



ENERGY AND ENVIRONMENT CABINET
OFFICE OF THE SECRETARY

Steven L. Beshear
Governor

Leonard K. Peters
Secretary

500 Mero Street
12th Floor, Capital Plaza Tower
Frankfort, Kentucky 40601
Phone: (502) 564-3350
Fax: (502) 564-7484
<http://eec.ky.gov>

October 29, 2014

Ms. Heather McTeer Toney
Regional Administrator
US EPA, Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth St, SW
Atlanta, GA 30303-8960

RE: Kentucky response to 120-day letter for 2012 PM_{2.5} designations

Dear Ms. McTeer Toney:

Thank you for your letter dated August 19, 2014, notifying Governor Beshear of the Administrator's intention to modify the Commonwealth's recommendations of air quality designations for the 2012 revised primary annual fine particle (PM_{2.5}) National Ambient Air Quality Standard (NAAQS). As afforded in Section 107(d)(1)(B)(ii) of the Clean Air Act, the purpose of this letter is to inform the Administrator that the proposed modifications to Kentucky's recommendations are inappropriate. The Commonwealth disagrees with EPA's intention to modify the recommended area designations to nonattainment for Jefferson County and a portion of Bullitt County in the Louisville area and for portions of Boone, Campbell, and Kenton Counties in the Northern Kentucky area.

Louisville Area

With regard to the Louisville area, I understand and appreciate EPA's concerns and approach related to the data quality issues associated with the ambient air monitoring data collected in Jefferson County, Kentucky. However, I want to express concern with the inconsistent approach EPA is applying when evaluating PM_{2.5} ambient air quality data collected in the Louisville area.

Currently, EPA is reviewing a pending redesignation request for the area that was submitted on March 5, 2012. In on-going conversations on the matter, EPA indicates that it is unable to finalize the redesignation to attainment status for the 1997 PM_{2.5} standard (15 µg/m³) due to the data quality issues related to ambient air monitoring data collected in Jefferson County, Kentucky. However, in this modification to Kentucky's recommendation, EPA intends to base its nonattainment designation on the design value monitor located in Clark County, Indiana (18-019-0006). If EPA is willing to use the

Clark County, Indiana ambient air monitoring data for the PM_{2.5} nonattainment designation for the 2012 standard, then EPA should also use the data to finalize the attainment designation for the 1997 standard. It should be noted that the Clark County monitor has served as the design value monitor for the Louisville area since 2007. As such, we request that EPA use the Clark County monitor design value in taking final action on the pending March 5, 2012 redesignation request.

In responding to your request for additional information related to EPA's modification of Kentucky's recommendation, the Louisville Metro Air Pollution Control District (LMAPCD) also performed a review of the data provided in the Technical Support Document (TSD) by comparing the emissions in the 2011 NEI with the emissions in the 2012 NEI. This review showed that total NH₃ decreased by 72 tons/year, total SO₂ decreased by 1,322 tons/year, and total NO_x decreased by 3,491 tons/year.

Additional reductions in PM_{2.5}, SO₂, and NO_x will occur in the area as a result of two significant emission reduction projects in progress at Louisville Gas & Electric's (LG&E) Mill Creek and Cane Run facilities. LG&E is modifying the control devices for four electric generation units (EGUs) at its Mill Creek facility to include particulate matter control systems and flue gas desulfurization for each of the EGUs. Reductions of 299.2 tons/year of PM_{2.5} and 14,208.6 tons/year in SO₂ are expected when the project is completed in 2016. Further reductions of 52 tons/year of PM_{2.5}, 10,572 tons/year of SO₂, and 4,823.2 tons/year of NO_x are expected by mid-2015 from the conversion of the Cane Run facility from three coal-fired boilers to a natural gas-fired combustion turbine plant.

In light of these significant emissions reductions, along with the downward trend of ambient air monitor results for PM_{2.5} concentrations, the Commonwealth strongly recommends EPA to classify the Louisville area as attainment/unclassifiable once Indiana certifies and submits 2014 ambient air monitoring data demonstrating the area achieves the NAAQS.

Northern Kentucky Area

To address the Cincinnati-Hamilton, Ohio-Kentucky area, Kentucky reviewed EPA's five factor analysis.

Factor 1: Air Quality Data

Kentucky acknowledges and agrees with EPA that the ambient air monitoring site in Butler County, Ohio (39-017-0020) should be exempted from comparison to the annual standard due to the close proximity of several facilities. Table 5, NEI 2011 Point Source Emissions (tons/year) in the technical support document provides a column that indicates the distance to the monitor of the listed sources. For Butler County, Ohio, the distances from sources to the monitor range from 15 to 23 miles. However, it appears that there are some potential particulate matter sources at distances much closer to the ambient monitor:

- a load out from Martin Marietta Aggregates is only approximately 0.19 miles;
- the conveyor load out for Martin Marietta Aggregates is approximately 0.3 miles;
- DMK Sandblasting Services is approximately 0.67 miles; and
- the AK Steel Blast Furnace is approximately 1.05 miles from the violating monitor.

With two monitors to the northwest and northeast demonstrating compliance, Kentucky finds that the localized emissions from the surrounding stationary sources are contributing to the violation at this monitor and not from contribution of Kentucky emissions.

For the ambient air monitor station identified by 39-061-0042, closer inspection identifies a large rail switch yard within approximately 0.69 miles of the violating monitor. In addition, a large confluence of interstates and local primary arteries are within approximately 1.61 miles of the violating monitor. And lastly, this violating monitor is within approximately 0.42 miles of the river and by barge traffic.

Additionally, monitor 39-061-0014 is located within approximately 0.03 miles (158 feet) of a rail line. It is within approximately 0.18 miles of significant roadways, and it is within approximately 0.09 miles (475 feet) of a manufacturing plant.

After reviewing the ambient air monitor results spatially from South to North (Kentucky to Ohio), the pattern of monitoring values demonstrate attainment, nonattainment, and then attainment. For this reason and the reasons cited above, Kentucky finds that it is the localized emissions from the nearby stationary sources that are contributing to the violating monitor and not from any significant contribution of Kentucky stationary sources.

Factor 2: Emissions and emissions-related data

Please note the percentage of emissions that the TSD attributes to Kentucky for the nonattainment area:

- **NO_x** = Boone: 9%, Campbell: 3%, Kenton: 5%;
- **PM** = Boone: 4%, Campbell: 2%, Kenton: 3%;
- **POM** = Boone: 8%, Campbell: 4%, Kenton: 6%; and
- **EC** = Boone: 8%, Campbell: 3%, Kenton: 6%.

Each of the Kentucky County's contribution is less than 10% of the total in the nonattainment area. Kentucky determines that emissions from Kentucky are negligible in causing nonattainment at the monitors in Ohio.

Factor 3: Meteorology

Under this factor, EPA states that the wind direction is predominantly from the south to southwesterly. As shown in the TSD Kentucky is upwind of 3 violating monitors, but also upwind of 7 attaining monitors. Disregarding the Butler County, Ohio monitor due to the proximity of several significant sources of particulate matter, it does not seem likely that emissions from Kentucky randomly impact certain monitors while not impacting other monitors. If Kentucky were a significant cause for the violations, one would expect that all of the monitors in the area would show nonattainment.

Factor 4: Geography/topography

As stated previously under Factor 1, each monitor in violation of the PM_{2.5} standard has significant sources located much closer than the northern portions of Kenton and Campbell Counties, Kentucky.

Ms. Heather McTeer Toney
Page No. 4
October 29, 2014

Factor 5: Jurisdictional boundaries. Kentucky has no comment with regard to Factor 5.

Relating to the summary of the letter, Kentucky notes that EPA indicates that Kenton County has 5% of the vehicle miles travelled (vmt) for the entire proposed nonattainment area, Boone County 4%, and Campbell County 3%. With all of the information provided above, and including the fact that the monitor located in Campbell County meets the standard, Kentucky finds that the portions of Boone, Campbell, and Kenton counties that EPA proposes to designate as nonattainment should be designated attainment/unclassifiable for the 2012 PM_{2.5} standard.

Kentucky appreciates the opportunity to provide additional documentation regarding the proposed nonattainment boundaries contained in your letter. Your prompt attention to this letter is appreciated. If you have any questions or need additional information, please contact me at (502) 564-3350, or have your staff contact Mr. Sean Alteri, Director of the Kentucky Division for Air Quality, at (502) 564-3999.

Sincerely yours,



Leonard K. Peters

c: Beverly Banister/R. Scott Davis