APPENDIX B: Supplementary Information

Figure B-1: 2012 Annual PM$_{2.5}$ Design Values
Figures B-2 to B-14: Emissions Information for PM$_{2.5}$ and Precursors

B-2: PM$_{2.5}$ Point Source Density
B-3: SO$_2$ Point Source Density
B-4: NO$_X$ Point Source Density
B-5: VOC Point Source Density
B-6: Direct PM$_{2.5}$ Area Source Density
B-7: SO$_2$ Area Source Density
B-8: NO$_X$ Area Source Density
B-9: VOC Area Source Density
B-10: NH$_3$ Area Source Density
B-11: PM$_{2.5}$ Point Source Emissions by Facility
B-12: SO$_2$ Point Source Emissions by Facility
B-13: NO$_X$ Point Source Emissions by Facility
B-14: VOC Point Source Emissions by Facility

Figure B-15: Population Density by County
Figure B-16: Population Growth by County
Figure B-17: Pennsylvania Air Basins
Figure B-1
2012 Annual PM$_{2.5}$ Design Values

Appearing in Red - 2012 Annual PM$_{2.5}$ Design Values Above the Standard of 12 ug/m$^3$

Appearing in Blue - 2012 Annual PM$_{2.5}$ Design Values Below the Standard of 12 ug/m$^3$
Figure B-2
Emission Density Map by County

PM$_{2.5}$ Point Source Emissions

PM$_{2.5}$ Point Source Emissions are from the 2011 National Emissions Inventory

PM$_{2.5}$ Emission Density (tons per year per square mile)

- **Green**: 0 - 0.5
- **Light Green**: 0.5 - 1.0
- **Yellow**: 1.0 - 2.0
- **Orange**: 2.0 - 4.0
- **Red**: Above 4.0
Figure B-3
Emission Density Map by County
SO₂ Point Source Emissions

SO₂ Point Source Emissions are from the 2011 National Emissions Inventory

SO₂ Emission Density (tons per year per square mile)
- 0 - 20
- 20 - 50
- 50 - 100
- 100 - 200
- Above 200
Figure B-4
Emission Density Map by County
NO\textsubscript{x} Point Source Emissions

NO\textsubscript{x} Point Source Emissions are from the 2011 National Emissions Inventory

NO\textsubscript{x} Emission Density (tons per year per square mile)

- **Green**: 0 - 5
- **Light Green**: 5 - 10
- **Yellow**: 10 - 25
- **Orange**: 25 - 50
- **Red**: Above 50
Figure B-5
Emission Density Map by County

VOC Point Source Emissions

VOC Point Source Emissions are from the 2011 National Emissions Inventory

VOC Emission Density (tons per year per square mile)

- **0 - 0.5**
- **0.5 - 1.0**
- **1.0 - 2.0**
- **2.0 - 4.0**
- **Above 4.0**
Figure B-6
Emission Density Map by County

PM$_{2.5}$ Area Source Emissions

PM$_{2.5}$ Area Source Emissions are from the 2011 National Emissions Inventory

PM$_{2.5}$ Emission Density (tons per year per square mile)

- Green: 0 - 1
- Light Green: 1 - 2
- Yellow: 2 - 4
- Orange: 4 - 8
- Red: Above 8
Figure B-7
Emission Density Map by County

SO₂ Area Source Emissions

SO₂ Area Source Emissions are from the 2011 National Emissions Inventory

SO₂ Emission Density (tons per year per square mile)

- **0 - 1**
- **1 - 2**
- **2 - 4**
- **4 - 8**
- **Above 8**
Figure B-8
Emission Density Map by County

NO\textsubscript{x} Area Source Emissions

NO\textsubscript{x} Area Source Emissions are from the 2011 National Emissions Inventory

NO\textsubscript{x} Emission Density (tons per year per square mile)

- Green: 0 - 1
- Light Green: 1 - 2
- Yellow: 2 - 4
- Orange: 4 - 8
- Red: Above 8
Figure B-9
Emission Density Map by County

VOC Area Source Emissions

VOC Area Source Emissions are from the 2011 National Emissions Inventory

VOC Emission Density (tons per year per square mile)

- Green: 0 - 4
- Light Green: 4 - 8
- Yellow: 8 - 16
- Orange: 16 - 32
- Red: Above 32
Figure B-10
Emission Density Map by County

NH₃ Area Source Emissions

NH₃ Area Source Emissions are from the 2011 National Emissions Inventory

NH₃ Emission Density (tons per year per square mile)
- Green: 0 - 1
- Light Green: 1 - 2
- Yellow: 2 - 4
- Orange: 4 - 8
- Red: Above 8
Figure B-11
Point Source Emissions by Facility

PM$_{2.5}$ Point Source Emissions

PM$_{2.5}$ Point Source Emissions are from the 2011 National Emissions Inventory

PM$_{2.5}$ Point Source Emissions (tons per year)

- 0 - 50
- 50 - 100
- 100 - 250
- 250 - 750
- Above 750
Figure B-12
Point Source Emissions by Facility

SO\textsubscript{2} Point Source Emissions

SO\textsubscript{2} Point Source Emissions are from the 2011 National Emissions Inventory

SO\textsubscript{2} Point Source Emissions (tons per year)

- 0 - 1000
- 1000 - 5000
- 5000 - 10000
- 10000 - 50000
- Above 50000
Figure B-13
Point Source Emissions by Facility

NO$_x$ Point Source Emissions

NO$_x$ Point Source Emissions are from the 2011 National Emissions Inventory

NO$_x$ Point Source Emissions (tons per year)

- 0 - 500
- 500 - 2000
- 2000 - 5000
- 5000 - 10000
- Above 10000
Figure B-14
Point Source Emissions by Facility

VOC Point Source Emissions

VOC Point Source Emissions are from the 2011 National Emissions Inventory

VOC Point Source Emissions (tons per year)

- • 0 - 50
- • 50 - 100
- • 100 - 250
- • 250 - 500
- • Above 500
Figure B-15
Population Density Map by County

Population based on 2010 US Census Results

Population Density (Person per square mile)

- 0 - 50
- 50 - 100
- 100 - 250
- 250 - 500
- Above 500
Figure B-16
Population Growth Map by County
Population Trends based on 2000 and 2010 US Census Results


-15% to 0%
0% to 5%
5% to 10%
10% to 20%
Above 20%
Figure B-17
Pennsylvania Air Basins Map

Air Basins
- Allegheny County
- Allentown Bethlehem Easton
- Erie
- Harrisburg
- Johnstown
- Lancaster
- Lower Beaver Valley
- Monongahela Valley
- Reading
- Scranton Wilkes-Barre
- Southeast Pennsylvania Inner
- Southeast Pennsylvania Outer
- Upper Beaver Valley
- York
- Liberty-Clairton