

Appendix F: Ohio Toxic Emissions Inventory

Mobile On-road and Non-road Sources

USEPA developed a comprehensive mobile on-road and off-road toxics inventory for calendar year 1999. The mobile source inventory was developed based on the basic model Mobile 6.2. The Mobile model is a tool for estimating emission factors which are then multiplied by vehicle miles traveled in order to estimate emissions. Ohio EPA had no experience with the new model and basically compared the 1999 Mobile 6 output with the 1998 Mobile 5 output. The differences between the old and the new model were in agreement to the explanation provided in the Mobile 6 document. The estimated Mobile source toxic emissions were then submitted to the RAPIDS QA/QC coordinator for quality assurance.

The emissions for the off-road mobile source toxics inventory were also obtained from EPA's Version 3 of the 1999 NEI (National Emission Inventory). The 1999 NEI non-road mobile source estimates were developed using top-down methods that estimated emissions on a national or state level. Although, the development of the inventory using top-down methods may mean that the emissions for a given county may be over- or underestimated, Ohio EPA accepted the federal estimate because there were no State quality non-road data to provide a better estimate of emissions. The data were also submitted to the RAPIDS QA/QC coordinator for quality assurance and no statistical outliers to the data set were identified.

INFORMATION

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Table F-1 – Ohio - Statewide Emissions (lb/yr)

Pollutant	Point Sources	Area Sources	Mobile Sources	Nonroad Sources	TOTAL
ACENAPHTHEN	0	6225.448641	2550.23	2083.527831	10859.20647
ACENAPHTHYL	0	131907.6978	13486.57	5038.262353	150432.5302
ACETALDEHYDE	259834	43.32	2943321.26	1488839.199	4692037.779
ACETAMIDE	21	1.367607582	0	0	22.36760758
ACETONITRILE	12134	0	0	0	12134
ACETOPHENONE	1864	97.55068326	0	0	1961.550683
ACETYLAMIN, 2	2	0	0	0	2
ACROLEIN	250	107487.125	304545.21	150380.7816	562663.1166
ACRYLAMIDE	3700	0	0	0	3700
ACRYLIC ACID	3140	0.040802178	0	0	3140.040802
ACRYLONITRIL	108525	0	0	0	108525
ALLYL CHLORI	25	0	0	0	25
ANILINE	24581	0	0	0	24581
ANTHRACENE	2968	8711.831172	3064.08	1174.162768	15918.07394
ANTIMONY	13212	1.368	0	0	13213.368
ARSENIC	23765	283.1205258	1605.83	641.1868197	26295.13735
ASBESTOS	1371	0	0	0	1371
ATRAZINE	27	3785998	0	0	3786025
BENZ(A) ANTHR	0	12445.20218	733.15	377.6875039	13556.03968
BENZ(GHI) PE	0	238.4452897	901.11	699.1106287	1838.665918
BENZENE	631854	3357711.565	14037124.39	5549726.081	23576416.04
BENZIDINE	2	0	0	0	2
BENZO(A) PYRE	0	2489.221406	457.89	243.1131744	3190.22458
BENZO(B) FLUO	0	3734.021932	504.86	200.1499416	4439.031873
BENZO(K) FLUO	0	1245.015619	504.86	185.4956238	1935.371243
BENZOTRICHLO	2	0	0	0	2
BENZYL CHLOR	1634	0	0	0	1634
BERYLLIUM	1171	167.9547857	0	47.14416045	1386.098946
BIPHENYL	9220	0	0	0	9220
BIS(2-CLETH)	4	0	0	0	4
BROMOFORM	2	0	0	0	2
BROMOMETH	184	0	0	0	184
BUTADIENE, 13	43459	0	1764326.8	705731.9916	2513517.792
CADMIUM	1844	552.6332596	0	57.80454203	2454.437802
CAPTAN	3705	0	0	0	3705
CARBARYL	940	0	0	0	940
CARBON DISUL	242978	9.879999998	0	0	242987.88
CARBON TETRA	10674	1994.004634	0	0	12668.00463
CARBONYL SUL	5603830	0	0	0	5603830
CHLORDANE	2	0	0	0	2
CHLORINE	48435	0	0	0	48435
CHLOROBENZ	77059	0	0	0	77059
CHLOROETHANE	285072	97556.30892	0	0	382628.3089
CHLOROFORM	41906	11171.3955	0	0	53077.3955
CHROMIUM	119990	1075.392595	644.21	76.35389661	121785.9565
CHROMIUM VI	0	32.560416	428.52	39.33382553	500.4142415
CHRYSENE	0	7467.365694	399.59	236.2211482	8103.176843
CLBENZILATE	2	0	0	0	2
CLMETH METH	65	0	0	0	65
COBALT	6115	830.232508	0	0	6945.232508
COPPER	74599	556.8642	0	0	75155.8642
CRESOL MX IS	53734	0	0	0	53734
CRESOL, M	108	0	0	0	108
CRESOL, O	704	0	0	0	704
CRESOL, P	140	0	0	0	140
CUMENE	95678	11447.51658	0	0	107125.5166
CYANIDE	16016	0	0	0	16016
D, 2, 4	3779	0	0	0	3779
DIBENZAHAN	0	2489.437775	0.06	4.72501506	2494.22279
DIBENZOFURAN	4440	83.63901924	0	0	4523.639019
DIBROMOET, 12	1496	0	0	0	1496
DIBUTYL PHTH	22	481279.4972	0	0	481301.4972
DICHLORETH12	0	3917.04	0	0	3917.04
DICHLORVOS	3	0	0	0	3
DICLBENZ, 14	1579	0	0	0	1579
DICLETH, 11-	92	0	0	0	92
DICLPROPE, 13	7	1808406.72	0	0	1808413.72
DIETHANOLAMI	22692	0	0	0	22692
DIEYLHEX PHT	10331	0	0	0	10331

Pollutant	Point Sources	Area Sources	Mobile Sources	Nonroad Sources	TOTAL
DIMETH HY,11	8	0	0	0	8
DIMETH PHTHA	1216	0	0	0	1216
DIMETH SULFA	96	0	0	0	96
DIMETHBNZ,33	2	0	0	0	2
DIMETHFORMAM	11680	110996.0486	0	0	122676.0486
DIMETHYLANIL	3905	0	0	0	3905
DINITRTOL,24	2	0	0	0	2
DIOXANE	7265	113.02542	0	0	7378.02542
DIPHENHYD,12	2	0	0	0	2
EPICLHYDRIN	439	0	0	0	439
ETH ACRYLATE	8949	0	0	0	8949
ETHYL CARBAM	79	0	0	0	79
ETHYLBENZENE	561250	1681157.262	6028205.46	3626812.857	11897425.58
ETHYLENE GLY	68540	3601504.117	0	0	3670044.117
ETHYLENE OXI	515	241921.2767	0	0	242436.2767
FLUORANTHENE	0	12445.73406	3189.77	2179.073108	17814.57717
FLUORENE	0	14934.44466	5319.92	3890.707379	24145.07204
FORMALDEHYDE	781345	68632.18674	6230185.1	3504648.838	10584811.13
GLYCOL ETHRS	3868415	787851.0539	0	0	4656266.054
HCL	68043934	371098.5712	0	0	68415032.57
HEPTACHLOR	2	0	0	0	2
HEXACL-1,3-C	8	0	0	0	8
HEXANE	2416683	5501773.187	5604761.18	2263254.072	15786471.44
HEXCHLORETH	776	0	0	0	776
HEXCL-13-BUT	262	0	0	0	262
HEXCLBENZENE	2	0	0	0	2
HF	6678984	0	0	0	6678984
HYDRAZINE	81	0	0	0	81
HYDROGEN CYA	36036	864838.065	0	0	900874.065
HYDROQUINONE	906	0	0	0	906
INDN(123CDPY	0	1245.30122	250.67	222.0689437	1718.040164
ISOPHORONE	0	10747.58727	0	0	10747.58727
LEAD	96801	437.3707206	0	29456.49123	126694.8619
LINDANE ISO	2	0	0	0	2
MALEIC ANHYD	455	0	0	0	455
MANGANESE	622278	663.3805	365.3	156.7203335	623463.4008
MERCURY	1653	127.292576	1772.42	560.6717342	4113.38431
METEN BIS,44	2	0	0	0	2
METH ETH KET	2799035	17947647.24	0	0	20746682.24
METH IODIDE	153	0	0	0	153
METH ISOBUT	790247	9605026.495	0	0	10395273.49
METH METHACR	67824	6259	0	0	74083
METH TERT BU	9303	0	1643242.18	0	1652545.18
METHANOL	3699756	7211021.796	0	0	10910777.8
METHYLENE CL	1603568	6790409.508	0	0	8393977.508
NAPHTHALENE	184567	430116.228	352953.35	73163.54547	1040800.123
NDIMETH CARB	4	0	0	0	4
NICKEL	40625	11806.0629	812.94	2391.613172	55635.61607
NITROBENZ	28	0	0	0	28
NITROPHENL,4	168	0	0	0	168
NITROPROPA,2	82	22.0399569	0	0	104.0399569
PCP	2	0	0	0	2
PENTCLNITBEN	7	0	0	0	7
PERC	615030	10921051.71	0	0	11536081.71
PHENANTHRENE	3925	48675.85295	8751.69	7491.187194	68843.73014
PHENOL	935036	1.215999999	0	0	935037.216
PHENYLENED,P	1	0	0	0	1
PHOSGENE	14	0.557990996	0	0	14.557991
PHTHALIC ANH	4353	0	0	0	4353
PROPIONALDEH	0	0	333173.39	327088.2597	660261.6497
PROPOXUR	11	0	0	0	11
PRPLENE OXID	3638	14468	0	0	18106
PYRENE	0	14934.55873	4440.35	2497.261405	21872.17013
QUINOLINE	2744	0	0	0	2744
QUINONE	19	0	0	0	19
SELENIUM	60889	98.8	0	20.09071912	61007.89072
STYRENE	2127478	37960.9	1187915.82	197945.1046	3551299.825
TCE,111	23990	33961757.58	0	0	33985747.58
TETCLET,1122	7	0	0	0	7
TITAN TETCL	262	0	0	0	262
TOLUENE	2783946	56514158.51	40667099.42	15378880.56	115344084.5
TOLUENE24DII	1878	0	0	0	1878

Pollutant	Point Sources	Area Sources	Mobile Sources	Nonroad Sources	TOTAL
TOLUIDINE, O-	42	0	0	0	42
TOXAPHENE	15	0	0	0	15
TRICHLORETHY	867105	28299333.61	0	0	29166438.61
TRICLENZ, 124	8996	0	0	0	8996
TRICLETH, 112	28	0	0	0	28
TRICLPHN, 245	3	0	0	0	3
TRICLPHN, 246	3	0	0	0	3
TRIETHAMINE	128804	9482.832738	0	0	138286.8327
TRIFLURALIN	3110	0	0	0	3110
TRIME-PENTAN	0	0	14080572.57	6813165.436	20893738.01
VINLIDENE CL	6615	0	0	0	6615
VINYL ACETAT	37045	0.512005158	0	0	37045.51201
VINYL CHLOR	714	0	0	0	714
XYLENE, M	35818	524452.4928	0	0	560270.4928
XYLENE, O	207	405185.3774	0	0	405392.3774
XYLENE, P	219	359981.7938	0	0	360200.7938
XYLENES ISO	4140498	111462805	22843502.33	14922112.12	153404527