

## 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 2011.

	1990	1999	2007	2011
VOC point sources	555	282	199	199
NOx point sources	96	34	36	38
VOC area sources including nonroad	210	194	178	179
NOx area sources including nonroad	101	95	77	70

**Point source methodology:** The 2001 maintenance plan derived 1999 point source emissions from 1996 point source emissions estimates by applying Bureau of Economic Analysis (BEA) growth factors by Source Classification Code (SCC) for fuel consumption SCCs and Department of Energy Annual Energy Outlook 1998 growth factors by Standard Industrial Classification (SIC) code for non-fuel combustion SCCs. The 2007 and 2011 emissions were projected from 1999 using the same methods employed by EPA in the NOx SIP Call analysis. The 2007 and 2011 emissions took into account allocations under Pennsylvania's Chapter 145 regulations implementing the NOx SIP Call (*25 Pa. Code* Chapter 145). Emissions from point sources not affected by the NOx SIP Call were projected using BEA industry earnings projections as was done in EPA's NOx SIP Call analysis.

**Area sources:** The 2001 maintenance plan estimates for 1999 were originally projected from the 1996 three-year periodic emissions inventory using growth and control factors by source category. Stationary area sources were estimated using the same procedures as the 1990 inventory. Projections to 2007 and 2011 for stationary area sources used a combination of EGAS 4.0 run in SCC-output mode and per capita emission factors using EGAS 4.0 population-based growth factors.

Pennsylvania used the EPA June 2000 NONROAD model for the sources covered by that model to prepare 1999, 2007, and 2011 emission estimates. The model's emission factors account for reductions attributable to federal control programs. Commercial marine, aircraft, and locomotive categories were developed using a methodology similar to that employed for non-NONROAD area sources.