

APPENDIX 2

EXAMINATION OF EMISSION TRENDS FOR NON-HIGHWAY SOURCES

The emission estimates in this analysis do not supercede the inventories approved by EPA in the maintenance plan. However, this information is provided to demonstrate that total emissions from non-highway sources have been decreasing and are projected to decrease through 2007.

	1999	2007
VOC point sources	6.49	6.79
NOx point sources	15.69	14.93
VOC area sources including nonroad	29.76	24.64
NOx area sources including nonroad	16.43	15.53

Point source methodology: The 1999 point source emissions were derived from those reported to DEP from facilities and then reported to EPA for the National Emissions Inventory, which require annual emissions. Typical summer day emissions were then estimated for those sources which only report annual emissions. The 2007 emissions were projected from 1999. The 2007 emissions took into account allocations under DEP's Chapter 145 regulations implementing the NOx SIP Call. Point sources not affected by the NOx SIP Call were projected using BEA industry earnings projections.

Area sources: Estimates for 1999 were prepared from the three-year periodic inventory. Stationary area sources were estimated using the same procedures as the 1990 inventory. Projections to 2007 used BEA growth projections for major industrial category. Population or gasoline sales were used for appropriate categories.

DEP used the draft EPA nonroad model for the sources covered by that model to prepare 1999 and 2007 emission estimates. The model's emission factors account for reductions attributable to federal control programs. For aircraft and railroad locomotives, emissions were estimated using sector specific methodologies. The Emissions Dispersion Modeling System (EDMS) was used for aircraft. For railroads, emissions were derived from surveys of Class I, II and III railroads operating in Pennsylvania, from which were estimated the amount of fuel used. Fuel consumption estimates were then multiplied by the appropriate EPA emission factors.