



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

DEC - 5 2008

Honorable Martin O'Malley  
Governor of Maryland  
100 State Circle  
Annapolis, Maryland 21401

Dear Governor O'Malley:

On August 18, 2008, the U.S. Environmental Protection Agency (EPA) wrote to you regarding Maryland's recommendations on the status of fine particle pollution (PM<sub>2.5</sub>) throughout the state. That letter transmitted the EPA's preliminary concurrence with most of Maryland's recommendations on air quality designations for the 2006 24-hour PM<sub>2.5</sub> standard, submitted in your December 17, 2007 letter to EPA. EPA's August 18, 2008 letter also proposed to modify Maryland's recommendations for the Washington, District of Columbia (D.C.) area because, based upon 2005 to 2007 air quality monitoring data, the Washington, D.C. area is now in attainment. By letter dated August 28, 2008, the Honorable Shari T. Wilson, Maryland's Department of the Environment Secretary, relayed your concurrence with EPA's modifications.

On September 2, 2008, EPA published a notice in the Federal Register to solicit public comments on our intended area designations for the 2006 24-hour PM<sub>2.5</sub> standard. Based upon public comment received, EPA determined that it was appropriate to further analyze the technical information used to support EPA's recommendations. This letter is to inform you that, based on EPA's further analysis of that technical information, EPA intends to make additional modifications to Maryland's December 17, 2007 recommendations regarding the Baltimore nonattainment area for the 2006 24-hour PM<sub>2.5</sub> standard. Specifically, EPA intends to add Montgomery and Prince George's Counties, Maryland to the Baltimore nonattainment area. EPA is providing you with an opportunity to discuss such modifications with EPA prior to EPA's final designation determination relating to these counties.

EPA has enclosed a detailed description of the area where EPA intends to make additional modifications to Maryland's recommendations, and the basis for such additional modifications. Should you have additional information that you wish to be considered by EPA in this process, please provide it to EPA Region III by February 3, 2009.

EPA intends to take final action on the boundaries recommended for the Baltimore nonattainment area in EPA's August 18, 2008 modification letter (the City of Baltimore and Anne Arundel, Baltimore, Carroll, Harford, and Howard Counties) on December 18, 2008.



EPA intends to make a final designation decision relating to inclusion of Montgomery and Prince George's Counties within the Baltimore nonattainment area for the 2006 24-hour PM<sub>2.5</sub> standard on or before April 6, 2009.

If you have any questions, please do not hesitate to contact me or have your staff contact Ms. Judy Katz, Director of Region III's Air Protection Division, at 215-814-2654. EPA looks forward to a continued dialogue with you as we work together to implement the PM<sub>2.5</sub> standards.

Sincerely,

A handwritten signature in black ink that reads "Donald S. Welsh". The signature is written in a cursive style with a large, prominent "D" and "W".

Donald S. Welsh  
Regional Administrator

Enclosures

cc: Honorable Shari T. Wilson, Secretary  
Maryland Department of the Environment

Mr. George S. Aburn, Director  
Air and Radiation Management Administration  
Maryland Department of the Environment

## Enclosure 1

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

The table below identifies the counties in Maryland 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      | Maryland Recommended Nonattainment Counties  | EPA's Intended Nonattainment Counties   |
|-----------|--|---|
| Baltimore | Anne Arundel County<br>Baltimore City<br>Baltimore County<br>Carroll County<br>Harford County<br>Howard County | Anne Arundel County<br>Baltimore City<br>Baltimore County<br>Carroll County<br>Harford County<br>Howard County<br>Montgomery County<br>Prince George's County |

EPA intends to designate the remaining counties as "attainment/unclassifiable."

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<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 three 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 three 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 (crustal).
- 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).