1.00
Bis(chloromethyl)ether	1.30E-02	1.00
Butadiene, 1,3-	1.70E-04	1.00
Cadmium	4.20E-03	1.00
Carbon tetrachloride	4.20E-05	1.00
Chlorinated dioxins & dibenzofurans	3.80E+01	6.80
Chloroform	5.30E-06	1.00
Chromium, hexavalent	1.40E-01	1.01
Dichlorobenzidine, 3,3-	3.40E-04	1.00
Dinitrotoluene, 2,4-	1.90E-04	1.00
Dioxane, 1,4-	7.70E-06	1.00
Diphenylhydrazine	2.20E-04	1.00
Epichlorohydrin	2.30E-05	1.00
Ethylene dibromide	7.10E-05	1.00
Ethylene dichloride (1,2 dichloroethane)	2.00E-05	1.00
Ethylene oxide	8.80E-05	1.00
Formaldehyde	6.00E-06	1.00
Hexachlorobenzene	5.10E-04	9.40
Hexachlorocyclohexane:	1.10E-03	4.00
technical grade	1.10E-03	4.00
alpha isomer	1.10E-03	4.00
Methylene chloride	1.00E-06	1.00
Nickel:		
refinery dust	2.60E-04	1.00
subsulfide	2.60E-04	1.00

Table – 8

Unit Risk Factor (U) and Multi Pathway Adjustment Factors (MP)

Toxic Air Contaminant	Unit Risk Factor	MP (MICR)
N-Nitroso- Compounds:		
n-Nitroso-n-ethylurea	7.70E-03	4.00
n-Nitroso-n-methylurea	3.30E-02	4.00
n-Nitrosodi-n-butylamine	3.10E-03	4.00
n-Nitrosodiethylamine	1.00E-02	4.00
n-Nitrosodimethylamine	4.60E-03	4.00
n-Nitrosodiphenylamine	2.60E-06	4.00
n-Nitrosopyrrolidine	6.00E-04	4.00
Polycyclic Aromatic Hydrocarbons (PAHs):	1.70E-03	8.60
Benz(a)anthracene	1.70E-03	8.60
Benzo(a)pyrene	1.70E-03	8.60
Benzo(b)fluoranthene	1.70E-03	8.60
Benzo(k)fluoranthene	1.70E-03	8.60
Chrysene	1.70E-03	8.60
Dibenzo(a,h)anthracene	1.70E-03	8.60
Indenopyrene	1.70E-03	8.60
Polychlorinated biphenyls (PCBs)	1.40E-03	31.00
Trichloroethylene	2.00E-06	1.00
Trichlorophenol, 2,4,6-	2.00E-05	3.60
Vinyl chloride	7.80E-05	1.00

Table – 9

Lifetime Exposure Adjustment (LEA) Factors

Type of Receptor	LEA Factor
Sensitive	1.0
Residential	1.0
Off-site Worker	0.14, if permit unit operates 24 hr/day, 365 days/yr 0.66, if permit unit does not operate 24 hr/day, 365 days/yr

When performing a screening risk assessment for offsite worker receptors, only 0.14 and 0.66 may be used for the LEA. Do not prorate for other operating schedules.

Table 10 – A
Reserved

Table 10 – B
Reserved

Table – 11

Meteorological Monitoring Stations in the South Coast Air Basin

STATION	UTM (KM) E-W	UTM (KM) N-S	LONGITUDE	LATITUDE
Anaheim	415.0	3742.5	117:55:07	33:49:16
Azusa	414.9	3777.4	117:55:23	34:08:09
Banning	510.5	3754.4	116:53:11	33:55:58
Burbank	379.5	3783.0	118:18:27	34:10:58
Canoga Park	352.9	3786.0	118:35:48	34:12:23
Compton	385.5	3750.3	118:14:17	33:53:19
Costa Mesa	413.8	3724.2	117:55:47	33:39:21
Downtown LA	386.9	3770.1	118:13:31	34:04:02
El Toro	436.0	3720.9	117:41:25	33:37:39
Fontana	455.4	3773.9	117:29:01	34:06:24
Indio	572.3	3731.0	116:13:11	33:43:06
King Harbor	371.2	3744.4	118:23:30	33:30:00
La Canada	388.2	3786.1	118:12:49	34:12:42
La Habra	412.0	3754.0	117:57:07	33:55:28
Lancaster	396.0	3839.5	118:08:08	34:41:38
Lennox (Hawthorne)	373.0	3755.0	118:22:26	33:55:46
Long Beach	390.0	3743.0	118:11:19	33:49:24
Los Alamitos	404.5	3739.8	118:01:54	33:47:45
Lynwood	388.0	3754.0	118:12:42	33:55:20
Malibu	344.0	3766.9	118:41:23	34:01:59
Newhall	355.5	3805.5	118:31:02	34:22:59
Norco	446.8	3749.0	117:34:31	33:52:54
Palm Springs	542.5	3742.5	116:32:27	33:49:25
Pasadena	396.0	3778.5	118:07:41	34:08:38
Pico Rivera	402.3	3764.1	118:03:29	34:00:53
Pomona	430.8	3769.6	117:44:60	34:03:60
Redlands	486.2	3769.4	117:09:00	34:04:00
Reseda	359.0	3785.0	118:31:49	34:11:54
Riverside	464.8	3758.6	117:22:50	33:58:10
Santa Ana Canyon	431.0	3748.4	117:44:46	33:52:32
Upland	440.0	3773.1	117:39:02	34:05:55
Vernon	387.4	3762.5	118:13:10	33:59:55
Walnut	420.0	3761.7	117:51:58	33:59:41
West LA	372.3	3768.6	118:23:01	34:03:08
Whittier	405.5	3754.0	118:01:28	33:55:26

Figure 1

Meteorological Monitoring Stations in the South Coast Air Basin

