

US EPA ARCHIVE DOCUMENT

1999 DRAFT Modeled Ambient Concentrations for Alabama: For Review Only

The purpose of presenting these estimates is to provide additional information for State, local, and tribal organization review of the draft 1999 NEI for HAPs posted October 2002. EPA strongly cautions that these model estimates should not be used to draw conclusions about air quality or risk. They should also not be used for comparison with 1996 NATA results to perform trends analysis because, in addition to being draft, changes have been made to emission inventory and processing methodologies.

See www.epa.gov/ttn/chief/net/index.html#1999 for more information on the draft 1999 NEI for HAPs.

Please also note:

- The general approach for emission inventory development and modeling is similar to that used for the National-Scale Assessment for 1996
For a discussion of limitations, please see <http://www.epa.gov/ttn/atw/nata1999/natsalim2.htm>
- The emission processing and modeling procedures utilize 1999 meteorology, 1999 emissions and updated and new spatial information including the 2000 census for population and census tract centroid location
Background concentrations are the same as those used in the 1996 NATA.
- For formaldehyde and acetaldehyde, secondary contributions were estimated outside of the ASPEN model using the same proportion of secondary to primary concentrations as was used in the 1996 NATA assessment.
- Because the emissions used are from 1999, they do not reflect potentially significant emission reductions that have taken effect since then, including those from: 1) mobile source regulations which are being phased in over time; 2) many of the air toxics regulations EPA has issued for major industrial sources; 3) State or industry initiatives; and 4) any facility closures.

DRAFT FOR REVIEW ONLY Estimated Annual Average Ambient Concentrations µg/m3 for Alabama

State	County	FIPS	Urban or Rural	Pollutant	Percentile Distribution of Ambient Concentrations Across Census Tracts								Contribution to Average from ...				
					5th	10th	25th	Median	Average	75th	90th	95th	Major	Area and Other	Onroad Mobile	Nonroad Mobile	Estimated Background
Alabama	Statewide	N/A	N/A	Acetaldehyde	7.37E-02	9.55E-02	1.49E-01	3.28E-01	4.55E-01	6.07E-01	1.03E+00	1.36E+00	3.98E-02	2.53E-02	3.38E-01	5.12E-02	0.00E+00
Alabama	Statewide	N/A	N/A	Acrolein	1.88E-02	2.14E-02	2.83E-02	4.68E-02	5.64E-02	7.36E-02	1.12E-01	1.29E-01	1.80E-03	1.38E-02	3.52E-02	5.67E-03	0.00E+00
Alabama	Statewide	N/A	N/A	Acrylonitrile	3.62E-05	6.14E-05	1.27E-04	4.44E-04	8.85E-03	1.73E-03	9.09E-03	1.70E-02	8.06E-03	7.83E-04	0.00E+00	0.00E+00	0.00E+00
Alabama	Statewide	N/A	N/A	Arsenic Compounds	1.31E-05	1.78E-05	3.39E-05	8.53E-05	2.01E-04	1.52E-04	2.40E-04	4.59E-04	1.39E-04	1.78E-05	3.60E-05	7.92E-06	0.00E+00
Alabama	Statewide	N/A	N/A	Benzene	5.82E-01	6.09E-01	6.97E-01	9.46E-01	1.12E+00	1.35E+00	1.89E+00	2.22E+00	1.96E-02	8.37E-02	4.60E-01	7.51E-02	4.80E-01
Alabama	Statewide	N/A	N/A	Benzidine	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Alabama	Statewide	N/A	N/A	Beryllium Compounds	3.79E-07	6.24E-07	1.33E-06	4.23E-06	3.72E-05	8.90E-06	3.61E-05	8.39E-05	3.40E-05	2.41E-06	0.00E+00	8.14E-07	0.00E+00
Alabama	Statewide	N/A	N/A	1,3-Butadiene	5.36E-03	6.20E-03	9.51E-03	2.46E-02	4.16E-02	5.50E-02	9.76E-02	1.45E-01	6.62E-05	2.26E-03	3.33E-02	5.98E-03	0.00E+00
Alabama	Statewide	N/A	N/A	Cadmium Compounds	1.49E-06	2.33E-06	4.82E-06	1.54E-05	1.75E-04	1.11E-04	3.43E-04	5.58E-04	1.33E-04	4.02E-05	0.00E+00	1.10E-06	0.00E+00
Alabama	Statewide	N/A	N/A	Carbon Disulfide	4.72E-02	4.73E-02	4.78E-02	4.91E-02	1.55E-01	5.29E-02	4.35E-01	7.91E-01	1.06E-01	2.17E-03	0.00E+00	0.00E+00	4.70E-02
Alabama	Statewide	N/A	N/A	Carbon Tetrachloride	8.80E-01	8.80E-01	8.80E-01	8.81E-01	8.86E-01	8.84E-01	8.93E-01	9.13E-01	6.21E-03	2.87E-04	0.00E+00	0.00E+00	8.80E-01
Alabama	Statewide	N/A	N/A	Chloroform	8.39E-02	8.46E-02	8.69E-02	9.94E-02	1.31E-01	1.18E-01	1.77E-01	3.02E-01	3.35E-02	1.45E-02	0.00E+00	0.00E+00	8.30E-02
Alabama	Statewide	N/A	N/A	Chromium Compounds (includes Hexavalent)	1.51E-05	2.35E-05	5.71E-05	1.89E-04	5.48E-04	5.45E-04	1.29E-03	1.96E-03	1.93E-04	3.24E-04	2.87E-05	2.14E-06	0.00E+00
Alabama	Statewide	N/A	N/A	Chromium VI	5.51E-06	8.38E-06	1.81E-05	6.19E-05	1.40E-04	1.33E-04	2.53E-04	3.98E-04	6.47E-05	6.29E-05	1.15E-05	7.28E-07	0.00E+00
Alabama	Statewide	N/A	N/A	Coke Oven Emissions	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.25E-02	8.62E-03	6.17E-02	1.17E-01	4.25E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Alabama	Statewide	N/A	N/A	1,4-Dichlorobenzene	1.71E-03	2.39E-03	5.41E-03	1.33E-02	1.89E-02	3.06E-02	4.19E-02	4.82E-02	5.05E-05	1.88E-02	0.00E+00	0.00E+00	0.00E+00
Alabama	Statewide	N/A	N/A	1,3-Dichloropropene	3.30E-03	4.55E-03	1.04E-02	2.63E-02	3.75E-02	6.14E-02	8.36E-02	9.70E-02	0.00E+00	3.75E-02	0.00E+00	0.00E+00	0.00E+00
Alabama	Statewide	N/A	N/A	Ethylene Dibromide	7.70E-03	7.70E-03	7.70E-03	7.70E-03	7.70E-03	7.70E-03	7.70E-03	7.70E-03	3.24E-07	5.16E-07	0.00E+00	0.00E+00	7.70E-03
Alabama	Statewide	N/A	N/A	Ethylene Dichloride	6.10E-02	6.10E-02	6.10E-02	6.12E-02	6.22E-02	6.17E-02	6.33E-02	6.57E-02	1.06E-03	1.09E-04	0.00E+00	0.00E+00	6.10E-02
Alabama	Statewide	N/A	N/A	Ethylene Oxide	2.29E-05	4.11E-05	1.20E-04	3.98E-04	1.24E-03	1.37E-03	2.86E-03	4.32E-03	5.76E-05	1.18E-03	0.00E+00	0.00E+00	0.00E+00
Alabama	Statewide	N/A	N/A	Formaldehyde	3.55E-01	3.68E-01	4.08E-01	5.46E-01	6.45E-01	7.49E-01	1.06E+00	1.29E+00	2.12E-02	5.84E-02	2.40E-01	7.62E-02	2.50E-01
Alabama	Statewide	N/A	N/A	Hexachlorobenzene	9.30E-05	9.30E-05	9.31E-05	9.32E-05	9.34E-05	9.36E-05	9.41E-05	9.44E-05	0.00E+00	4.37E-07	0.00E+00	0.00E+00	9.30E-05
Alabama	Statewide	N/A	N/A	Hexachlorobutadiene	1.80E-03	1.80E-03	1.80E-03	1.80E-03	1.80E-03	1.80E-03	1.80E-03	1.80E-03	0.00E+00	1.40E-07	0.00E+00	0.00E+00	1.80E-03
Alabama	Statewide	N/A	N/A	Hexamethylene Diisocyanate	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.85E-05	0.00E+00	1.97E-05	7.89E-05	8.49E-06	1.00E-05	0.00E+00	0.00E+00	0.00E+00
Alabama	Statewide	N/A	N/A	Hydrazine	2.83E-11	8.38E-11	3.71E-10	4.65E-09	4.40E-06	5.77E-08	2.11E-06	4.68E-06	1.02E-06	3.37E-06	0.00E+00	0.00E+00	0.00E+00
Alabama	Statewide	N/A	N/A	Lead Compounds	1.46E-04	2.15E-04	4.85E-04	1.11E-03	3.74E-03	2.83E-03	9.33E-03	1.78E-02	7.01E-04	2.47E-03	0.00E+00	5.74E-04	0.00E+00
Alabama	Statewide	N/A	N/A	Manganese Compounds	7.37E-05	1.29E-04	3.02E-04	8.50E-04	3.96E-03	2.73E-03	9.68E-03	1.61E-02	1.35E-03	2.59E-03	9.22E-06	3.08E-06	0.00E+00
Alabama	Statewide	N/A	N/A	Mercury Compounds	1.51E-03	1.51E-03	1.52E-03	1.55E-03	1.62E-03	1.64E-03	1.75E-03	1.82E-03	1.13E-05	6.09E-05	3.66E-05	8.12E-06	1.50E-03
Alabama	Statewide	N/A	N/A	Methylene Chloride	1.57E-01	1.61E-01	1.75E-01	2.21E-01	2.62E-01	3.07E-01	4.14E-01	4.75E-01	1.73E-02	9.45E-02	0.00E+00	0.00E+00	1.50E-01
Alabama	Statewide	N/A	N/A	Nickel Compounds	2.45E-05	4.20E-05	9.19E-05	3.28E-04	6.87E-04	7.74E-04	1.25E-03	1.99E-03	1.78E-04	4.18E-04	2.14E-05	6.93E-05	0.00E+00
Alabama	Statewide	N/A	N/A	Perchloroethylene	1.43E-01	1.44E-01	1.49E-01	1.70E-01	1.95E-01	2.14E-01	2.67E-01	3.27E-01	1.31E-02	4.20E-02	0.00E+00	0.00E+00	1.40E-01
Alabama	Statewide	N/A	N/A	Polychlorinated Biphenyls	3.83E-04	3.84E-04	3.93E-04	4.03E-04	4.33E-04	4.46E-04	5.20E-04	5.61E-04	1.31E-09	5.28E-05	0.00E+00	0.00E+00	3.80E-04
Alabama	Statewide	N/A	N/A	Polycyclic Organic Matter	5.39E-03	7.18E-03	1.32E-02	3.08E-02	4.32E-02	5.51E-02	9.40E-02	1.15E-01	7.76E-03	2.35E-02	1.04E-02	1.51E-03	0.00E+00
Alabama	Statewide	N/A	N/A	7-PAH	4.51E-04	5.07E-04	6.37E-04	8.68E-04	9.57E-04	1.14E-03	1.52E-03	1.76E-03	4.85E-07	8.65E-04	6.68E-05	2.42E-05	0.00E+00
Alabama	Statewide	N/A	N/A	Propylene Dichloride	2.09E-06	3.46E-06	6.56E-06	1.63E-05	7.54E-05	5.47E-05	1.35E-04	2.15E-04	3.14E-05	4.40E-05	0.00E+00	0.00E+00	0.00E+00
Alabama	Statewide	N/A	N/A	Quinoline	7.02E-10	3.15E-09	1.07E-08	6.14E-08	1.66E-04	5.43E-05	3.32E-04	5.70E-04	1.26E-05	1.54E-04	0.00E+00	0.00E+00	0.00E+00
Alabama	Statewide	N/A	N/A	1,1,2,2-Tetrachloroethane	1.40E-05	2.08E-05	4.41E-05	1.57E-04	8.01E-04	6.67E-04	1.40E-03	2.22E-03	4.33E-04	3.67E-04	0.00E+00	0.00E+00	0.00E+00
Alabama	Statewide	N/A	N/A	Trichloroethylene	8.18E-02	8.23E-02	8.45E-02	9.34E-02	1.07E-01	1.11E-01	1.34E-01	1.56E-01	1.31E-02	1.26E-02	0.00E+00	0.00E+00	8.10E-02
Alabama	Statewide	N/A	N/A	Vinyl Chloride	3.75E-05	5.71E-05	1.09E-04	3.03E-04	1.63E-03	1.20E-03	2.87E-03	4.76E-03	7.14E-04	9.17E-04	0.00E+00	0.00E+00	0.00E+00
Alabama	All Urban Counties	N/A	U	Acetaldehyde	1.37E-01	1.85E-01	3.05E-01	4.62E-01	6.13E-01	8.25E-01	1.23E+00	1.48E+00	5.07E-02	2.84E-02	4.63E-01	7.06E-02	0.00E+00
Alabama	All Urban Counties	N/A	U	Acrolein	2.47E-02	3.08E-02	4.47E-02	6.18E-02	7.05E-02	9.31E-02	1.23E-01	1.37E-01	2.06E-03	1.38E-02	4.70E-02	7.66E-03	0.00E+00
Alabama	All Urban Counties	N/A	U	Acrylonitrile	9.80E-05	1.37E-04	2.84E-04	1.02E-03	1.21E-02	3.04E-03	1.09E-02	3.29E-02	1.10E-02	1.08E-03	0.00E+00	0.00E+00	0.00E+00
Alabama	All Urban Counties	N/A	U	Arsenic Compounds	2.40E-05	3.77E-05	7.39E-05	1.23E-04	2.68E-04	1.83E-04	2.98E-04	6.47E-04	1.85E-04	2.34E-05	4.85E-05	1.05E-05	0.00E+00
Alabama	All Urban Counties	N/A	U	Benzene	6.64E-01	7.22E-01	8.99E-01	1.14E+00	1.32E+00	1.63E+00	2.11E+00	2.48E+00	2.73E-02	9.38E-02	6.20E-01	1.00E-01	4.80E-01
Alabama	All Urban Counties	N/A	U	Benzidine	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Alabama	All Urban Counties	N/A	U	Beryllium Compounds	7.74E-07	1.18E-06	3.21E-06	6.27E-06	4.93E-05	1.14E-05	3.97E-05	9.02E-05	4.50E-05	3.34E-06	0.00E+00	1.04E-06	0.00E+00
Alabama	All Urban Counties	N/A	U	1,3-Butadiene	7.34E-03	9.51E-03	1.96E-02	3.75E-02	5.55E-02	7.01E-02	1.24E-01	1.65E-01	9.16E-05	1.85E-03	4.54E-02	8.18E-03	0.00E+00

