UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

DEC - 3 2003

4APT-APB

Honorable Paul E. Patton
Governor of Kentucky
State Capitol
700 Capitol Avenue
Frankfort, KY 40601

Dear Governor Patton:

Thank you for making recommendations on 8-hour ozone air quality designations. Your letter is an important step in providing citizens of Kentucky with information on air pollution levels where they live and work. Levels of ground-level ozone have improved significantly since the Clean Air Act (CAA) was amended in 1990 at which time 135 areas were designated as not attaining the 1-hour ozone standard. Since that time nearly half those areas (67) have cleaned up their air to meet the 1-hour ozone standard and have been redesignated as attaining that standard. However, many areas have still not met the less stringent 1-hour ozone standard, and in 1997, the U. S. Environmental Protection Agency (EPA) promulgated a more stringent 8-hour ozone national ambient air quality standard. Thus, much work remains to be done. Under the CAA, EPA is required to promulgate designations for new or revised standards, such as the 8-hour ozone standard. Earlier this year, after several public interest groups filed a lawsuit claiming EPA had not met the statutory deadline for designating areas for the 8-hour ozone standard, we entered into a consent decree that requires us to promulgate designations by April 15, 2004.

The CAA defines a nonattainment area as any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant. EPA guidance indicates that Kentucky should use the larger of the Consolidated Metropolitan Statistical Area (CMSA), Metropolitan Statistical Area (MSA), or the 1-hour ozone nonattainment area as the presumptive boundary for 8-hour ozone nonattainment areas. The guidance provides 11 factors that Kentucky should consider in determining whether to modify the presumptive boundaries. We have reviewed your letter, dated July 14, 2003, submitting Kentucky's recommendations on air quality designations for the 8-hour ozone standard. We have also reviewed the extensive justification information you have submitted to support your recommendations for areas that differed from the presumptive boundaries. We appreciate the effort the Commonwealth made to develop this supporting information. This letter is to inform you that the EPA does not intend to make modifications to your recommended designations and boundaries. We will continue to work with your office as we move forward to make final designations.

EPA has been tracking preliminary 2003 ozone monitoring data and its impact on areas' preliminary 2001-2003 design values. We received John Lyons' letter to Beverly Banister,

Director, Air, Pesticides and Toxics Management Division, dated November 17, 2003, informing us that the ozone monitoring data for 2003 has completed the full quality assurance and quality control process and has been fully uploaded into the the Air Quality System. Bell and Warren Counties are now meeting the 8-hour ozone standard and should be designated as attainment. EPA concurs with your revised recommendation for Bell and Warren Counties.

The enclosures to this letter identifies the counties that should be included in each nonattainment area and a summary explaining why we believe your recommendations are consistent with the statutory definition of a nonattainment area in light of the 11 factors provided in our guidance. Enclosure 1 identifies the areas/counties that will be designated nonattainment. Enclosure 2 provides information on those areas/counties which do not require modification but which differ from EPA's presumptive boundaries.

We look forward to a continued dialogue with Kentucky as we work to finalize the designations for the 8-hour ozone standard. We appreciate your efforts and will review any future supporting information that Kentucky wishes to submit on these recommendations. If you have any questions, please do not hesitate to contact Beverly Banister, at (404) 562-9326, or Kay Prince, Chief, Air Planning Branch, at (404) 562-9026.

Sincerely,

J. I. Palmer, Jr.
Regional Administrator

Enclosure

cc: Henry C. List, KYDEP
John Lyons, KYDEP
Art Williams, Jefferson County
The Honorable Joseph E. Kernan, Governor, Indiana
Lori Kaplan, IDEM
John A. Benedict, WVDEP

Enclosure 1

The following table identifies the individual areas and counties comprising those areas within Kentucky that EPA intends to designate as nonattainment. EPA intends to designate as attainment/unclassifiable all counties not identified in the table below.

Nonattainment Areas		
Area	**Kentucky Recommended Nonattainment Counties**	**EPA Recommended Nonattainment Counties**
Cincinnati-Hamilton, OH-KY-IN	Boone Campbell Kenton	Boone Campbell Kenton
Clarkesville-Hopkinsville, TN-KY	Christian	Christian
Huntington-Ashland, KY-WV	Boyd	Boyd
Louisville, KY-IN	Bullitt Jefferson Oldham	Bullitt Jefferson Oldham

Enclosure 2

This table identifies counties which would otherwise be included in a nonattainment area's presumptive boundary, in accordance with EPA's March 28, 2000, Boundary Guidance Memorandum, but which have been omitted from the Commonwealth's recommendations for nonattainment areas, and for which EPA is not modifying. Following the table is a discussion of the justification for omitting each county from the nonattainment area.

Justification for Less than Presumptive Boundaries	
Area	**"Presumptive" Kentucky Counties Excluded from Nonattainment Area**
Cincinnati-Hamilton, OH-KY-IN*	Gallatin Grant Pendleton
Evansville-Henderson, IN-KY*	Henderson
Huntington-Ashland, KY-WV*	Carter Greenup

**These are interstate areas. Letters addressing the Indiana, Ohio, and/or West Virginia portions of these areas were sent to the respective Environmental Commissioners of these states as applicable.*

Cincinnati-Hamilton, OH-KY-IN

Gallatin County:

According to 1996 national emissions trends data, Gallatin County has one large source of emissions of volatile organic compounds (VOC) and nitrogen oxides (NOx), the Gallatin Steel Company. This source emits 112 tons per year (tpy) of VOC and 1,192 tpy of NOx. The County contributes one percent or less of the 1999 VOC and NOx point source emissions to the entire Cincinnati-Hamilton CMSA. The population of the County, based on 2000 census data, is 7,870 and predominantly rural and is less than one percent of the total CMSA population (based on 2001 population projections). While population growth is expected to increase between 2000 and 2010 by an additional 47.9 percent for Gallatin, the County's population will still be relatively small in number (i.e., 11,638) compared to the rest of the CMSA. For example, projected 2010 populations for the Kentucky Counties of Boone and Campbell are 126,036 and 92,385, respectively, and 882,300 for Hamilton County, Ohio.

On road mobile source emissions from the 1999 National Emissions Inventory estimates that Gallatin contributes one percent VOC and two percent NOx to the CMSA. In comparison, Hamilton County, Ohio contributes 44 percent VOC and 38 percent NOx to the CMSA's onroad mobile emissions.

Grant County:

Grant County has no large VOC or NOx point sources. The County contributes one percent each to the 1999 VOC and NOx point source emissions, respectively, for the entire Cincinnati-Hamilton CMSA. The population of the County, based on 2000 census data, is 22,384, and is approximately 78 percent rural. Grant County represents about one percent of the total CMSA population, based on 2001 population projections. While population growth is expected to increase between 2000 and 2010 by an additional 44.5 percent for Grant, this equates to only about 10,000 people. The County's overall population will still be much smaller, at 32,341, than other counties within the CMSA, such as Boone County, Kentucky and Hamilton County Ohio, which are projected to have over 120,000 and 880,000 people, respectively, in 2010. The populations in larger counties are projected to increase in numbers greater than the entire population of Grant County. For example, from 2000-2010, Boone is expected to grow by 40,045 people and Butler County, Ohio, which has 332,807 people according to 2000 data is estimated to increase by 53,553 people.

On road mobile source emissions from the 1999 National Emissions Inventory estimates that Grant contributes two percent VOC and three percent NOx to the CMSA. In comparison Hamilton County, Ohio contributes 44 percent VOC and 38 percent NOx to the CMSA's on road mobile emissions.

Pendleton County:

Pendleton County has a large NOx source which emits 2,169 tpy. The County contributed zero and one percent of the 1999 VOC and NOx point source emissions, respectively, for the entire Cincinnati-Hamilton CMSA. The population of the County, based on 2000 census data, is 14,390, and is predominantly rural. Pendleton County represents approximately one percent of the total CMSA population based on 2001 population projections. While population growth is expected to increase between 2000 and 2010 by an additional 22.9 percent for Pendleton, the County's population will still be relatively small in number, i.e., 17,690, compared to the rest of the CMSA. Comparatively, the 2010 population estimates for other CMSA counties are 56,665 for Dearborn County, Ohio and 159,730 for Kenton County, Kentucky.

On road mobile source emissions from the 1999 National Emissions Inventory estimates that Pendleton contributes one percent VOC and one percent NOx to the CMSA. In comparison, Hamilton County, Ohio contributes 44 percent VOC and 38 percent NOx to the CMSA's on road mobile emissions.

Summary:

The Kentucky counties of Gallatin, Grant, and Pendleton do not have ozone monitors located within them. However, as detailed above, their point and mobile source emissions are much lower than almost all of the other CMSA Counties. Gallatin, Grant, and Pendleton have no large point sources of emissions (with the exception of one large NOx source in Pendleton) and

are fairly rural with small populations. Therefore, since these counties have very low emissions and low populations, EPA concurs with the Commonwealth's recommendation to leave these counties out of the nonattainment area.

Evansville-Henderson, IN-KY

Henderson County is the only county located in Kentucky included in the Evansville-Henderson, IN-KY MSA. This MSA also includes Posey, Vanderburgh, and Warrick Counties in Indiana. Although Posey County was violating the 8-hour ozone standard, based on 2000-2002 data at 0.087 parts per million (ppm), it appears to be attaining the standard based on 2001-2003 data. However, Warrick County, Indiana, is now violating the 8-hour ozone standard, according to preliminary 2001-2003 air quality data.

Henderson County contributes 9 and 15 percent of the total MSA VOC and NOx point source emissions, respectively, based on 1999 emission inventory data. In comparison, Posey contributes 9 and 29 percent of the total MSA VOC and NOx point source emissions, respectively, whereas Warrick contributes 9 and 56 percent of the total MSA VOC and NOx point source emissions, respectively. Vanderburgh contributes 25 and 18 percent of the total MSA VOC and NOx point source emissions, respectively.

On road mobile source emissions from Henderson County were estimated at 3.85 tons per summer day VOC and 4.61 tons per summer day NOx in 1999, representing 15 and 14 percent of the VOC and NOx onroad mobile emissions from the study area. Kentucky also documented that commuting traffic into and out of Henderson County is minimal, which is defined as 11-30 percent, indicating that Henderson's residents do not contribute a significant amount of mobile source emissions by commuting into other parts of the MSA. Specifically, 1999 data show that 74 percent of Henderson County residents work in Henderson, 17 percent commute to Vanderburgh to work, and the remaining residents commute to work to Kentucky counties outside the MSA (i.e., Union, Daviess, and Webster Counties). Henderson County contributed approximately 16 percent to the MSA's total vehicle miles traveled in 1999.

Overall, Henderson County contributes approximately 13 percent of the total VOC emissions and less than three percent of the total NOx emissions of the Evansville-Henderson study area. Henderson's 2000 population is 44,829 as compared to Posey at 27,061 and Warrick at 52,383. Projected population growth for 2000-2010 is 3.3 percent for Henderson as compared to 5.9 percent for Posey and 11.4 percent for Warrick. Henderson County is 41 percent rural with the remaining 59 percent living in incorporated areas.

Henderson County has two ozone monitors monitoring attainment for the 2000-2002 monitoring period. The monitors have 8-hour ozone design values of 0.079 ppm and 0.077 ppm (only two years of data at the second monitor) for the 2000-2002 period. These monitors continue to be in attainment based on preliminary 2001-2003 data, i.e. 0.079 ppm for the monitor with three years of data. Since Henderson County has low VOC and NOx emissions, a small population, two attaining monitors, and contributes minimal emissions to the MSA through commuting to other counties, EPA concurs with the Commonwealth's recommendation to

designate this County as attainment.

Huntington-Ashland, KY-WV

Carter County:

The Huntington-Ashland, KY-WV MSA consists of the Ohio County of Lawrence, the West Virginia Counties of Cabell and Wayne, and the Kentucky Counties of Boyd, Carter, and Greenup. Carter is not recommended for inclusion in the nonattainment boundary. Carter's ozone monitor shows an 8-hour ozone design value of 0.080 ppm for the 2000-2002 period.

Carter County has the smallest population of all the counties in the MSA (27,024 according to 2001 estimates). In comparison, the largest MSA county, Cabell County, West Virginia, has an estimated population for 2001 of 95,682. Kentucky's submittal documents that Carter's population represents approximately 9 percent of the total 2001 MSA population and is 85 percent rural. Carter's population is expected to increase by 9.4 percent between 2000 and 2010 which translates to an increase of 2,517 people.

Point source emissions from Carter County are much smaller in magnitude than the other counties in the MSA. Specifically, Carter contributes 9 and 2 percent of the total annual VOC and NOx point source emissions, respectively, of the MSA according to 1999 data. In absolute values, Carter's point sources emit, respectively, 2,301 and 2,957 tons of VOC and NOx annually based on 1999 data. In comparison, 1999 annual point source emissions from other large counties in the MSA are as follows: Boyd County, Kentucky emissions are 9,520 VOC and 13,732 NOx tpy; Lawrence County, Ohio emissions are 4,087 VOC and 4,133 NOx tpy; Cabell County, West Virginia emissions are 6,996 VOC and 12,732 NOx tpy. Carter has no large VOC or NOx sources.

Kentucky's submittal includes 2001 emissions data documenting that Carter's VOC point source emissions have substantively decreased since 1999. Carter County's VOC point source emissions for 1999 are estimated at 0.06 tons per summer day, which represents less than one percent of the overall 18.87 tons per summer day VOC point source emissions from the Kentucky portion of the MSA alone (i.e., the Kentucky Counties of Boyd, Carter, and Greenup). Carter's NOx point source emissions are estimated at zero tons per summer day which represents zero percent of the overall 22.21 tons per summer day NOx point source emissions from the Kentucky portion of the MSA.

Regarding the 2001 on road mobile source emission contributions, Carter's VOC on road mobile source emissions are estimated at 3.35 tons per summer day, which represent approximately 39 percent of the overall 8.66 tons per summer day VOC mobile source emissions from the Kentucky portion of the MSA. Carter's on road NOx mobile source emissions are estimated at 3.67 tons per summer day, which represent approximately 36 percent of the overall 10.20 tons per summer day NOx on road mobile source emissions from the Kentucky portion of the MSA.

Greenup County:

Greenup County is not recommended for inclusion in the nonattainment boundary. Greenup's monitor has an 8-hour ozone design value of 0.083 ppm for the 2000-2002 period.

Greenup has the second smallest population of all the counties in the MSA (36,823 according to 2001 population data). In comparison, the largest MSA county, Cabell County, West Virginia has an estimated population for 2001 of 95,682. Kentucky's submittal documents that Greenup's projected 2001 population data represents approximately 12 percent of the total MSA population of 313,930. Greenup's population is expected to increase by 0.3 percent between 2000 and 2010.

Point source emissions from Greenup are much smaller in magnitude than the other counties in the MSA. Specifically, Greenup contributes 8 and 4 percent of the total annual VOC and NOx point source emissions, respectively, of the MSA according to 1999 data. In absolute values, Greenup's point sources emit 2,157 and 4,644 tpy, of VOC and NOx, respectively. In comparison, 1999 annual point source emissions from other large counties in the MSA are as follows: Boyd County, Kentucky emissions are 9,520 VOC and 13,732 NOx tpy; Lawrence County, Ohio emissions are 4,087 VOC and 4,133 NOx tpy; Cabell County, West Virginia emissions are 6,996 VOC and 12,732 NOx tpy. Greenup's largest VOC source is CSX, which emits 117 tpy of VOC (according to 1996 data); the County has no large NOx sources.

Kentucky's submittal includes 2001 emissions data, documenting that Greenup's VOC point source emissions have substantively decreased since 1999. Greenup County's VOC point source emissions for 1999 are estimated at 0.20 tons per summer day which represent one percent of the overall 18.87 tons per summer day VOC point source emissions from the Kentucky portion of the MSA alone. Greenup's NOx point source emissions are estimated at 2.15 tons per summer day which represent 10 percent of the overall 22.21 tons per summer day NOx point source emissions from the Kentucky portion of the MSA

Regarding the 2001 on road mobile source emission contributions, Greenup's VOC on road mobile source emissions are estimated at 2.12 tons per summer day, which represent approximately 24 percent of the overall 8.66 tons per summer day VOC mobile source emissions from the Kentucky portion of the MSA. Greenup's on road NOx mobile source emissions are estimated at 2.51 tons per summer day which represent approximately 25 percent of the overall 10.20 tons per summer day NOx on road mobile source emissions from the Kentucky portion of the MSA.

Summary:

Since the Kentucky Counties of Carter and Greenup are monitoring attainment have relatively small populations and low point and mobile source emissions, and have no significantly large point sources of emissions, EPA concurs with the Commonwealth's recommendation to designate these counties as attainment.