

Appendix H: Pennsylvania Toxic Emissions Inventory

METHODOLOGY

Point Source Methodology

PA Department of Environmental Protection's Bureau of Air Quality, as part of its annual air emissions inventory process, collected point source emissions information included in the Pennsylvania inventory. Every January, PA DEP mails preprinted forms to every active facility in the emission inventory. Facilities are required to submit activity data for the previous year. This data includes operating schedules, throughputs, fuel usage, and emission estimates. The reports are to be completed and notarized and sent to PA DEP by March 1st.

Regional inspectors then verify and enter the data into the emission inventory database. The data is then quality assured and completed by September. Where directly reported toxics data existed for 1999, that data was broken down into its component SCC-level emissions and entered into Rapids.

Area Source Methodology

All of the Non-point emissions of air toxics were speciated from criteria pollutant inventories using speciation factors from the EPA's Speciate database (see Table 2 for profile codes).

The source criteria pollutant data came from the 1999 National Emissions Trends submission to the U.S. EPA. Non-road Engine and Highway Vehicle criteria pollutant emissions were developed using EPA provided models. The Area source emissions were calculated using factors in Table 1 below.

Table H-1: Area Source Criteria Emission Factors

SCC	EMISSION_FACTOR
2103004000	.34 LB VOC/E3GAL Oil
2103005000	.71 LB VOC/E3GAL Oil
2103006000	2.80 LB VOC/E6FT3 Natural Gas
2104001000	.07 LB VOC/TON Coal
2104002000	.07 LB VOC/TON Coal
2104006000	5.30 LB VOC/E6FT3 Natural Gas
2104007000	.50 LB VOC/E3GAL LPG
2302050000	.11 TON VOC/EACH Employee
2401001000	3.63 LB VOC/EACH Person
2401005000	3519.00 LB VOC/EACH Employee
2401008000	.50 LB VOC/EACH Person
2401015000	131.00 LB VOC/EACH Employee
2401025000	1597.00 LB VOC/EACH Employee
2401040000	6029.00 LB VOC/EACH Employee
2401050000	2877.00 LB VOC/EACH Employee
2401055000	77.00 LB VOC/EACH Employee
2401065000	290.00 LB VOC/EACH Employee
2401070000	793.90 LB VOC/EACH Employee
2401075000	35.00 LB VOC/EACH Employee
2401080000	308.00 LB VOC/EACH Employee
2401090000	.60 LB VOC/EACH Person
2401100000	.80 LB VOC/EACH Person
2401200000	.80 LB VOC/EACH Person
2415005000	.49 LB VOC/EACH Employee
2415030000	.21 LB VOC/EACH Employee
2415065000	2.50 LB VOC/EACH Employee
2415105000	1.10 LB VOC/EACH Employee
2425000000	1.30 LB VOC/EACH Person
2461021000	.37 LB VOC/EACH Person
2461022000	.03 TON VOC/MILE Area
2461800000	3.50 LB VOC/ACRE Area
2465000000	7.84 LB VOC/EACH Person
2501060053	.30 LB VOC/E3GAL Gasoline
2501060101	1.80 LB VOC/E3GAL Gasoline
2501060101	11.70 LB VOC/E3GAL Gasoline
2501060102	1.80 LB VOC/E3GAL Gasoline
2501060102	11.70 LB VOC/E3GAL Gasoline
2501060201	1.00 LB VOC/E3GAL Gasoline
2505030120	11.00 LB VOC/E3GAL Gasoline
2601010000	9.80 LB VOC/TON Waste
2601020000	9.80 LB VOC/TON Waste
2601030000	9.80 LB VOC/TON Waste
2610010000	30.00 LB VOC/TON Waste
2610020000	30.00 LB VOC/TON Waste
2610030000	30.00 LB VOC/TON Waste
2620030000	35.36 TON VOC/E6TON Refuse
2630020000	0.00 LB VOC/E3GAL Wastewater
2810001000	24.00 LB VOC/TON Forests
2810030000	11.00 LB VOC/TON Material

Table H-2: Profile Codes Applied by SCC and Material

SCC	Material	Profile	SCC	Material	Profile
2103004000	TOG	0002	2260004020	TOG	6001
2103005000	TOG	0003	2260004025	TOG	6001
2103006000	TOG	0003	2260004030	TOG	6001
2104001000	TOG	1185	2260004035	TOG	6001
2104002000	TOG	1185	2260005035	TOG	1186
2104006000	TOG	2445	2260005050	TOG	1186
2104007000	TOG	2445	2260006005	TOG	6001
2201001110	EVHC	G008	2260006010	TOG	6001
2201001110	EXHC	G001	2260007005	TOG	1186
2201001110	EXPM	G004	2260008000	TOG	1186
2201001130	EVHC	G008	2265001020	TOG	6001
2201001130	EXHC	G001	2265001030	TOG	6001
2201001130	EXPM	G004	2265001050	TOG	6001
2201001170	EVHC	G008	2265001060	TOG	6001
2201001170	EXHC	G001	2265002003	TOG	1186
2201001170	EXPM	G004	2265002009	TOG	1186
2201001230	EVHC	G008	2265002015	TOG	1186
2201001230	EXHC	G001	2265002021	TOG	1186
2201001230	EXPM	G004	2265002024	TOG	1186
2201001270	EVHC	G008	2265002027	TOG	1186
2201001270	EXHC	G001	2265002030	TOG	1186
2201001270	EXPM	G004	2265002033	TOG	1186
2201001310	EVHC	G008	2265002039	TOG	1186
2201001310	EXHC	G001	2265002042	TOG	1186
2201001310	EXPM	G004	2265002045	TOG	1186
2201020110	EVHC	G008	2265002057	TOG	1186
2201020110	EXHC	G001	2265002060	TOG	1186
2201020110	EXPM	G004	2265002066	TOG	1186
2201020130	EVHC	G008	2265002072	TOG	1186
2201020130	EXHC	G001	2265002078	TOG	1186
2201020130	EXPM	G004	2265002081	TOG	1186
2201020170	EVHC	G008	2265003010	TOG	1186
2201020170	EXHC	G001	2265003020	TOG	1186
2201020170	EXPM	G004	2265003030	TOG	1186
2201020230	EVHC	G008	2265003040	TOG	1186
2201020230	EXHC	G001	2265003050	TOG	1186
2201020230	EXPM	G004	2265004010	TOG	6001
2201020270	EVHC	G008	2265004015	TOG	6001
2201020270	EXHC	G001	2265004025	TOG	6001
2201020270	EXPM	G004	2265004030	TOG	6001
2201020310	EVHC	G008	2265004035	TOG	6001
2201020310	EXHC	G001	2265004040	TOG	6001
2201020310	EXPM	G004	2265004055	TOG	6001
2201040110	EVHC	G008	2265004075	TOG	6001
2201040110	EXHC	G001	2265005010	TOG	1186
2201040110	EXPM	G004	2265005015	TOG	1186
2201040130	EVHC	G008	2265005025	TOG	1186
2201040130	EXHC	G001	2265005030	TOG	1186
2201040130	EXPM	G004	2265005035	TOG	1186
2201040170	EVHC	G008	2265005040	TOG	1186
2201040170	EXHC	G001	2265005045	TOG	1186
2201040170	EXPM	G004	2265005050	TOG	1186
2201040230	EVHC	G008	2265005055	TOG	1186
2201040230	EXHC	G001	2265006005	TOG	6001
2201040230	EXPM	G004	2265006010	TOG	6001
2201040270	EVHC	G008	2265006015	TOG	6001
2201040270	EXHC	G001	2265006025	TOG	6001
2201040270	EXPM	G004	2265006030	TOG	6001

SCC	Material	Profile	SCC	Material	Profile
2201040310	EVHC	G008	2265007010	TOG	1186
2201040310	EXHC	G001	2265008005	TOG	1186
2201040310	EXPM	G004	2270001060	TOG	2526
2201070110	EVHC	G008	2270002003	TOG	2526
2201070110	EXHC	G001	2270002009	TOG	2526
2201070110	EXPM	G004	2270002015	TOG	2526
2201070130	EVHC	G008	2270002018	TOG	2526
2201070130	EXHC	G001	2270002021	TOG	2526
2201070130	EXPM	G004	2270002024	TOG	2526
2201070170	EVHC	G008	2270002027	TOG	2526
2201070170	EXHC	G001	2270002030	TOG	2526
2201070170	EXPM	G004	2270002033	TOG	2526
2201070230	EVHC	G008	2270002036	TOG	2526
2201070230	EXHC	G001	2270002039	TOG	2526
2201070230	EXPM	G004	2270002045	TOG	2526
2201070270	EVHC	G008	2270002048	TOG	2526
2201070270	EXHC	G001	2270002051	TOG	2526
2201070270	EXPM	G004	2270002054	TOG	2526
2201070310	EVHC	G008	2270002057	TOG	2526
2201070310	EXHC	G001	2270002060	TOG	2526
2201070310	EXPM	G004	2270002063	TOG	2526
2201080110	EVHC	G008	2270002066	TOG	2526
2201080110	EXHC	G001	2270002069	TOG	2526
2201080110	EXPM	G004	2270002072	TOG	2526
2201080130	EVHC	G008	2270002075	TOG	2526
2201080130	EXHC	G001	2270002081	TOG	2526
2201080130	EXPM	G004	2270003010	TOG	2526
2201080170	EVHC	G008	2270003020	TOG	2526
2201080170	EXHC	G001	2270003030	TOG	2526
2201080170	EXPM	G004	2270003040	TOG	2526
2201080230	EVHC	G008	2270003050	TOG	2526
2201080230	EXHC	G001	2270005015	TOG	2526
2201080230	EXPM	G004	2270005020	TOG	2526
2201080270	EVHC	G008	2270005035	TOG	2526
2201080270	EXHC	G001	2270005045	TOG	2526
2201080270	EXPM	G004	2270005050	TOG	2526
2201080310	EVHC	G008	2270005055	TOG	2526
2201080310	EXHC	G001	2270006005	TOG	2526
2201080310	EXPM	G004	2270006010	TOG	2526
2230001110	EXHC	G002	2270006015	TOG	2526
2230001110	EXPM	G005	2270006025	TOG	2526
2230001130	EXHC	G002	2270006030	TOG	2526
2230001130	EXPM	G005	2270007015	TOG	2526
2230001170	EXHC	G002	2270008005	TOG	2526
2230001170	EXPM	G005	2302050000	TOG	9008
2230001230	EXHC	G002	2401001000	TOG	6003
2230001230	EXPM	G005	2401005000	TOG	1194
2230001270	EXHC	G002	2401008000	TOG	1003
2230001270	EXPM	G005	2401015000	TOG	1003
2230001310	EXHC	G002	2401025000	TOG	1003
2230001310	EXPM	G005	2401040000	TOG	1003
2230060110	EXHC	G002	2401050000	TOG	6003
2230060110	EXPM	G005	2401055000	TOG	6003
2230060130	EXHC	G002	2401065000	TOG	1003
2230060130	EXPM	G005	2401070000	TOG	1003
2230060170	EXHC	G002	2401075000	TOG	1003
2230060170	EXPM	G005	2401080000	TOG	1003
2230060230	EXHC	G002	2401090000	TOG	6003
2230060230	EXPM	G005	2401100000	TOG	1003

SCC	Material	Profile	SCC	Material	Profile
2230060270	EXHC	G002	2401200000	TOG	6003
2230060270	EXPM	G005	2415005000	TOG	1195
2230060310	EXHC	G002	2415030000	TOG	1195
2230060310	EXPM	G005	2415065000	TOG	1195
2230070110	EXHC	G003	2415105000	TOG	1195
2230070110	EXPM	G006	2425000000	TOG	2570
2230070130	EXHC	G003	2461021000	TOG	1007
2230070130	EXPM	G006	2461022000	TOG	1007
2230070170	EXHC	G003	2461800000	TOG	0076
2230070170	EXPM	G006	2465000000	TOG	0197
2230070230	EXHC	G003	2501060053	TOG	7005
2230070230	EXPM	G006	2501060101	TOG	7005
2230070270	EXHC	G003	2501060102	TOG	7005
2230070270	EXPM	G006	2501060201	TOG	7005
2230070310	EXHC	G003	2505030120	TOG	7005
2230070310	EXPM	G006	2601010000	TOG	0122
2260001020	TOG	6001	2601020000	TOG	0122
2260001030	TOG	6001	2601030000	TOG	0122
2260001060	TOG	6001	2610010000	TOG	0121
2260002006	TOG	1186	2610020000	TOG	0121
2260002009	TOG	1186	2610030000	TOG	0121
2260002021	TOG	1186	2620030000	TOG	0202
2260002039	TOG	1186	2630020000	TOG	2542
2260002054	TOG	1186	2810001000	TOG	0307
2260003030	TOG	1186	2810030000	TOG	0307
2260004015	TOG	6001			

INFORMATION

For more information about Pennsylvania's emissions inventory, please contact:

Robert Altenburg
Bureau of Air Quality
Pennsylvania Department of Environmental Protection
Rachel Carson State Office Building
P.O. Box 8468
Harrisburg, PA 17105-8468

(P) 717-787-9702

(F) 717-772-2303

(E) raltenburg@state.pa.us

Table H-3: Pennsylvania - Statewide Summary of Emissions (lb/yr)

Pollutant	Point Source	Area Source	Total
ACETALDEHYDE	22200		22200
ACROLEIN	3400		3400
ACRYLONITRIL	2400		2400
ANTIMONY	3800		3800
ARSENIC	5800		5800
BENZENE	135800	4680391	4816190.76
BERYLLIUM	400		400
BUTADIENE, 1,3	2000	48272.36	50272.36
CADMIUM	9200		9200
CARBON TETRA	7200		7200
CHLOROFORM	65200		65200
CHROMIUM	13800		13800
COBALT	7800		7800
DIBUTYL PHTH	3600	2075.4	5675.4
DICHLORETH12	600		600
DIEYLHEX PHT	8400		8400
ETHYLBENZENE	185600	1268777.46	1454377.46
ETHYLENE OXI	6400		6400
FORMALDEHYDE	376200	1002858.5	1379058.5
GLYCOL ETHRS	510600		510600
LEAD	58800		58800
MANGANESE	26400		26400
MERCURY	5008		5008
METHYLENE CL	1996200	2114602.74	4110802.74
NAPHTHALENE	140600	947157.78	1087757.78
NICKEL	48400		48400
PERC	44400	4988543.54	5032943.54
PHENOL	114200		114200
STYRENE	1231200	75632.26	1306832.26
TCE, 111	19400	13073387.2	13092787.2
TOLUENE	3061200	47727470.34	50788670.34
TRICHLORETHY	1211800	11880644.54	13092444.54
VINYL CHLOR	115600		115600
XYLENE, M	14000		14000
XYLENE, O	12400	4905289.42	4917689.42
XYLENE, P	10000		10000
XYLENES ISO	1322400	13305361.5	14627761.5