

**APPENDIX B-4**

**SUMMARIES OF TOXIC POLLUTANTS**

BAY AREA AIR QUALITY MANAGEMENT DISTRICT  
 TOXIC AIR CONTAMINANTS  
 2002 ANNUAL REPORT  
 JUNE 2004

SUMMARY OF TOXIC POLLUTANTS

SORTED BY POLLUTANT

Pollutant	Trigger Level (lbs/yr)	Total # Plants Emitting	# Plants Above Trigger	Total Emissions (lbs/yr)
Acetaldehyde	72	89	11	31000
Acrolein	3.9	8	2	210
Acrylic acid	190	4	0	40
Acrylonitrile	.67	4	4	200
Ammonia (NH3) pollutant	19300	66	20	2900000
Arsenic (all)	.024	378	33	12
Asbestos pollutant	.003	1	0	.000
Benzene	6.7	1402	183	51000
Benzyl chloride	2320	3	0	1100
Beryllium (all) pollutant	.015	379	13	1.100
Bromine	328	1	0	1
Butadiene, 1,3-	1.1	9	6	440
Butyl cellosolve	3860	462	7	370000
Cadmium	.046	383	22	49
Carbon tetrachloride	4.6	44	2	1900
Cellosolve	38600	67	1	110000
Cellosolve acetate	12400	46	0	4800
Chlorinated dioxins & furans (	.0000012	52	21	.0006400
Chlorine pollutant	1370	6	1	1900
Chlorobenzene	13500	11	0	5700
Chlorobenzene - other/not spec	13500	8	0	6600
Chloroform	36	95	36	16000
Chromium (hexavalent)	.0014	407	79	9.2000
Copper (all) pollutant	463	52	0	430
Cresol	34700	13	0	370
Di(2-ethylhexyl) phthalate	81	1	0	0
Dichlorobenzene	68	35	6	3400
Dioxane, 1,4-	25	68	4	410
Epichlorohydrin	8.3	4	0	.1
Ethyl acrylate	9260	6	0	170
Ethyl benzene	190000	241	0	29000
Ethyl chloride	1930000	31	0	1600
Ethylene dibromide	2.7	30	2	280
Ethylene dichloride	9.7	70	22	1000
Ethylene oxide	2.1	40	4	47
Formaldehyde	33	770	108	210000
Glycol ether - other/not spec	3860	151	3	66000
Hexachlorobenzene	.39	2	0	.03
Hexane	39000	84	2	190000
Hydrazine	.039	1	0	.029
Hydrochloric acid mist polluta	1350	74	3	19000
Hydrogen Chloride (HCl)	1350	61	11	150000
Hydrogen Fluoride (HF)	1140	47	0	1400
Hydrogen Sulfide (H2S)	8110	66	3	110000
Isophorone	390000	4	0	90
Lead (all) pollutant	29	388	2	430
Manganese	77	345	5	1200
Mercury (all) pollutant	57.9	380	3	550
Methyl alcohol	120000	364	1	380000
Methyl bromide	1160	1	0	0
Methyl cellosolve	3860	13	0	3500
Methyl ethyl ketone (MEK)	149000	445	0	240000
Methyl methacrylate	189000	3	0	19
Methyl tertiary-butyl ether	580000	118	0	210000
Methylene chloride	190	151	65	98000
Naphthalene	270	6	0	170
Nickel pollutant	.73	473	40	730

BAY AREA AIR QUALITY MANAGEMENT DISTRICT  
 TOXIC AIR CONTAMINANTS  
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SUMMARY OF TOXIC POLLUTANTS  
 SORTED BY POLLUTANT (cont)

Pollutant	Trigger Level (lbs/yr)	Total # Plants Emitting	# Plants Above Trigger	Total Emissions (lbs/yr)
Nitropropane, 2-	3860	1	0	0
PAH's (benzo[a]pyrene equiv)	.043	53	8	460
Perchloroethylene	33	842	782	560000
Phenol	8690	18	0	16000
Phosphine	1930	1	0	110
Phthalic anhydride	1350000	3	0	170
Polychlorinated biphenyl (PCB)	.007	7	7	3.000
Selenium	96.5	47	2	620
Styrene	135000	77	0	260000
Tetrachloroethane, 1,1,2,2-	3.3	3	2	63
Toluene	38600	876	1	380000
Toluene diisocyanate (TDI)	18.3	6	1	230
Trichloroethane, 1,1,1- (w/o	61800	116	1	89000
Trichloroethane, 1,1,1- (with	61800	40	0	12000
Trichloroethylene	97	135	43	27000
Triethylamine	1400	1	0	290
Vinyl chloride	2.5	53	39	10000
Vinylidene chloride	6180	39	0	420
Xylene	57900	1052	0	380000
Zinc pollutant	6760	51	0	2700
----- 77 pollutants				----- 6975000

number of toxic pollutants tracked in BAAQMD: 112  
 number of toxic pollutants reported in BAAQMD: 77  
 number of toxic pollutants reported > cutoff: 43

BAY AREA AIR QUALITY MANAGEMENT DISTRICT  
 TOXIC AIR CONTAMINANTS  
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SUMMARY OF TOXIC POLLUTANTS

SORTED BY EMISSIONS

Pollutant	Trigger Level (lbs/yr)	Total # Plants Emitting	# Plants Above Trigger	Total Emissions (lbs/yr)
Ammonia (NH3) pollutant	19300	66	20	2900000
Perchloroethylene	33	842	782	560000
Toluene	38600	876	1	380000
Xylene	57900	1052	0	380000
Methyl alcohol	120000	364	1	380000
Butyl cellosolve	3860	462	7	370000
Styrene	135000	77	0	260000
Methyl ethyl ketone (MEK)	149000	445	0	240000
Methyl tertiary-butyl ether	580000	118	0	210000
Formaldehyde	33	770	108	210000
Hexane	39000	84	2	190000
Hydrogen Chloride (HCl)	1350	61	11	150000
Cellosolve	38600	67	1	110000
Hydrogen Sulfide (H2S)	8110	66	3	110000
Methylene chloride	190	151	65	98000
Trichloroethane, 1,1,1- (w/o	61800	116	1	89000
Glycol ether - other/not spec	3860	151	3	66000
Benzene	6.7	1402	183	51000
Acetaldehyde	72	89	11	31000
Ethyl benzene	190000	241	0	29000
Trichloroethylene	97	135	43	27000
Hydrochloric acid mist polluta	1350	74	3	19000
Phenol	8690	18	0	16000
Chloroform	36	95	36	16000
Trichloroethane, 1,1,1- (with	61800	40	0	12000
Vinyl chloride	2.5	53	39	10000
Chlorobenzene - other/not spec	13500	8	0	6600
Chlorobenzene	13500	11	0	5700
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Methyl cellosolve	3860	13	0	3500
Dichlorobenzene	68	35	6	3400
Zinc pollutant	6760	51	0	2700
Carbon tetrachloride	4.6	44	2	1900
Chlorine pollutant	1370	6	1	1900
Ethyl chloride	1930000	31	0	1600
Hydrogen Fluoride (HF)	1140	47	0	1400
Manganese	77	345	5	1200
Benzyl chloride	2320	3	0	1100
Ethylene dichloride	9.7	70	22	1000
Nickel pollutant	.73	473	40	730
Selenium	96.5	47	2	620
Mercury (all) pollutant	57.9	380	3	550
PAH's (benzo[a]pyrene equiv)	.043	53	8	460
Butadiene, 1,3-	1.1	9	6	440
Lead (all) pollutant	29	388	2	430
Copper (all) pollutant	463	52	0	430
Vinylidene chloride	6180	39	0	420
Dioxane, 1,4-	25	68	4	410
Cresol	34700	13	0	370
Triethylamine	1400	1	0	290
Ethylene dibromide	2.7	30	2	280
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Acrolein	3.9	8	2	210
Acrylonitrile	.67	4	4	200
Ethyl acrylate	9260	6	0	170
Naphthalene	270	6	0	170
Phthalic anhydride	1350000	3	0	170
Phosphine	1930	1	0	110

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SUMMARY OF TOXIC POLLUTANTS  
 SORTED BY EMISSIONS (cont)

Pollutant	Trigger Level (lbs/yr)	Total # Plants Emitting	# Plants Above Trigger	Total Emissions (lbs/yr)
Isophorone	390000	4	0	90
Tetrachloroethane, 1,1,2,2-	3.3	3	2	63
Cadmium	.046	383	22	49
Ethylene oxide	2.1	40	4	47
Acrylic acid	190	4	0	40
Methyl methacrylate	189000	3	0	19
Arsenic (all)	.024	378	33	12
Chromium (hexavalent)	.0014	407	79	9.2000
Polychlorinated biphenyl (PCB)	.007	7	7	3.000
Beryllium (all) pollutant	.015	379	13	1.100
Bromine	328	1	0	1
Nitropropane, 2-	3860	1	0	0
Epichlorohydrin	8.3	4	0	.1
Hexachlorobenzene	.39	2	0	.03
Hydrazine	.039	1	0	.029
Chlorinated dioxins & furans (	.0000012	52	21	.0006400
Di(2-ethylhexyl) phthalate	81	1	0	0
Asbestos pollutant	.003	1	0	.000
Methyl bromide	1160	1	0	0
-----				
77 pollutants				6975000

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BAY AREA AIR QUALITY MANAGEMENT DISTRICT  
 TOXIC AIR CONTAMINANTS  
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SUMMARY OF TOXIC POLLUTANTS

SORTED BY OCCURRENCES

Pollutant	Trigger Level (lbs/yr)	Total # Plants Emitting	# Plants Above Trigger	Total Emissions (lbs/yr)
Benzene	6.7	1402	183	51000
Xylene	57900	1052	0	380000
Toluene	38600	876	1	380000
Perchloroethylene	33	842	782	560000
Formaldehyde	33	770	108	210000
Nickel pollutant	.73	473	40	730
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Manganese	77	345	5	1200
Ethyl benzene	190000	241	0	29000
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Methylene chloride	190	151	65	98000
Trichloroethylene	97	135	43	27000
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Acetaldehyde	72	89	11	31000
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Ethylene dibromide	2.7	30	2	280
Phenol	8690	18	0	16000
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Chlorine pollutant	1370	6	1	1900
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SUMMARY OF TOXIC POLLUTANTS  
 SORTED BY OCCURRENCES (cont)

Pollutant	Trigger Level (lbs/yr)	Total # Plants Emitting	# Plants Above Trigger	Total Emissions (lbs/yr)
Toluene diisocyanate (TDI)	18.3	6	1	230
Acrylic acid	190	4	0	40
Acrylonitrile	.67	4	4	200
Epichlorohydrin	8.3	4	0	.1
Isophorone	390000	4	0	90
Benzyl chloride	2320	3	0	1100
Methyl methacrylate	189000	3	0	19
Phthalic anhydride	1350000	3	0	170
Tetrachloroethane, 1,1,2,2-	3.3	3	2	63
Hexachlorobenzene	.39	2	0	.03
Asbestos pollutant	.003	1	0	.000
Bromine	328	1	0	1
Di(2-ethylhexyl) phthalate	81	1	0	0
Hydrazine	.039	1	0	.029
Methyl bromide	1160	1	0	0
Nitropropane, 2-	3860	1	0	0
Phosphine	1930	1	0	110
Triethylamine	1400	1	0	290
----- 77 pollutants				----- 6975000

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 TOXIC AIR CONTAMINANTS  
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SUMMARY OF TOXIC POLLUTANTS

SORTED BY TRIGGER LEVEL

Pollutant	Trigger Level (lbs/yr)	Total # Plants Emitting	# Plants Above Trigger	Total Emissions (lbs/yr)
Chlorinated dioxins & furans (	.0000012	52	21	.0006400
Chromium (hexavalent)	.0014	407	79	9.2000
Asbestos pollutant	.003	1	0	.000
Polychlorinated biphenyl (PCB)	.007	7	7	3.000
Beryllium (all) pollutant	.015	379	13	1.100
Arsenic (all)	.024	378	33	12
Hydrazine	.039	1	0	.029
PAH's (benzo[a]pyrene equiv)	.043	53	8	460
Cadmium	.046	383	22	49
Hexachlorobenzene	.39	2	0	.03
Acrylonitrile	.67	4	4	200
Nickel pollutant	.73	473	40	730
Butadiene, 1,3-	1.1	9	6	440
Ethylene oxide	2.1	40	4	47
Vinyl chloride	2.5	53	39	10000
Ethylene dibromide	2.7	30	2	280
Tetrachloroethane, 1,1,2,2-	3.3	3	2	63
Acrolein	3.9	8	2	210
Carbon tetrachloride	4.6	44	2	1900
Benzene	6.7	1402	183	51000
Epichlorohydrin	8.3	4	0	.1
Ethylene dichloride	9.7	70	22	1000
Toluene diisocyanate (TDI)	18.3	6	1	230
Dioxane, 1,4-	25	68	4	410
Lead (all) pollutant	29	388	2	430
Formaldehyde	33	770	108	210000
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Chloroform	36	95	36	16000
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Dichlorobenzene	68	35	6	3400
Acetaldehyde	72	89	11	31000
Manganese	77	345	5	1200
Di(2-ethylhexyl) phthalate	81	1	0	0
Selenium	96.5	47	2	620
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Acrylic acid	190	4	0	40
Methylene chloride	190	151	65	98000
Naphthalene	270	6	0	170
Bromine	328	1	0	1
Copper (all) pollutant	463	52	0	430
Hydrogen Fluoride (HF)	1140	47	0	1400
Methyl bromide	1160	1	0	0
Hydrochloric acid mist polluta	1350	74	3	19000
Hydrogen Chloride (HCl)	1350	61	11	150000
Chlorine pollutant	1370	6	1	1900
Triethylamine	1400	1	0	290
Phosphine	1930	1	0	110
Benzyl chloride	2320	3	0	1100
Butyl cellosolve	3860	462	7	370000
Glycol ether - other/not spec	3860	151	3	66000
Methyl cellosolve	3860	13	0	3500
Nitropropane, 2-	3860	1	0	0
Vinylidene chloride	6180	39	0	420
Zinc pollutant	6760	51	0	2700
Hydrogen Sulfide (H2S)	8110	66	3	110000
Phenol	8690	18	0	16000
Ethyl acrylate	9260	6	0	170
Cellosolve acetate	12400	46	0	4800



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SUMMARY OF TOXIC POLLUTANTS

SORTED BY TRIGGER LEVEL (cont)

Pollutant	Trigger Level (lbs/yr)	Total # Plants Emitting	# Plants Above Trigger	Total Emissions (lbs/yr)
Chlorobenzene	13500	11	0	5700
Chlorobenzene - other/not spec	13500	8	0	6600
Ammonia (NH3) pollutant	19300	66	20	2900000
Cresol	34700	13	0	370
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Isophorone	390000	4	0	90
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SUMMARY OF TOXIC POLLUTANTS  
 SORTED BY PLANTS ABOVE TRIGGER

Pollutant	Trigger Level (lbs/yr)	Total # Plants Emitting	# Plants Above Trigger	Total Emissions (lbs/yr)
Perchloroethylene	33	842	782	560000
Benzene	6.7	1402	183	51000
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Arsenic (all)	.024	378	33	12
Cadmium	.046	383	22	49
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Epichlorohydrin	8.3	4	0	.1
Ethyl acrylate	9260	6	0	170
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Hexachlorobenzene	.39	2	0	.03

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SUMMARY OF TOXIC POLLUTANTS  
 SORTED BY PLANTS ABOVE TRIGGER (cont)

Pollutant	Trigger Level (lbs/yr)	Total # Plants Emitting	# Plants Above Trigger	Total Emissions (lbs/yr)
Hydrazine	.039	1	0	.029
Hydrogen Fluoride (HF)	1140	47	0	1400
Isophorone	390000	4	0	90
Methyl bromide	1160	1	0	0
Methyl cellosolve	3860	13	0	3500
Methyl ethyl ketone (MEK)	149000	445	0	240000
Methyl methacrylate	189000	3	0	19
Methyl tertiary-butyl ether	580000	118	0	210000
Naphthalene	270	6	0	170
Nitropropane, 2-	3860	1	0	0
Phenol	8690	18	0	16000
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Phthalic anhydride	1350000	3	0	170
Styrene	135000	77	0	260000
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Triethylamine	1400	1	0	290
Vinylidene chloride	6180	39	0	420
Xylene	57900	1052	0	380000
Zinc pollutant	6760	51	0	2700
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