

US EPA ARCHIVE DOCUMENT

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February 21, 2012

Ms. Gwendolyn Keyes Fleming
Regional Administrator
U.S. EPA, Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303

RE: Response to 120-day Letter for the 2008 8-Hour Ozone
Nonattainment Areas in Kentucky

Dear Ms. Fleming:

This letter is in response to your letter dated December 8, 2011, regarding Kentucky's recommendations for the 2008 8-hour ozone standard submitted on March 12, 2009 and revised October 13, 2011. Kentucky appreciates the opportunity to provide additional documentation regarding the proposed nonattainment boundaries contained in your letter. We have provided a response to EPA's technical support document with additional documentation and supporting conclusion as an attachment to this letter.

Your prompt attention to this letter is appreciated. If you have any questions or comments concerning this matter, please contact Andrea Smith with the Division for Air Quality at (502) 564-3999 or andrea.smith@ky.gov.

Sincerely yours,

Leonard K. Peters
Secretary

Enclosure
LKP:jg
cc: Beverly Banister/R. Scott Davis

Response to Technical Support Document for Kentucky Area Designations for the 2008 Ozone National Ambient Air Quality Standards

Discussion and Recommendation

Boone, Campbell, and Kenton counties in Kentucky should be designated attainment/unclassifiable for the 2008 8-hour ozone standard of 0.075ppm. The violating monitors in Ohio are located in specific corridors near I-71, I-74, I-75, and I-275 and their confluences, Kings Island amusement park, and the downtown Cincinnati metropolitan area with attractions such as the Cincinnati Bengals Paul Brown Stadium and the Cincinnati Reds Great American Ball Park. The emissions contribution of the three Kentucky counties is negligible in comparison with the emissions for the entire proposed nonattainment area. The population of the Kentucky counties is each less than ten percent of the population in the proposed nonattainment area, as is the associated vehicle miles traveled which impacts the mobile emissions contribution. Based on the factor analyses provided, Kentucky believes that Boone, Campbell, and Kenton counties in Kentucky should be designated attainment/unclassifiable for the 2008 8-hour ozone standard.

Factor 1: Air Quality Data

No monitors in Boone, Campbell, or Kenton are in violation of the standard. The 2010 the design values were 0.065ppm for Boone, 0.072ppm for Campbell, and 0.070ppm for Kenton. As shown in the weight of evidence in the remaining factors, the emissions do not contribute to the violations of the standard in the area.

Factor 2: Emissions and Emissions-Related Data

Emissions Data

Boone County emissions are 6.1% of the VOC emissions in the proposed nonattainment area, and 7.1% of the NOx emissions for the proposed nonattainment area.

Campbell County emissions are 3.2% of the VOC emissions in the proposed nonattainment area, and 2.2% of the NOx emissions for the proposed nonattainment area.

Kenton County emissions are 5.5% of the VOC emissions in the proposed nonattainment area, and 3.3% of the NOx emissions for the proposed nonattainment area.

As shown in Table 1, the combination of all emissions from the Kentucky are significantly below those of the Ohio emissions.

Further, as shown in Table 2, actual point source data for the Kentucky portion reveals that although Boone County VOC emissions increased 119 tons between 2008 and 2010, the NOx emissions for Boone County decreased over 1900 tons.

Actual point source data for the Kentucky portion reveals that Campbell County VOC emissions decreased 13 tons between 2008 and 2010, and the NOx emissions for Campbell County decreased 87 tons.

Actual point source data for the Kentucky portion reveals that although Kenton County NOx emissions increased 20 tons per year between 2008 and 2010, the VOC emissions for Kenton County decreased 87 tons.

The point source emissions for the area have basically remained the same for VOC and decreased significantly for NOx emissions.

Population density and degree of urbanization

Although EPA reviewed population density and population growth, the actual contribution in population for the Kentucky counties to the entire proposed nonattainment area was not considered.

Even though Boone County had a 37% increase in population from 2000-2010, the county accounts for only 5.5% of the total proposed nonattainment area.

Campbell County population increased 2% from 2000-2010 and accounts for only 4.2% of the total proposed nonattainment area.

Kenton County population increased 5% from 2000-2010 and accounts for only 7.4% of the total proposed nonattainment area.

The population of the Kentucky counties is each less than ten percent of the population in the proposed nonattainment area.

Traffic VMT data and commuting patterns

EPA provided data on the VMT for each county in the proposed nonattainment area, but did not view each county's contribution in relation to the entire proposed nonattainment area.

Boone accounts for 5.5% of the total proposed nonattainment area VMT; Campbell, accounts for 5.0% ; and Kenton, accounts for 8.3% (Table 3). An additional consideration should be given to the location of Kings Island Amusement Park located in Warren County, Ohio, and the traffic associated with the visitors to this local attraction. Data from www.coastergrotto.com/theme-park-attendance.jsp. indicates that between 2008-2010, the park averaged 3.08 million visitors annually.

This amount of vehicular emissions are certain to contribute significantly to the area's violating monitors, as can be seen in the map provided in EPA's technical support document (TSD).

Factor 3: Meteorology (weather/transport patterns)

Although Kentucky agrees that predominant wind patterns in this area are from the south-southwest direction, a review of the map in the TSD would exonerate Campbell and Kenton counties since they are south-southwest of two monitors in Ohio that attain the standard.

Factor 4: Geography/topography (mountain ranges or other air basin boundaries)

EPA indicated that there was no significance in these criteria for this area.

Factor 5: Jurisdictional boundaries

EPA notes that previously established nonattainment boundaries were utilized in considering the proposed nonattainment boundary for this standard. Kentucky does not agree that this is the most effective approach. Counties that have been designated nonattainment in the past does not provide a forgone conclusion that they should be designated nonattainment in the future.

Conclusion

As shown in the documentation above, the Kentucky counties that EPA proposes to be designated nonattainment are in fact monitoring attainment; provide minimal contribution to the nonattaining ozone monitors; and do not have the authority to address vehicle emissions as that is reserved for the federal government. Kentucky respectfully requests that EPA reconsider its initial proposed nonattainment boundary to exclude the Kentucky counties of Boone, Campbell, and Kenton.

Table 1: Total 2008 VOC and NOx Emissions (tons/year) in the Cincinnati-Middletown-Wilmington, OH-KY-IN CSA

State/County	State-Recommended Nonattainment	VOC Emissions (tpy)	KY %	Area %	NOx Emissions (tpy)	KY %	Area %
I N D I A N A							
Dearborn	No	3,572		5.0%	11,637		9.4%
Franklin	No	1,097		1.5%	862		0.7%
Ohio	No	210		0.3%	259		0.2%
K E N T U C K Y							
Boone	No	4,332	32.6%	6.1%	8,848	42.0%	7.1%
Bracken	No	361		0.5%	760		0.6%
Campbell	No	2,260	17.0%	3.2%	2,697	12.8%	2.2%
Gallatin	No	671		0.9%	1,634		1.3%
Grant	No	1,148		1.6%	1,623		1.3%
Kenton	No	3,901	29.4%	5.5%	4,095	19.5%	3.3%
Pendleton	No	608		0.8%	1,394		1.1%
O H I O							
Brown	No	1,720		2.4%	1,430		1.2%
Butler	Yes	10,813		15.1%	12,600		10.2%
Clermont	Yes	5,809		8.1%	28,461		23.0%
Clinton	Yes	2,618		3.7%	2,941		2.4%
Hamilton	Yes	26,816		37.5%	38,664		31.2%
Warren	Yes	5,618		7.9%	6,027		4.9%
	CSA Total	71,554			123,932		

Table 2: Actual Kentucky Point Emissions for 2008 and 2010

	2008		2010		Difference	
	NO2	VOC	NO2	VOC	NO2	VOC
KY						
Boone	4635	782	2719	902	-1916	119
Campbell	100	172	81	159	-19	-13
Kenton	92	281	112	194	20	-87

Table 3: 2008 Traffic VMT Data

State/County	State-Recommended Nonattainment	2008 VMT (million miles)	KY %	Area %
I N D I A N A				
Dearborn	Yes	904		4.5%
Franklin	No	316		1.6%
Ohio	No	63		0.3%
K E N T U C K Y				
Boone	No	1,095	23.1%	5.5%
Bracken	No	89		0.4%
Campbell	No	1,005	21.2%	5.0%
Gallatin	No	278		1.4%
Grant	No	432		2.2%
Kenton	No	1,669	35.1%	8.3%
Pendleton	No	182		0.9%
O H I O				
Brown	No	413		2.1%
Butler	Yes	2,469		12.3%
Clermont	Yes	1,464		7.3%
Clinton	Yes	655		3.3%
Hamilton	Yes	7,391		36.8%
Warren	Yes	1,640		8.2%
Area-Wide		20,065		