

APPENDIX B-4

SUMMARIES OF TOXIC POLLUTANTS

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
TOXIC AIR CONTAMINANTS
2003 ANNUAL REPORT

SUMMARY OF TOXIC POLLUTANTS

SORTED BY POLLUTANT

Pollutant	Trigger Level (lbs/yr)	Total # Plants Emitting	# Plants Above Trigger	Total Emissions (lbs/yr)
Acetaldehyde	72	81	10	8800
Acrolein	3.9	4	2	110
Acrylic acid	190	1	0	45
Acrylonitrile	.67	5	5	250
Allyl chloride	193	2	0	54
Ammonia (NH3) pollutant	19300	69	22	2700000
Arsenic (all)	.024	625	33	11
Benzene	6.7	1637	190	46000
Benzyl chloride	2320	4	0	840
Beryllium (all) pollutant	.015	625	13	1.200
Bromine	328	1	0	0
Butadiene, 1,3-	1.1	8	7	440
Butyl alcohol, tert-	-8888	3	3	700
Butyl cellosolve	3860	389	5	300000
Cadmium	.046	629	25	50
Carbon tetrachloride	4.6	40	1	2000
Cellosolve	38600	45	1	96000
Cellosolve acetate	12400	30	0	4700
Chlorinated dioxins & furans	.0000012	52	21	.0005600
Chlorine pollutant	1370	3	1	1900
Chlorobenzene	13500	10	0	4700
Chlorobenzene - other/not spec	13500	2	0	5100
Chloroform	36	92	39	15000
Chromium (hexavalent)	.0014	649	82	9.6000
Copper (all) pollutant	463	52	0	440
Cresol	34700	10	0	390
Di(2-ethylhexyl) phthalate	81	1	0	0
Dichlorobenzene	68	37	7	7900
Dioxane, 1,4-	25	26	4	400
Epichlorohydrin	8.3	1	0	.1
Ethyl acrylate	9260	5	0	78
Ethyl benzene	190000	225	0	27000
Ethyl chloride	1930000	28	0	1700
Ethylene dibromide	2.7	21	3	340
Ethylene dichloride	9.7	56	21	910
Ethylene oxide	2.1	39	2	35
Formaldehyde	33	1001	109	210000
Glycol ether - other/not spec	3860	119	2	48000
Hexachlorobenzene	.39	2	0	.04
Hexamethylene-1,6-diisocyanate	1.9	1	1	2.5
Hexane	39000	67	1	130000
Hydrochloric acid mist polluta	1350	72	3	18000
Hydrogen Chloride (HCl)	1350	58	9	150000
Hydrogen Fluoride (HF)	1140	47	0	1600
Hydrogen Sulfide (H2S)	8110	59	2	95000
Isophorone	390000	3	0	91
Lead (all) pollutant	29	631	2	420
Manganese	77	592	5	1100
Mercury (all) pollutant	57.9	628	3	520
Methyl alcohol	120000	291	1	340000
Methyl bromide	1160	1	0	9
Methyl cellosolve	3860	10	0	2100
Methyl ethyl ketone (MEK)	149000	381	0	170000
Methyl methacrylate	189000	2	0	20
Methyl tertiary-butyl ether	580000	109	0	220000
Methylene chloride	190	135	66	91000
Naphthalene	270	6	0	170
Nickel pollutant	.73	636	38	790

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
 TOXIC AIR CONTAMINANTS
 2003 ANNUAL REPORT

SUMMARY OF TOXIC POLLUTANTS

SORTED BY POLLUTANT (cont)

Pollutant	Trigger Level (lbs/yr)	Total # Plants Emitting	# Plants Above Trigger	Total Emissions (lbs/yr)
PAH's (benzo[a]pyrene equiv)	.043	54	9	460
Perchloroethylene	33	790	744	530000
Phenol	8690	18	0	14000
Phosphine	1930	1	0	110
Phthalic anhydride	1350000	1	0	15
Polychlorinated biphenyl (PCB)	.007	7	7	2.600
Selenium	96.5	47	1	600
Styrene	135000	68	0	260000
Tetrachloroethane, 1,1,2,2-	3.3	3	2	100
Toluene	38600	788	1	320000
Toluene diisocyanate (TDI)	18.3	3	1	200
Trichloroethane, 1,1,1- (w/o	61800	72	0	81000
Trichloroethane, 1,1,1- (with	61800	37	0	12000
Trichloroethane, 1,1,2-	12	1	0	2
Trichloroethylene	97	124	44	21000
Triethylamine	1400	2	0	290
Vinyl chloride	2.5	51	39	10000
Vinylidene chloride	6180	34	0	410
Xylene	57900	962	0	320000
Zinc pollutant	6760	50	0	3000
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78 pollutants				6275910

number of toxic pollutants tracked in BAAQMD: 114
 number of toxic pollutants reported in BAAQMD: 78
 number of toxic pollutants reported > cutoff: 44

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
TOXIC AIR CONTAMINANTS
2003 ANNUAL REPORT

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	69	22	2700000
Perchloroethylene	33	790	744	530000
Methyl alcohol	120000	291	1	340000
Xylene	57900	962	0	320000
Toluene	38600	788	1	320000
Butyl cellosolve	3860	389	5	300000
Styrene	135000	68	0	260000
Methyl tertiary-butyl ether	580000	109	0	220000
Formaldehyde	33	1001	109	210000
Methyl ethyl ketone (MEK)	149000	381	0	170000
Hydrogen Chloride (HCl)	1350	58	9	150000
Hexane	39000	67	1	130000
Cellosolve	38600	45	1	96000
Hydrogen Sulfide (H2S)	8110	59	2	95000
Methylene chloride	190	135	66	91000
Trichloroethane, 1,1,1- (w/o	61800	72	0	81000
Glycol ether - other/not spec	3860	119	2	48000
Benzene	6.7	1637	190	46000
Ethyl benzene	190000	225	0	27000
Trichloroethylene	97	124	44	21000
Hydrochloric acid mist polluta	1350	72	3	18000
Chloroform	36	92	39	15000
Phenol	8690	18	0	14000
Trichloroethane, 1,1,1- (with	61800	37	0	12000
Vinyl chloride	2.5	51	39	10000
Acetaldehyde	72	81	10	8800
Dichlorobenzene	68	37	7	7900
Chlorobenzene - other/not spec	13500	2	0	5100
Cellosolve acetate	12400	30	0	4700
Chlorobenzene	13500	10	0	4700
Zinc pollutant	6760	50	0	3000
Methyl cellosolve	3860	10	0	2100
Carbon tetrachloride	4.6	40	1	2000
Chlorine pollutant	1370	3	1	1900
Ethyl chloride	1930000	28	0	1700
Hydrogen Fluoride (HF)	1140	47	0	1600
Manganese	77	592	5	1100
Ethylene dichloride	9.7	56	21	910
Benzyl chloride	2320	4	0	840
Nickel pollutant	.73	636	38	790
Butyl alcohol, tert-	-8888	3	3	700
Selenium	96.5	47	1	600
Mercury (all) pollutant	57.9	628	3	520
PAH's (benzo[a]pyrene equiv)	.043	54	9	460
Butadiene, 1,3-	1.1	8	7	440
Copper (all) pollutant	463	52	0	440
Lead (all) pollutant	29	631	2	420
Vinylidene chloride	6180	34	0	410
Dioxane, 1,4-	25	26	4	400
Cresol	34700	10	0	390
Ethylene dibromide	2.7	21	3	340
Triethylamine	1400	2	0	290
Acrylonitrile	.67	5	5	250
Toluene diisocyanate (TDI)	18.3	3	1	200
Naphthalene	270	6	0	170
Acrolein	3.9	4	2	110
Phosphine	1930	1	0	110
Tetrachloroethane, 1,1,2,2-	3.3	3	2	100

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
TOXIC AIR CONTAMINANTS
2003 ANNUAL REPORT

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	3	0	91
Ethyl acrylate	9260	5	0	78
Allyl chloride	193	2	0	54
Cadmium	.046	629	25	50
Acrylic acid	190	1	0	45
Ethylene oxide	2.1	39	2	35
Methyl methacrylate	189000	2	0	20
Phthalic anhydride	1350000	1	0	15
Arsenic (all)	.024	625	33	11
Chromium (hexavalent)	.0014	649	82	9.6000
Methyl bromide	1160	1	0	9
Polychlorinated biphenyl (PCB)	.007	7	7	2.600
Hexamethylene-1,6-diisocyanate	1.9	1	1	2.5
Trichloroethane, 1,1,2-	12	1	0	2
Beryllium (all) pollutant	.015	625	13	1.200
Epichlorohydrin	8.3	1	0	.1
Hexachlorobenzene	.39	2	0	.04
Bromine	328	1	0	0
Chlorinated dioxins & furans (.0000012	52	21	.0005600
Di(2-ethylhexyl) phthalate	81	1	0	0
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78 pollutants				6275910

number of toxic pollutants tracked in BAAQMD: 114
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number of toxic pollutants reported > cutoff: 44

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
TOXIC AIR CONTAMINANTS
2003 ANNUAL REPORT

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	1637	190	46000
Formaldehyde	33	1001	109	210000
Xylene	57900	962	0	320000
Perchloroethylene	33	790	744	530000
Toluene	38600	788	1	320000
Chromium (hexavalent)	.0014	649	82	9.6000
Nickel pollutant	.73	636	38	790
Lead (all) pollutant	29	631	2	420
Cadmium	.046	629	25	50
Mercury (all) pollutant	57.9	628	3	520
Arsenic (all)	.024	625	33	11
Beryllium (all) pollutant	.015	625	13	1.200
Manganese	77	592	5	1100
Butyl cellosolve	3860	389	5	300000
Methyl ethyl ketone (MEK)	149000	381	0	170000
Methyl alcohol	120000	291	1	340000
Ethyl benzene	190000	225	0	27000
Methylene chloride	190	135	66	91000
Trichloroethylene	97	124	44	21000
Glycol ether - other/not spec	3860	119	2	48000
Methyl tertiary-butyl ether	580000	109	0	220000
Chloroform	36	92	39	15000
Acetaldehyde	72	81	10	8800
Hydrochloric acid mist polluta	1350	72	3	18000
Trichloroethane, 1,1,1- (w/o	61800	72	0	81000
Ammonia (NH3) pollutant	19300	69	22	2700000
Styrene	135000	68	0	260000
Hexane	39000	67	1	130000
Hydrogen Sulfide (H2S)	8110	59	2	95000
Hydrogen Chloride (HCl)	1350	58	9	150000
Ethylene dichloride	9.7	56	21	910
PAH's (benzo[a]pyrene equiv)	.043	54	9	460
Chlorinated dioxins & furans (.0000012	52	21	.0005600
Copper (all) pollutant	463	52	0	440
Vinyl chloride	2.5	51	39	10000
Zinc pollutant	6760	50	0	3000
Hydrogen Fluoride (HF)	1140	47	0	1600
Selenium	96.5	47	1	600
Cellosolve	38600	45	1	96000
Carbon tetrachloride	4.6	40	1	2000
Ethylene oxide	2.1	39	2	35
Dichlorobenzene	68	37	7	7900
Trichloroethane, 1,1,1- (with	61800	37	0	12000
Vinylidene chloride	6180	34	0	410
Cellosolve acetate	12400	30	0	4700
Ethyl chloride	1930000	28	0	1700
Dioxane, 1,4-	25	26	4	400
Ethylene dibromide	2.7	21	3	340
Phenol	8690	18	0	14000
Chlorobenzene	13500	10	0	4700
Cresol	34700	10	0	390
Methyl cellosolve	3860	10	0	2100
Butadiene, 1,3-	1.1	8	7	440
Polychlorinated biphenyl (PCB)	.007	7	7	2.600
Naphthalene	270	6	0	170
Acrylonitrile	.67	5	5	250
Ethyl acrylate	9260	5	0	78
Acrolein	3.9	4	2	110

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 TOXIC AIR CONTAMINANTS
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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)
Benzy1 chloride	2320	4	0	840
Butyl alcohol, tert-	-8888	3	3	700
Chlorine pollutant	1370	3	1	1900
Isophorone	390000	3	0	91
Tetrachloroethane, 1,1,2,2-	3.3	3	2	100
Toluene diisocyanate (TDI)	18.3	3	1	200
Allyl chloride	193	2	0	54
Chlorobenzene - other/not spec	13500	2	0	5100
Hexachlorobenzene	.39	2	0	.04
Methyl methacrylate	189000	2	0	20
Triethylamine	1400	2	0	290
Acrylic acid	190	1	0	45
Bromine	328	1	0	0
Di(2-ethylhexyl) phthalate	81	1	0	0
Epichlorohydrin	8.3	1	0	.1
Hexamethylene-1,6-diisocyanate	1.9	1	1	2.5
Methyl bromide	1160	1	0	9
Phosphine	1930	1	0	110
Phthalic anhydride	1350000	1	0	15
Trichloroethane, 1,1,2-	12	1	0	2
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78 pollutants				6275910

number of toxic pollutants tracked in BAAQMD: 114
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BAY AREA AIR QUALITY MANAGEMENT DISTRICT
TOXIC AIR CONTAMINANTS
2003 ANNUAL REPORT

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	.0005600
Chromium (hexavalent)	.0014	649	82	9.6000
Polychlorinated biphenyl (PCB)	.007	7	7	2.600
Beryllium (all) pollutant	.015	625	13	1.200
Arsenic (all)	.024	625	33	11
PAH's (benzo[a]pyrene equiv)	.043	54	9	460
Cadmium	.046	629	25	50
Hexachlorobenzene	.39	2	0	.04
Acrylonitrile	.67	5	5	250
Nickel pollutant	.73	636	38	790
Butadiene, 1,3-	1.1	8	7	440
Hexamethylene-1,6-diisocyanate	1.9	1	1	2.5
Ethylene oxide	2.1	39	2	35
Vinyl chloride	2.5	51	39	10000
Ethylene dibromide	2.7	21	3	340
Tetrachloroethane, 1,1,2,2-	3.3	3	2	100
Acrolein	3.9	4	2	110
Carbon tetrachloride	4.6	40	1	2000
Benzene	6.7	1637	190	46000
Epichlorohydrin	8.3	1	0	.1
Ethylene dichloride	9.7	56	21	910
Trichloroethane, 1,1,2-	12	1	0	2
Toluene diisocyanate (TDI)	18.3	3	1	200
Dioxane, 1,4-	25	26	4	400
Lead (all) pollutant	29	631	2	420
Formaldehyde	33	1001	109	210000
Perchloroethylene	33	790	744	530000
Chloroform	36	92	39	15000
Mercury (all) pollutant	57.9	628	3	520
Dichlorobenzene	68	37	7	7900
Acetaldehyde	72	81	10	8800
Manganese	77	592	5	1100
Di(2-ethylhexyl) phthalate	81	1	0	0
Selenium	96.5	47	1	600
Trichloroethylene	97	124	44	21000
Acrylic acid	190	1	0	45
Methylene chloride	190	135	66	91000
Allyl chloride	193	2	0	54
Naphthalene	270	6	0	170
Bromine	328	1	0	0
Copper (all) pollutant	463	52	0	440
Hydrogen Fluoride (HF)	1140	47	0	1600
Methyl bromide	1160	1	0	9
Hydrochloric acid mist polluta	1350	72	3	18000
Hydrogen Chloride (HCl)	1350	58	9	150000
Chlorine pollutant	1370	3	1	1900
Triethylamine	1400	2	0	290
Phosphine	1930	1	0	110
Benzyl chloride	2320	4	0	840
Butyl cellosolve	3860	389	5	300000
Glycol ether - other/not spec	3860	119	2	48000
Methyl cellosolve	3860	10	0	2100
Vinylidene chloride	6180	34	0	410
Zinc pollutant	6760	50	0	3000
Hydrogen Sulfide (H2S)	8110	59	2	95000
Phenol	8690	18	0	14000
Ethyl acrylate	9260	5	0	78
Cellosolve acetate	12400	30	0	4700

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
TOXIC AIR CONTAMINANTS
2003 ANNUAL REPORT

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	10	0	4700
Chlorobenzene - other/not spec	13500	2	0	5100
Ammonia (NH3) pollutant	19300	69	22	2700000
Cresol	34700	10	0	390
Cellosolve	38600	45	1	96000
Toluene	38600	788	1	320000
Hexane	39000	67	1	130000
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Isophorone	390000	3	0	91
Methyl tertiary-butyl ether	580000	109	0	220000
Phthalic anhydride	1350000	1	0	15
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Butyl alcohol, tert-	-8888	3	3	700
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78 pollutants				6275910

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BAY AREA AIR QUALITY MANAGEMENT DISTRICT
TOXIC AIR CONTAMINANTS
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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	790	744	530000
Benzene	6.7	1637	190	46000
Formaldehyde	33	1001	109	210000
Chromium (hexavalent)	.0014	649	82	9.6000
Methylene chloride	190	135	66	91000
Trichloroethylene	97	124	44	21000
Chloroform	36	92	39	15000
Vinyl chloride	2.5	51	39	10000
Nickel pollutant	.73	636	38	790
Arsenic (all)	.024	625	33	11
Cadmium	.046	629	25	50
Ammonia (NH3) pollutant	19300	69	22	2700000
Chlorinated dioxins & furans (.0000012	52	21	.0005600
Ethylene dichloride	9.7	56	21	910
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Manganese	77	592	5	1100
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Acrolein	3.9	4	2	110
Ethylene oxide	2.1	39	2	35
Glycol ether - other/not spec	3860	119	2	48000
Hydrogen Sulfide (H2S)	8110	59	2	95000
Lead (all) pollutant	29	631	2	420
Tetrachloroethane, 1,1,2,2-	3.3	3	2	100
Carbon tetrachloride	4.6	40	1	2000
Cellosolve	38600	45	1	96000
Chlorine pollutant	1370	3	1	1900
Hexamethylene-1,6-diisocyanate	1.9	1	1	2.5
Hexane	39000	67	1	130000
Methyl alcohol	120000	291	1	340000
Selenium	96.5	47	1	600
Toluene	38600	788	1	320000
Toluene diisocyanate (TDI)	18.3	3	1	200
Acrylic acid	190	1	0	45
Allyl chloride	193	2	0	54
Benzyl chloride	2320	4	0	840
Bromine	328	1	0	0
Cellosolve acetate	12400	30	0	4700
Chlorobenzene	13500	10	0	4700
Chlorobenzene - other/not spec	13500	2	0	5100
Copper (all) pollutant	463	52	0	440
Cresol	34700	10	0	390
Di(2-ethylhexyl) phthalate	81	1	0	0
Epichlorohydrin	8.3	1	0	.1
Ethyl acrylate	9260	5	0	78
Ethyl benzene	190000	225	0	27000
Ethyl chloride	1930000	28	0	1700

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 TOXIC AIR CONTAMINANTS
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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)
Hexachlorobenzene	.39	2	0	.04
Hydrogen Fluoride (HF)	1140	47	0	1600
Isophorone	390000	3	0	91
Methyl bromide	1160	1	0	9
Methyl cellosolve	3860	10	0	2100
Methyl ethyl ketone (MEK)	149000	381	0	170000
Methyl methacrylate	189000	2	0	20
Methyl tertiary-butyl ether	580000	109	0	220000
Naphthalene	270	6	0	170
Phenol	8690	18	0	14000
Phosphine	1930	1	0	110
Phthalic anhydride	1350000	1	0	15
Styrene	135000	68	0	260000
Trichloroethane, 1,1,1- (w/o	61800	72	0	81000
Trichloroethane, 1,1,1- (with	61800	37	0	12000
Trichloroethane, 1,1,2-	12	1	0	2
Triethylamine	1400	2	0	290
Vinylidene chloride	6180	34	0	410
Xylene	57900	962	0	320000
Zinc pollutant	6760	50	0	3000
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78 pollutants				6275910

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