



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

AUG 18 2008

Honorable Edward G. Rendell  
Governor of Pennsylvania  
225 Main Capitol Building  
Harrisburg, Pennsylvania 17120

Dear Governor Rendell:

Thank you for your recommendations on the status of fine particle pollution (PM<sub>2.5</sub>) throughout Pennsylvania. Fine particle pollution represents one of the most significant barriers to clean air facing our nation today. Health studies link these tiny particles – about 1/30<sup>th</sup> the diameter of a human hair – to serious human health problems including aggravated asthma, increased respiratory symptoms like coughing and difficult or painful breathing, chronic bronchitis, decreased lung function, and even premature death in people with heart and lung disease. Fine particle pollution can remain suspended in the air for long periods of time and create public health problems far away from emission sources. Reducing levels of fine particle pollution is an important part of our nation's commitment to clean, healthy air.

The U.S. Environmental Protection Agency (EPA) has reviewed the December 28, 2007 letter from the Honorable Kathleen A. McGinty, Secretary of the Pennsylvania Department of Environmental Protection, submitting Pennsylvania's recommendations on air quality designations for the 2006 24-hour PM<sub>2.5</sub> standard. EPA has also reviewed the technical information submitted to support the recommendations. EPA appreciates the effort Pennsylvania has made to develop this supporting information.

Consistent with the Clean Air Act, this letter is to inform you that the Environmental Protection Agency (EPA) supports most of Pennsylvania's recommended nonattainment designations and boundaries, but intends to make modifications to some of Pennsylvania's recommendations. Furthermore, based upon 2005 to 2007 air quality monitoring data, the State College area is now in attainment. This is truly good news for the residents of Pennsylvania.

EPA has enclosed a detailed analysis of relevant areas that serves as the basis for EPA's preliminary concurrence with most of Pennsylvania's recommendations, as well as a detailed description of areas where EPA intends to modify Pennsylvania's recommendations, and the basis for such modification. Your Department of Environmental Protection Acting Secretary, Mr. Joseph R. Powers and the Bureau of Air Quality Director, Ms. Joyce E. Epps, will also receive a copy of this letter and the enclosures. Should you have additional information that you wish to be considered by EPA in this process, please provide it to EPA Region III by October 20, 2008.



EPA has taken steps to reduce fine particle pollution across the country, such as the Clean Diesel Program, to dramatically reduce emissions from highway, nonroad, and stationary diesel engines. In addition, State programs implemented to attain the 1997 PM<sub>2.5</sub> standards, will also help to reduce unhealthy levels of fine particle pollution.

EPA intends to make final designation decisions for the 2006 24-hour PM<sub>2.5</sub> standard by December 18, 2008. If you have any questions, please do not hesitate to contact me. Please also be aware that in the near future, EPA is planning to publish a notice in the Federal Register to solicit public comments on our intended designation decisions. EPA looks forward to a continued dialogue with you as we work together to implement the PM<sub>2.5</sub> standards.

Sincerely,



Donald S. Welsh,  
Regional Administrator

Enclosures

cc: Honorable Joseph R. Powers, Acting Secretary  
Pennsylvania Department of Environmental Protection

Ms. Joyce E. Epps, Director  
Bureau of Air Quality

## Enclosure 1

### Pennsylvania Area Designations for the 2006 24-Hour Fine Particle National Ambient Air Quality Standard

The table below identifies the counties in Pennsylvania that EPA intends to designate as not attaining the 2006 24-hour fine particle standard.<sup>1</sup> A county will be designated as nonattainment if it has an air quality monitor that is violating the standard or if the county is determined to be contributing to the violation of the standard.

Area	Pennsylvania Recommended Nonattainment Counties	EPA's Intended Nonattainment Counties
Allentown-Bethlehem-Easton	Lehigh County Northampton County	Lehigh County Northampton County
Harrisburg-Lebanon-Carlisle	Cumberland County Dauphin County Lebanon County	Cumberland County Dauphin County Lebanon County
Johnstown	Cambria County Indiana County (partial)	Cambria County Indiana County (partial)
Lancaster	Lancaster County	Lancaster County
Liberty-Clairton	Allegheny County (partial)	Allegheny County (partial)
Philadelphia	Bucks County Chester County Delaware County Montgomery County Philadelphia County	Bucks County Chester County Delaware County Montgomery County Philadelphia County
Pittsburgh	Allegheny County (partial) Armstrong County (partial) Beaver County Butler County  Lawrence County (partial) Washington County Westmoreland County	Allegheny County (partial) Armstrong County (partial) Beaver County Butler County Greene County Lawrence County (partial) Washington County Westmoreland County
Reading	Berks County	Berks County
State College	Centre County	None: demonstrating attainment based on 2005-2007 monitoring data
York	York County	York County

EPA intends to designate Mercer County as unclassifiable and the remaining counties in the Commonwealth as "attainment/unclassifiable." A county is designated as unclassifiable when it has air quality monitoring data for the 2005-2007 time period that is not complete and cannot be used for determining compliance with the standard.

<sup>1</sup> EPA designated nonattainment areas for the 1997 fine particle standards in 2005. In 2006, the 24-hour PM<sub>2.5</sub> standard was revised from 65 micrograms per cubic meter (average of 98<sup>th</sup> percentile values for 3 consecutive years) to 35 micrograms per cubic meter. The level of the annual standard for PM<sub>2.5</sub> remained unchanged at 15 micrograms per cubic meter (average of annual averages for 3 consecutive years).

## Enclosure 2

### Description of the Contributing Emissions Score

The Contributing Emissions Score (CES) is a metric that takes into consideration emissions data, meteorological data, and air quality monitoring information to provide a relative ranking of counties in and near an area. Using this methodology, scores were developed for each county in and around the relevant metro area. The county with the highest contribution potential was assigned a score of 100, and other county scores were adjusted in relation to the highest county. The CES represents the relative maximum influence that emissions in that county have on a violating county. The CES, which reflects consideration of multiple factors, should be considered in evaluating the weight of evidence supporting designation decisions for each area.

The CES for each county was derived by incorporating the following significant information and variables that impact fine particle (PM<sub>2.5</sub>) transport:

- Major PM<sub>2.5</sub> components: total carbon (organic carbon (OC) and elemental carbon (EC)), sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), and inorganic particles (crystal).
- PM<sub>2.5</sub> emissions for the highest (generally top 5%) PM<sub>2.5</sub> emission days (herein called “high days” or “high PM<sub>2.5</sub> days”) for each of two seasons, cold (October-April) and warm (May-September).
- Meteorology on high days using the NOAA HYSPLIT model for determining trajectories of air masses for specified days.
- The “urban increment” of a violating monitor, which is the urban PM<sub>2.5</sub> concentration that is in addition to a regional background PM<sub>2.5</sub> concentration, determined for each PM<sub>2.5</sub> component.
- Distance from each potentially contributing county to a violating county or counties.

A more detailed description of the CES can be found at [http://www.epa.gov/ttn/naaqs/pm/pm25\\_2006\\_techinfo.html#C](http://www.epa.gov/ttn/naaqs/pm/pm25_2006_techinfo.html#C).