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September 1, 2004

Mr. Bharat Mathur  
Acting Regional Administrator  
U.S. EPA, Region 5  
77 West Jackson Boulevard  
Chicago, IL 60604

RE: Proposed Designations Concerning Fine  
Particles

Dear Mr. Mathur:

On June 29, 2004, the U.S. Environmental Protection Agency (EPA) informed Indiana of its proposed designations for fine particle nonattainment area boundaries. We have carefully reviewed EPA's proposed designations for Indiana and other states, along with additional technical information, and have had numerous discussions within our state and with other states and EPA concerning this important matter. We have serious concerns about the counties EPA has proposed for nonattainment that Indiana did not include in its recommendations.

We all share the goal of ambient air that meets national health standards for our citizens. We have made substantial progress towards our goal of healthy air since passage of the Clean Air Act over 30 years ago. We intend to continue this progress until air quality standards are met throughout the state. However, some of EPA's proposed designations will not help Indiana achieve that goal.

Specifically, we differ with EPA recommendations of nonattainment for:

- Porter County in Northwest Indiana,
- St. Joseph County in North Central Indiana,
- Hamilton, Hendricks, Morgan and Johnson counties in Central Indiana,
- Gibson, Pike, Warrick and Spencer counties in Southwest Indiana,
- Floyd and Jefferson counties in South Central Indiana, and
- Lawrenceburg Township (Dearborn County) in Southeast Indiana.

This letter provides Indiana's response to EPA's proposed designations. Indiana's view is that nonattainment areas should be limited only to those areas where measured air quality exceeds the standard or where a nonattainment designation is a necessary tool to address contributions to local nonattainment. Governor Kernan has expressed this view to Administrator Leavitt in his

letter dated June 23, 2004, (see Enclosure 1) and in a subsequent conversation with the Administrator.

IDEM appreciates the effort that EPA has made to evaluate all areas carefully and to ensure that decisions are made consistently across the country. We also appreciate how closely your staff has worked with IDEM staff on this matter. That being said, we believe that the approach EPA has taken in proposing designations is not consistent with the guidance provided by EPA to states. Furthermore, some of the proposed designations are not supported by current emissions data or meteorological patterns, and are inconsistent with proposed designations for other areas of the country.

Indiana's major concerns about EPA's approach are as follows:

### **1. The Emission Weighting System Is Flawed**

Although EPA provided states and Regional Administrators guidance for devising nonattainment boundary recommendations that is virtually identical to that associated with the 8-hour ozone standard,<sup>1</sup> it appears that the EPA placed enormous reliance on a new emissions weighting system to substantiate its proposed designations. IDEM believes that this weighting system:

- was devised after states submitted their recommendations,
- was applied with insufficient consultation and consideration with states and within EPA,
- places undue weight on outdated emissions data as opposed to other key considerations such as meteorology, photochemical modeling, or speciated data analysis,
- fails to consider the true impact of emissions on actual monitor values,
- was not applied to numerous counties that may have a greater impact on counties with a monitored violation, and
- unfairly penalizes counties in smaller urban areas since it relies on complex ratios that do not take volume of actual emissions into consideration.

One result of EPA's approach is that counties such as Jefferson, Pike and Spencer that are located adjacent to, but not within, urban areas are automatically included as nonattainment counties if they contain a power plant. This result is unjustified for several reasons:

- a. There is no scientific basis to assume that these power plants are contributing to urban nonattainment but more remote plants are not. In fact, EPA has determined just the opposite to be true: in its proposed Clean Air Interstate Rule ("CAIR"), it found that all power plants in the east and Midwest are contributing to high background PM<sub>2.5</sub> levels.

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<sup>1</sup> IDEM believes that the factors outlined in U.S. EPA's nonattainment boundary guidance are generally appropriate, with one very important exception--the reliance on the Consolidated Metropolitan Statistical Area (CMSA) boundary as a primary criterion. These boundaries at best imperfectly represent metropolitan areas, are inconsistent from area to area, and are in no way related to what we now understand to be the nature of fine particle formation and transport.

- b. EPA has used outdated emissions and emissions control information about power plants in the counties it has proposed as nonattainment.
- c. EPA is poised to require substantial reductions of NO<sub>x</sub> and SO<sub>2</sub> from the power plant sector through the CAIR from facilities in both attainment and nonattainment counties. Including these particular counties with power plants in nonattainment areas is not necessary to ensure the reductions will occur.

**2. EPA has not proposed or finalized essential guidance on implementing the PM 2.5 standards.**

The PM 2.5 implementation rule is critical to understanding the significance and consequences of a nonattainment designation and the planning procedures that a nonattainment designation triggers. For example, if the PM 2.5 designations take effect in early 2005 and the implementation rule has not been finalized, states will be unable to apply nonattainment New Source Review requirements to new permit applications.

**3. EPA is poised to automatically impose tougher permit requirements that have not been shown to be necessary for every new nonattainment area.**

Based on EPA's statements to date relative to the ozone standard, it is presumed that EPA will seek to impose nonattainment area new source review immediately for any area designated as nonattainment for PM 2.5. Not only is this approach unwarranted, as discussed in Governor Kernan's letter, but at the very least nonattainment New Source Review should be deferred until the implementation rule is final.

**4. The science associated with determining the causes of and contributions to PM 2.5 nonattainment is still developing.**

Modeling and other technical analyses have not progressed to the point where we know with certainty which geographic areas to control, which sources to control and the quantity of pollutants to control. Significant technical work will take place to fill these gaps over the next several years. Until these analyses are conducted and more is known relative to the causes and contributions to PM 2.5 nonattainment and the trends in PM 2.5 air quality, any areas designated as nonattainment should be limited to those that clearly and directly influence the existing monitor readings.

**5. There is a significant regional component to PM 2.5 nonattainment.**

Current scientific evidence, including EPA's modeling for the proposed Clean Air Interstate Rule and the Lake Michigan Air Directors' Consortium technical analysis, shows there is a regional component to PM 2.5, in addition to a local component. There is widespread recognition that regional controls of SO<sub>2</sub> and NO<sub>x</sub> will be necessary to address PM 2.5 nationwide. For those counties with violations, regional controls should take them

a long way toward compliance. For example, EPA's modeling shows its proposed Clean Air Interstate Rule will bring all Indiana counties into attainment by 2015, and all but one county (Lake) into attainment by 2010. Despite this regional component, Indiana's monitors do not show widespread violations of the annual standard. Many of Indiana's urban and suburban counties monitor compliance. Nonattainment designations for these urban and suburban counties would impose economic hardships and encourage urban sprawl beyond the current urban boundaries without contributing to attainment in adjacent counties. As noted above, nonattainment designations would lead to mandatory local controls, including stricter permitting of new sources, which may be unnecessary. Technical analysis to date is not conclusive on the issue of how local emissions decreases will impact PM 2.5 concentrations downwind.

**6. Local contributions and source impacts should not be overlooked.**

Of the 18 full counties and 1 partial county proposed as nonattainment by the EPA on June 29, 2004, only six of these counties have monitors that measure a violation of the annual standard for fine particles. Unlike ozone, background concentrations of fine particles are below the standard throughout the state. Although background concentrations are close to the standard at many monitors, IDEM believes that in certain cases the monitors that actually exceed the standard do so because of urban excess and/or local sources. For example, suburban counties are often below the standard in areas adjacent to the urban core where there is an exceedance. Therefore, it should not be assumed that a county contributes significantly to a violation in a neighboring county, especially if the "contributing" county itself is downwind and/or monitors ambient air that meets the standard. Furthermore, when federal programs such as the Clean Air Interstate Rule are implemented, precursors for fine particles as well as direct fine particles will be reduced in both attainment and nonattainment areas. Thus, designating counties as nonattainment that are currently monitoring attainment is unnecessary and will impose a needless burden on these areas.

**7. EPA's rules should be completed soon, should provide flexibility, and should harmonize dates and planning.**

We urge EPA to complete the PM 2.5 implementation rule soon, and in doing so, provide states with as much flexibility as possible to develop State Implementation Plans. In addition, we urge EPA to reconcile the attainment dates for PM 2.5 with the NO<sub>x</sub> and SO<sub>2</sub> reduction dates in the Clean Air Interstate Rule. PM 2.5 SIPs will be due in early 2008, and attainment will be required by early 2010. If the first phase of the proposed reductions does not occur until 2010, attainment may not be achieved until 2013 or later. EPA should harmonize as much as possible the planning and implementation for PM 2.5 with ozone and regional haze efforts.

Enclosure 2 contains additional, detailed information and analysis to support Indiana's recommendations, but I will address each area briefly.

### **Northwest Indiana**

The only monitored violation of the standard within the PMSA occurs in Lake County, at just one of the seven monitors (East Chicago). The design value for Lake County should be  $15.2\mu\text{g}/\text{m}^3$  (the East Chicago site), as opposed to  $17.7\mu\text{g}/\text{m}^3$  (Burr Street). The Burr Street monitor is a source-specific site (it is immediately adjacent to a truck stop) that does not monitor ambient air concentrations for purposes of the annual standard. Both Porter County monitor values are below the standard. The lone monitored violation of the standard within this region indicates potential contribution from a local source or sources. With there being a marginal violation at just one site among seven in Lake and Porter counties, there is indication that this may be an isolated problem, as opposed to a regional problem. Wind rose analysis indicates that Porter County is not likely a significant contributor to Lake County PM 2.5 values. Since Porter County is upwind of LaPorte County, and LaPorte County's monitor values are well below the standard, Porter County does not appear to be contributing to PM 2.5 violations anywhere within the region. Therefore, IDEM continues to recommend that Porter County be designated attainment.

### **North Central Indiana**

The monitor located in Elkhart County is the only monitor within the region that exceeds the standard. Values for all three monitors located within St. Joseph County are well below the standard (14.0, 14.0 and 14.3). The Elkhart monitor value of  $15.2\mu\text{g}/\text{m}^3$  is marginally above the standard. It is reasonable to assume that regional controls such as the utility  $\text{NO}_x$  rule and low sulfur fuels will reduce PM 2.5 concentrations sufficiently to enable Elkhart County to attain the standard in a timely manner. Additionally, it does not appear that there will be a need for local controls in either St. Joseph or Elkhart Counties because of the anticipated regional reductions from the Clean Air Interstate Rule. Therefore, IDEM continues to recommend that St. Joseph County be designated attainment.

### **Central Indiana**

The only monitored violations of the standard within the MSA occur in Marion County. Four of the six monitors within the MSA exceed the standard. Marion County (Indianapolis) maintains the highest (significantly) concentration for employment, vehicle miles traveled (VMT), commerce, and recreation compared to the other counties within the MSA. Stationary sources within Marion County account for over half of the direct PM 2.5 emissions from stationary sources within Central Indiana and the next closest county within the region accounts for just 11 percent. Sources within Marion County also account for 70 percent of the  $\text{SO}_2$  emissions from stationary sources within the Central Indiana Region. Unlike ozone, PM 2.5 monitoring values indicate that PM 2.5 values decrease away from the core of the Indianapolis urban area into the suburban area. This is represented by the lower values registered at the Mann Road monitor which

is Southwest of the core urban area and by the Madison County monitor which is Northeast of the core urban area. Both of these monitors register values below the standard.

As a result of the weighted emission scoring system, EPA has proposed that Hamilton, Hendricks, and Johnson counties be included in the nonattainment area due to population density and the potential impact of mobile source emissions. However, the predominant VMT concentrations and commuting patterns do not occur in the urban core where violations occur, but rather in the fringes of the county along the I-465 corridor in the Northeast, Northwest, and Southwest corners of Marion County where monitor values are either below the standard or predicted to be below the standard (see Enclosure 2). There are power plants located in Hamilton and Morgan counties (one in each). The plant in Hamilton County recently converted from coal to gas and has reduced its emissions dramatically (2002 NO<sub>x</sub> emissions are nearly 60 percent less than 1999 and SO<sub>2</sub> emissions for 2002 are nearly 85 percent lower than 1999). The closest downwind PM 2.5 monitor of Morgan County is the Mann Road monitor in Marion County. This monitor maintains a value below the standard. Therefore, IDEM does not believe that emissions from Morgan County significantly impacts PM 2.5 concentrations in Marion County. IDEM recommends that Hamilton, Hendricks, Johnson, and Morgan counties be designated attainment.

### **Southwest Indiana**

There are three PM 2.5 monitors within the MSA and they are all located in Vanderburgh County. All three monitors in Vanderburgh County exceed the standard. Rural background monitors are located east of Warrick County in Spencer County and North of Gibson County in Knox County. To a significant degree, these monitors receive air masses that have just crossed the state line. These have design values of 14.4 and 13.9, respectively, indicating high background levels coming into the area, despite being below the standard. These values also are an indication that PM 2.5 concentrations in the neighboring counties (i.e., Warrick and Gibson) could be below the standard if monitors were present. The 2001 to 2003 design values have dropped and NO<sub>x</sub> emissions are expected to decrease throughout the Midwest over the next few years due to the NO<sub>x</sub> SIP Call and new federal engine and fuel standards. The power plants and other industrial sources in Gibson, Warrick, Pike, and Spencer counties have reduced emissions significantly since 1999. For example, from 1999 to 2003, PSI Energy in Gibson County has reduced its NO<sub>x</sub> emissions by more than 22 percent and its SO<sub>2</sub> emissions by more than 14 percent, and the Indiana Michigan Power-Rockport facility has reduced its NO<sub>x</sub> emissions by over 10 percent and its SO<sub>2</sub> emissions by over 15 percent over the same period of time. Furthermore, there is no scientific evidence that emissions from these counties or facilities contribute to monitored violations in Vanderburgh or Dubois counties. Therefore, it is unnecessary to extend the restrictions that accompany a nonattainment designation to additional counties at this time. There are rural counties upwind of Vanderburgh and Dubois counties in other states that could be impacting PM 2.5 concentrations more so than Gibson, Spencer, or Pike Counties, but EPA has proposed those counties as attainment/unclassifiable and not subjected them to the emissions scoring system. IDEM recommends that Gibson, Pike, Spencer, and Warrick counties be designated attainment.

### **South Central Indiana**

There are only two PM 2.5 monitors within Indiana's portion of the Louisville MSA (one monitor each in Clark and Floyd Counties). The Jeffersonville site in Clark County is the only monitor in violation of the standard. The difference between the monitor values at the Jeffersonville (Clark County) site and the New Albany (Floyd County) site suggests a geographically isolated spike in PM 2.5 concentrations in Clark County. This is further exemplified by the slightly lower PM 2.5 monitor values recorded within the urban core of Louisville, as it is unusual for the highest value within the urban area to be outside of the core county (Jefferson, KY). This indicates the possibility that the isolated spikes associated with the Clark County monitor may be affected by a local source or sources within Clark County, including onroad and nonroad contributions from a nearby interstate (I-65) that has been undergoing major reconstruction. There is a power plant in Floyd County. However, there is no scientific evidence that the power plant is a significant contributor to the Jeffersonville monitor value. Additionally, this source will be regulated by future control requirements (e.g., the Clean Air Interstate Rule) regardless of Floyd County's attainment status.

Jefferson County is not part of the Louisville MSA, however it is adjacent to Clark County. There is a power plant (Clifty Creek) in Jefferson County, which is why EPA has included it in the proposed nonattainment area. The county is downwind of the Louisville MSA, thus it is highly unlikely that it is a significant contributor to monitored violations of an annual standard. It appears that EPA subjectively chose to apply the weighted emissions scoring system to Jefferson County as part of the Louisville MSA. There are a number of rural and partially urban counties directly upwind of the Louisville Area that could affect monitored violations within the region more directly than Jefferson County. Additionally, EPA's guidance to Regional Administrators states that the MSA/CMSA should serve as a presumptive boundary and does not distinguish between rural counties and rural counties that abut an MSA. If EPA is going to designate a county nonattainment based on its contribution to a monitored violation, then counties should be viewed consistently, not singled out because they are adjacent to an MSA or because a power plant is located within it.

IDEM recommends that EPA designate Floyd and Jefferson Counties as attainment.

### **Southeast Indiana**

There are no PM 2.5 monitors in Dearborn County. There is only one significant stationary source in Indiana's portion of the Cincinnati Consolidated MSA (CMSA), which is the AEP Tanners Creek power plant. Dearborn County accounts for approximately 2 percent of the total population within the CMSA. The Tanners Creek power plant has reduced its emissions in recent years by installing permanent combustion controls to address requirements associated with Title IV and the NO<sub>x</sub> SIP Call. This facility has installed low- NO<sub>x</sub> burners on three of its four units, and over-fire air on the fourth, and largest unit. From 1999 to 2002, annual NO<sub>x</sub> emissions from this facility have been reduced by over 20,000 tons (a 60 percent decrease), and SO<sub>2</sub> emissions have been reduced by nearly 14,000 tons (a 22 percent decrease). If a monitor were located in Dearborn County, it is reasonable to assume that the values would be consistent with background

Bharat Mathur  
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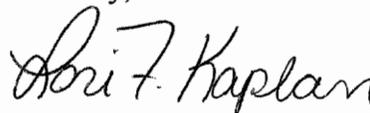
values elsewhere in the state and Midwest. Therefore, IDEM does not believe that PM 2.5 concentrations exceed the standard in Dearborn County. Additionally, based on analysis of similar urban areas, IDEM does not believe that emissions from Dearborn County contribute significantly to PM 2.5 values elsewhere in the Cincinnati CMSA. Therefore, IDEM recommends that Dearborn County be designated attainment/unclassifiable.

More detail on each of these areas is presented in Enclosure 2.

Indiana appreciates this opportunity to provide additional input and recommendations to EPA concerning this important matter prior to final action being taken. Upon your review and consideration of the information contained within, we hope that EPA concludes that modifications to our recommendations are unnecessary.

We look forward to further consultation with EPA on this critical issue. If you or your staff has questions about this letter or the attached information, please contact Janet McCabe of the Office of Air Quality at 317/232-8222.

Sincerely,



Lori F. Kaplan  
Commissioner

Enclosures

cc: Steve Rothblatt, Region 5  
Jay Bortzer, Region 5



**OFFICE OF THE GOVERNOR  
INDIANAPOLIS, INDIANA 46204-2797**

**JOSEPH E. KERNAN  
GOVERNOR**

June 23, 2004

Administrator Michael Leavitt  
United States Environmental Protection Agency  
1101A  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

Re: Nonattainment Areas for the Fine Particle Standard

Dear Administrator Leavitt:

I write today to request your assistance in a matter important to Indiana.

The United States Environmental Protection Agency (USEPA) is in the process of preparing proposed designations of nonattainment under the Clean Air Act for the fine particle air quality standard. It is our understanding that EPA plans to send letters to states to start a formal 120 day consultation process on or about June 28<sup>th</sup>. Indiana and other states made initial recommendations to the USEPA in February 2004.

As a former governor, you are aware of the significance of nonattainment designations on local communities. The "stigma" associated with the tougher air permit requirements has proven to complicate or block many economic development projects from considering nonattainment areas. Once on a nonattainment list, the track record is not good for timely changes back to attainment, even after the air quality readings demonstrate that the air quality goals have been achieved.

As a result, nonattainment designations should be limited to areas where measured air quality exceeds the standard or where nonattainment designation is an essential tool to address specific contributions to local nonattainment. As we all know, there are significant regional contributions to most areas that do not meet the current ozone and fine particle federal air quality standard. States and the USEPA have implemented and are pursuing additional regional control measures to address this general contribution. The state and federal regional programs do not require that a facility be located within an area designated to be nonattainment in order to be impacted by the program.

Administrator Leavitt  
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Based on information that has been provided by your staff to mine, the USEPA is on a track to base its proposed PM2.5 nonattainment designations on a very flawed analysis scheme. The analysis results in nonattainment status for many counties where air quality actually meets the health standard and where the designation is not necessary to address sources that may be contributing to regional air pollution levels. The end result would be the designation of a number of generally rural or suburban areas as nonattainment and an unnecessary negative impact on economic development efforts in Indiana.

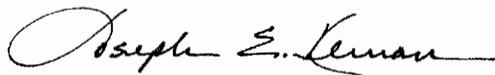
Key concerns about the analyses include:

- counties in Indiana that contain coal-fired power plants, such as Spencer, Pike, Gibson, Dearborn, Jefferson, and Warrick may be designated as nonattainment solely based on the presence of a facility that will clearly be affected by Indiana's existing regional NOx program and EPA's proposed sulfur and nitrogen interstate air quality rule. A nonattainment designation for these counties serves no useful purpose beyond creating a bias against a low-cost source of energy prevalent in the Midwest;
- the USEPA's approach is very limited scientifically by not including air quality modeling or available information on meteorology in making determinations;
- the USEPA's approach is not considering transportation conformity and the difficulties that will result from inclusion of non-urban counties to address an urban area air quality reading; and
- the USEPA's approach is inconsistent with its guidance for designations issued in April 2003 that links the ozone nonattainment designations to the fine particle nonattainment designations.

Please understand Indiana is very committed to moving forward to address fine particle pollution in concert with other states and the federal government. I urge you to consider carefully the basis for, and the implications of, using the currently proposed approach for this critical determination. Designation as a nonattainment area is an extremely serious and significant matter, which can impact economic development for years into the future. The USEPA should make these decisions strategically, taking into account the fact that regional control strategies will undoubtedly be a primary element of states' clean air plans.

I would be pleased to discuss this important issue further with you.

Sincerely,



Joseph E. Kernan

cc: E. Bayh  
R. Lugar  
P. Visclosky  
C. Chocola  
M. Souder  
S. Buyer  
D. Burton  
M. Pence  
J. Carson  
J. Hostettler  
B. Hill

## **ENCLOSURE 2**

### **Technical Support Document**

Indiana has carefully reviewed U.S. EPA's proposed PM 2.5 designations. In this Technical Support Document, we provide specific comments on each affected region, supplementing and refining the technical information provided in Indiana's February 2004 submittal. In addition, we have concerns that apply generally, as follows.

1. U.S. EPA has used 1999-2001 emissions data to assess contribution of PM 2.5 precursors to nonattainment areas. More updated information is available, which should be used instead. In several counties, significant reductions have occurred that U.S. EPA should consider.
2. U.S. EPA has included counties outside core urban areas without adequate scientific support that these areas are contributing to monitored PM 2.5 exceedances. Although it is widely acknowledged that regional emissions are a significant factor in PM 2.5 values, modeling and other technical analyses have not progressed to the point where we can know with certainty which geographic areas to control, which sources to control and the quantity of pollutants to control. Significant technical work will take place to fill these gaps over the next 10 months. Until these analyses are conducted and more is known relative to the causes and contributions to PM2.5 concentrations and trends in PM 2.5 air quality, any areas designated as nonattainment should be limited to those that clearly and directly influence existing monitor readings.
3. U.S. EPA's scoring system is contrary to the agency's own guidance, does not appropriately take into account meteorology, and results in certain counties being included while others are not, even though emissions from the excluded counties may be just as significant. For areas where the scoring system was applied, the system places undue weight on outdated emissions data as opposed to other key considerations such as meteorology, photochemical modeling, or speciated data analysis. In addition, the scoring system fails to consider the true impact of emissions on actual monitor values, and unfairly penalizes counties in smaller urban areas since it relies on complex ratios that do not take volume of actual emissions into consideration.

For these reasons, as well as those explained below, Indiana urges U.S. EPA to adopt the PM 2.5 designations recommended by the state on February 15, 2004, as illustrated in the table below.

County	MSA	State Recommendation	EPA Proposal
Dearborn	Cincinnati	Attainment/Unclassifiable	Nonattainment
Floyd	Louisville	Attainment	Nonattainment
Gibson	Evansville	Attainment/Unclassifiable	Nonattainment
Hamilton	Indianapolis	Attainment/Unclassifiable	Nonattainment
Hendricks	Indianapolis	Attainment/Unclassifiable	Nonattainment
Jefferson	N/A	Attainment/Unclassifiable	Nonattainment
Johnson	Indianapolis	Attainment/Unclassifiable	Nonattainment
Morgan	Indianapolis	Attainment/Unclassifiable	Nonattainment
Pike	N/A	Attainment/Unclassifiable	Nonattainment
Porter	Gary/Chicago	Attainment	Nonattainment
Spencer	N/A	Attainment/Unclassifiable	Nonattainment
St. Joseph	South Bend	Attainment	Nonattainment
Warrick	Evansville	Attainment/Unclassifiable	Nonattainment

### Central Indiana

#### Monitoring Data Trends

County	Site Name	2000	2001	2002	2003
Marion	Mann Road	15.19	14.78	15.22	14.53
Marion	Washington Park	17.75	16.58	16.55	15.45
Marion	E. 75 <sup>th</sup> Street	16.36	16.25	15.68	14.67
Marion	W. 18 <sup>th</sup> Street	16.78	17.14	14.24	16.21
Marion	E. Michigan St.	17.00	17.09	16.72	16.32
Madison	Anderson – 5 <sup>th</sup> Street	15.55	14.61	14.91	14.35
Delaware	Muncie High School	16.24	14.49	14.51	14.02

The only monitored violations of the standard within the MSA occur in Marion County. Four of the six monitors within the MSA exceed the standard. Marion County (Indianapolis) has the highest concentration of employment, VMT, commerce, and recreation compared to the other counties within the MSA. Mobile source emissions represent the largest portion of the VOC and NO<sub>x</sub> emissions inventories for Marion County, as well as for the MSA as a whole. The majority of the traffic congestion is limited to Marion County. A significant level of commuting occurs from the surrounding counties to Marion County, meaning that a portion of Marion County's VMT originates from the surrounding counties. The Indianapolis MSA's population density is spreading well beyond Marion County, but Marion County maintains the highest population and an in-county workforce ratio of 94%. Stationary sources within Marion County account for

over half of the direct PM 2.5 emissions from stationary sources within Central Indiana and the next closest is Morgan County with 11%. Sources within Marion County also account for 70% of the SO<sub>2</sub> emissions from stationary sources within the Central Indiana Region. It is worth noting that despite its large geographic size, the total direct PM<sub>2.5</sub> and SO<sub>2</sub> emissions inventories for stationary sources within Central Indiana are relatively small in comparison with other large MSAs within the state (e.g., NW Indiana and Evansville) and the country. Thus, the wind weighted emissions scoring approach more notably increases the burden placed upon the rural counties located within the Central Indiana MSA, due to the MSA's comparatively low emissions inventory.

Unlike ozone, PM 2.5 monitoring values indicate that PM 2.5 values decrease relatively quickly away from the core of the Indianapolis urban area into the suburban area, where EPA indicates growth is occurring. This is illustrated by the lower values registered at the Mann Road monitor, which is Southwest of the core urban area, and by the Madison County monitor, which is Northeast of the core urban area. Both of these monitors register values below the standard. The monitor locations are aligned such that their readings describe the profile of PM<sub>2.5</sub> levels from the urban edges through the urban center. Recent analysis by LADCO indicates a common "cone-shaped" profile of PM 2.5 values in densely populated urban areas with the peak value at the urban center (core) and values decreasing gradually based on distance from the urban core (both upwind and downwind). The Indianapolis urban area appears to follow this profile, with the peak value being represented at the Michigan Street monitor at 16.7 µg/m<sup>3</sup> (closest monitor to the center or core of the urban area). The W. 18<sup>th</sup> Street monitor is just northwest of the urban monitor alignment; it follows this "cone-shaped" profile as well at 15.9 µg/m<sup>3</sup>. In projecting likely monitor values through radial extrapolation (method based on PM 2.5 concentration decrease per mile from the urban center, the Michigan St. monitor in this instance), the following table illustrates that the actual and predicted monitor values indeed follow a "cone-shaped" curve.

LOCATION	MILES	ACTUAL VALUE	PREDICTED VALUE
Michigan Street	0.0	16.7	16.7
Washington Park	2.7	16.2	16.3
West 18 <sup>th</sup> Street	4.7	15.9	16.0
West 75 <sup>th</sup> Street	8.2	15.5	15.5
Mann Road	10.3	14.8	15.2
Hamilton County Line	11.8		14.9

Furthermore, the predicted values based on radial extrapolation are very consistent with the actual values for existing monitor sites. Using this same methodology, a calculation was made to determine what the likely design value would be if a monitor was located at the Hamilton County line. As the table illustrates, the projected value at the Hamilton County line is below the standard. This is significant, because if any county outside of Marion were to have a monitored value above the standard, it would likely be Hamilton due to the fact that it is directly downwind of urban area. Additionally, since the greatest concentration of VMT occurs in the northeast, northwest, and southwest corners of Marion County where actual and/or predicted monitor values are below the standard, mobile source emissions from the surrounding counties are not a significant contributor to monitor violations in Marion County.

Although U.S. EPA used population density, vehicle miles traveled (VMT) and commuting patterns to maintain the argument that surrounding counties like Hamilton, Hendricks, Johnson, and Morgan should be designated along with Marion County, available data indicate that Marion County is not significantly affected by emissions from the collar counties. U.S. EPA's data indicate that the population density of Marion County in 2002 was 2,180 residents per square mile. When compared to the population density of the surrounding counties, Marion County's population density ranges from eight to thirteen times greater. VMT concentrations and commuting patterns do not occur in the urban core where violations occur. Instead the great majority of these commuting patterns and VMT concentrations occur in the outer fringes of Marion County along the I-465 corridor in the Northeast, Northwest, and Southwest corners of the county. These points further support IDEM's belief that fine particle monitor values measured in the urban core of Marion County, are from sources and related activities within Marion County.

In addition to the scientific challenges of modeling and other technical analyses, the science to support using VMT and commuting patterns to justify the inclusion of surrounding counties is lacking as well. While mobile sources play a role in fine particle concentrations, the extent is still unknown. However, diesel powered vehicles emit significantly more PM 2.5 precursors than their gasoline powered counterparts. Thus, it is worth noting that in Central Indiana, only 8.4% of daily VMT is associated with diesel powered vehicles, with the remaining 91.6% associated with gasoline powered vehicles. Of the 8.4% of daily diesel powered VMT, the vast majority of the VMT is attributable to heavy-duty diesel vehicles, most of which travel through the MSA, not originate within it.

Additionally, the cumulative reductions associated with the use of Low Sulfur Gasoline (LSG) and Ultra Low Sulfur Diesel (ULSD) sources have not been considered in U.S. EPA's assessment. These cleaner burning fuels, when fully implemented, will further reduce the already insignificant role that the surrounding counties commuting patterns may have on Marion County PM 2.5 concentrations.

#### **Hamilton County:**

U.S. EPA proposed to include Hamilton County as a part of the Indianapolis nonattainment area. U.S. EPA indicates that Hamilton County contributes to violations in Marion County based on the wind-weighted emissions score as well as growth and commuting patterns. However, current data do not support the U.S. EPA's analysis and proposed designation for Hamilton County. Hamilton County countywide and power plant emissions from 1999 through 2003 have shown a steady decline. Additionally, the preponderance of meteorological data does not support U.S. EPA's conclusion that Hamilton County contributes to upwind Marion County monitor values. Below, IDEM has supplied detailed technical support for IDEM's original recommendation that Hamilton County be designated attainment for the fine particle standard.

Additional Information for EPA's Consideration:

*Emissions Characteristics and Controls:*

Although U.S. EPA used 2001 National Emissions Inventory data as a factor in the wind-weighted emissions scoring calculation, it did not consider recent emissions data. IDEM has quality assured countywide emissions data for 1999 through 2002. Hamilton County's countywide stationary source emissions in tons per year for 1999 through 2002 are as follows:

	NO <sub>x</sub>	SO <sub>2</sub>
1999	2182.98	9641.73
2002	1192.69	3707.54

In addition to the countywide emissions, IDEM also has quality assured emissions data from the PSI Energy power plant located in Hamilton County for 1999 through 2003. This data also show a consistent emissions reduction due to the plant's recent conversion from coal to natural gas. This conversion occurred during the second quarter of 2003, so we expect to see further reductions of NO<sub>x</sub> and SO<sub>2</sub> in 2004. In fact, total SO<sub>2</sub> emissions are expected to drop to less than 100 tons per year. The PSI Energy power plant's emissions in tons per year for 1999 through 2003 are as follows:

PSI Energy - Noblesville	NO <sub>x</sub>	SO <sub>2</sub>
1999	2159.10	9617.63
2000	2146.61	6877.27
2001	1578.77	4689.22
2002	1152.87	3617.44
2003	891.24	1583.72

*Meteorological Analysis:*

Hamilton County accounts for a very small portion of the overall precursor emissions within the MSA. These emissions likely have little to no effect on PM<sub>2.5</sub> concentrations in Marion County because the closest upwind monitor to Hamilton County (West 75<sup>th</sup> Street) has a lower PM 2.5 value than the core area of Marion County and the nearest downwind monitor (Anderson) maintains a value below the standard.

U.S. EPA's meteorological data used to calculate the wind-weighted emissions score indicates that only 18% of the prevailing winds are from the north through east-north-east, while 36% of the prevailing winds are from the south through west-south-west. These prevailing wind patterns further demonstrate that a downwind county such as Hamilton County will not dramatically affect the monitor values of an upwind county such as Marion County.

**Hendricks County:**

U.S. EPA proposed to include Hendricks County as a part of the Indianapolis nonattainment area. U.S. EPA indicates that Hendricks County contributes to violations in Marion County based on the wind-weighted emissions score, as well as growth and commuting patterns. However, the most recent emissions inventory shows that point sources in Hendricks County only account for 2.28 tons of NO<sub>x</sub> and .39 tons of SO<sub>2</sub> per year. Additionally, the preponderance of meteorological data does not support the U.S. EPA's conclusion that Hendricks County contributes significantly to monitor violations in Marion County.

**Additional Information for EPA's Consideration:*****Emissions Characteristics and Controls:***

Although U.S. EPA used 2001 emissions data as a factor in the wind-weighted emissions scoring calculation, it did not consider more up-to-date emissions information. IDEM has quality assured countywide stationary source emissions data for 2002. This new data is referenced below in tons per year.

	NO <sub>x</sub>	SO <sub>2</sub>
1999	94.87	372.22
2002	2.28	0.39

The PM 2.5 precursor emissions contributions for Hendricks County are minimal, thus are unlikely to be affecting PM 2.5 concentrations in Marion County. Additionally, given such a small emissions inventory, the effect of U.S. EPA's wind-weighted emissions scoring system is to unfairly penalize MSA counties that maintain a reasonably small emissions base for PM 2.5 precursors.

**Johnson County:**

U.S. EPA proposed to include Johnson County as a part of the Indianapolis nonattainment area, indicating that Johnson County contributes to violations in Marion County based on the wind-weighted emissions score, as well as growth and commuting patterns. However, the most recent emissions inventory shows that point sources in Johnson County only account for 7.6 tons of NO<sub>x</sub> and .04 tons of SO<sub>2</sub> per year. Additionally, the preponderance of meteorological data does not support the U.S. EPA's conclusion that Johnson County significantly contributes to PM 2.5 concentrations in Marion County.

Additional Information for EPA's Consideration:

*Emissions Characteristics and Controls:*

Although U.S. EPA used 1999-2001 emissions data as a factor in the wind-weighted emissions scoring calculation, it did not factor in recent emissions information. IDEM has quality assured countywide stationary source emissions data for 2002. This new data is referenced below in tons per year.

	NO <sub>x</sub>	SO <sub>2</sub>
1999	19.82	68.81
2002	7.66	.04

The PM<sub>2.5</sub> precursor emissions contributions for Johnson County are minimal, thus are unlikely to be affecting PM<sub>2.5</sub> concentrations in Marion County. Additionally, given such a small total emissions inventory for precursors, the effect of U.S. EPA's wind-weighted emissions scoring system is to unfairly penalize MSA counties that maintain a reasonably small emissions base for PM 2.5 precursors.

**Morgan County:**

U.S. EPA proposed to include Morgan County as a part of the Indianapolis nonattainment area, indicating that Morgan County contributes to violations in Marion County based on the wind-weighted emissions score, in addition to growth and commuting patterns. These data do not support the U.S. EPA's designation of nonattainment for Morgan County.

*Emissions Characteristics and Controls:*

The IPALCO-Pritchard Station power plant is the only major source in Morgan County. Overall, Morgan County's emissions base is not very significant when compared to other "urban" counties, including Marion. The closest downwind PM 2.5 monitor of Morgan County is the Mann Road monitor in Marion County, approximately one mile north of Morgan County. This monitor maintains a value below the standard. Additionally, this power plant will be regulated by future control requirements (e.g., the Clean Air Interstate Rule) regardless of Morgan County's attainment status.

## Cincinnati Area

### Dearborn County – Lawrenceburg Township

U.S. EPA proposed to include Lawrenceburg Township in Dearborn County as a part of the Cincinnati nonattainment area. Dearborn County's largest stationary source is the AEP-Tanners Creek power plant, located in Lawrenceburg Township. The U.S. EPA indicates that Dearborn County contributes to violations in the Cincinnati MSA based on the wind-weighted emissions score as well as growth and commuting patterns. However, the countywide emissions inventory for Dearborn County and the AEP Tanners Creek power plant from 1999 through 2003 has shown a steady decline. Additionally, the data do not support U.S. EPA's conclusion that the growth and commuting patterns of Dearborn County adversely affect the Cincinnati MSA. Below, IDEM has supplied detailed technical support for IDEM's original recommendation that all of Dearborn County be designated attainment for the fine particle standard.

#### Additional Information for EPA's Consideration:

##### *Emissions Characteristics and Controls:*

Although U.S. EPA used 1999-2001 emissions data as a factor in the weighted emissions scoring calculation, it did not consider emissions trends. IDEM has quality assured countywide emissions data for 1999 through 2002 that shows steady countywide reductions. Dearborn County's countywide stationary source emissions, excluding the AEP Tanners Creek facility, in tons per year for 1999 through 2002 are as follows:

	NO <sub>x</sub>	SO <sub>2</sub>
1999	300.73	427.71
2002	144.12	259.41

IDEM has also quality assured emissions data for the AEP Tanners Creek power plant located in Dearborn County for 1999 through 2003. These data also show a consistent emissions reduction of annual NO<sub>x</sub> emissions, over and above reductions referenced above.

AEP Tanners Creek	NO <sub>x</sub>	SO <sub>2</sub>
1999	33817	50746
2000	32666	67474
2001	25775	55431
2002	17751	64439
2003	13503	54196

The Tanners Creek power plant has installed combustion controls to address requirements associated with Title IV and the NO<sub>x</sub> SIP Call, including low- NO<sub>x</sub> burners with over-fire air on three of its four units, and over-fire air on the fourth, and largest, unit. Additionally, this source will be regulated further by future control requirements (e.g., the Clean Air Interstate Rule) regardless of the county's attainment status.

*Population and VMT:*

Dearborn County accounts for only 2.3% of the total population within the CMSA. The total population, population density, and percent of the CMSA total population for Dearborn County is comparable to that of Brown County, Ohio, which is also within the CMSA, but proposed by EPA to be designated attainment. The overall VMT originating in Lawrenceburg Township and terminating elsewhere within the CMSA is insignificant when compared to the total VMT within the CMSA. Additionally, it does not appear that U.S. EPA took the actual impact of mobile source emissions on PM 2.5 concentrations into account.

**Louisville Area**

**Monitoring Data Trends**

COUNTY	MONITOR LOCATION	2000-2002 AVERAGE VALUE	2001-2003 AVERAGE VALUE
Clark	Jeffersonville	17.2	16.2
Floyd	New Albany	15.5	14.9

**Floyd County:**

Additional Information for EPA's Consideration:

*Monitor Values:*

There are only two PM 2.5 monitors within Indiana's portion of the Louisville MSA (one monitor each in Clark and Floyd Counties). The Jeffersonville site in Clark County is the only monitor in violation of the standard. The difference between the monitor values at the Jeffersonville (Clark County) site and the New Albany (Floyd County) site suggests a geographically isolated spike in PM 2.5 concentrations in Clark County. This theory is supported further by the slightly lower PM 2.5 monitor values recorded within the urban core of Louisville, since it is unusual for the highest value within the urban area to be outside of the core county (Jefferson, KY). The data indicate the possibility that the isolated spikes associated with the Clark County monitor may be affected by a local source or sources within Clark County, including onroad and nonroad

contributions from a nearby interstate (I-65), which has been undergoing major reconstruction for several years now.

*Discussion:*

There is a power plant in Floyd County. However, there is no direct evidence that the power plant is a significant contributor to the Jeffersonville monitor value. Additionally, this source will be regulated by future control requirements (e.g., the Clean Air Interstate Rule) regardless of Floyd County's attainment status. There is a background monitor in Washington County, which is directly downwind of Floyd County, and it maintains a value below the annual standard. Therefore, IDEM does not believe that emissions from Floyd County are specifically attributable to the spike in PM 2.5 concentrations in Clark County.

**Jefferson County:**

Additional Information for EPA's Consideration:

*Meteorological Analysis:*

The prevailing wind direction in south-central Indiana is from the southwest-south-southeast. Jefferson County is northeast of the Louisville MSA, thus downwind of the urban area. The prevailing wind patterns are most relevant in determining potential contributions to a violation of an annual standard. Since Jefferson County is downwind of the Louisville MSA based on prevailing wind patterns, it is unlikely that it significantly contributes to PM 2.5 concentrations in the MSA.

*Discussion:*

Jefferson County is not part of the Louisville MSA, thus it is not within the presumptive nonattainment boundary. However, Jefferson County is adjacent to Clark County, which is part of the MSA. The county is downwind of the Louisville MSA, therefore, it is highly unlikely that the county is a significant contributor to monitored violations of an annual standard in Louisville. In this case, U.S. EPA subjectively chose to apply the weighted emissions scoring system to Jefferson County as part of the Louisville MSA. There are a number of rural and partially urban counties directly upwind of the Louisville Area that could affect monitored violations within the region more directly than Jefferson County, but those counties were not subjected to a wind-weighted emissions scoring system and were proposed by U.S. EPA as attainment. Additionally, U.S. EPA's guidance to Regional Administrators states that the MSA/CMSA should serve as a presumptive boundary and does not distinguish between rural counties and rural counties that abut an MSA. If U.S. EPA is going to designate a county nonattainment based on its contribution to a monitored violation, then counties should be viewed consistently, not singled out because they are adjacent to an MSA or because a power plant is located within them.

**Northwest Indiana**

**Monitoring Data Trends**

COUNTY	MONITOR LOCATION	2000-2002 AVERAGE VALUE	2001-2003 AVERAGE VALUE
Lake	East Chicago	15.6	15.2
Lake	Gary Federal Building	16.1*	
Lake	Gary Ivanhoe School	15.2	14.8
Lake	Hammond Purdue Univ Calumet	15.0	14.9
Lake	Hammond Robertsdale Clark HS	14.9	14.9
Lake	Highland	14.6	14.6
Porter	Dunes Lake Shore	13.5	13.4
Porter	Ogden Dunes WWTP	14.3	13.8

\* 1999 – 2001 Average

**Additional Information for EPA's Consideration:**

*Monitor Values:*

The only monitored violation of the standard within the PMSA occurs in Lake County, at just one of the seven monitors (East Chicago) within the region. The design value for Lake County should be 15.2 $\mu\text{g}/\text{m}^3$  (the East Chicago site), as opposed to 17.7 $\mu\text{g}/\text{m}^3$  (Burr Street), which reflects an average value for a source-specific site that does not monitor ambient air concentrations associated with the annual standard. Both Porter County monitor values are below the standard. The lone monitored violation of the standard within this region indicates potential contribution from a local source(s). With just a marginal violation at one site among seven in Lake and Porter counties, this may be an isolated problem, as opposed to a regional problem.

*Meteorological Analysis:*

Wind rose analysis indicates that Porter County is not likely a significant contributor to Lake County PM 2.5 values. Since Porter County is upwind of LaPorte County, and LaPorte County's monitor values are well below the standard, Porter County does not appear to be contributing to PM 2.5 violations anywhere within the region.

**North Central Indiana**

**Monitoring Data Trends**

COUNTY	MONITOR LOCATION	2000-2002 AVERAGE VALUE	2001-2003 AVERAGE VALUE
Elkhart	Elkhart Pierre Moran School	15.5	15.2
St. Joseph	South Bend Children's Hospital Grounds	14.4	14.3
St. Joseph	South Bend Lasalle High School	14.1	14.0
St. Joseph	South Bend Nuner Elementary School	14.0	14.0

**Additional Information for EPA's Consideration:**

*Monitor Values:*

There are no monitored violations of the standard in St. Joseph County. In fact, the design values for the three St. Joseph County sites are very similar to values associated with background PM 2.5 monitor values across the Midwest. The Elkhart County monitor value is marginally above the standard. However, based on the other three monitor values within the region, this value appears to represent a geographically isolated violation of the standard, as opposed to a regional PM 2.5 violation of the standard. It also appears that this monitor may be affected by sources directly upwind in Elkhart County.

**Southwest Indiana**

**Monitoring Data Trends**

COUNTY	MONITOR LOCATION	2000-2002 AVERAGE VALUE	2001-2003 AVERAGE VALUE
Dubois	Jasper	16.7	16.2
Vanderburgh	Civic Center	15.7	15.2
Vanderburgh	Fire Station #17	15.5	15.2
Vanderburgh	University of Evansville	15.7	15.5

**Gibson County:**

Additional Information for EPA's Consideration:

*Emissions Characteristics and Controls:*

IDEM has quality assured emissions data for the PSI Energy power plant located in Gibson County for 1999 through 2003. These data also show a consistent emissions reduction of annual NO<sub>x</sub> emissions and a total decrease from 1999 to 2003 in annual SO<sub>2</sub> emissions:

PSI Energy Gibson	NO <sub>x</sub>	SO <sub>2</sub>
1999	49474	158944
2000	47840	171651
2001	44060	148331
2002	45283	127503
2003	38417	136536

As the chart indicates, from 1999 to 2003, PSI Energy in Gibson County has reduced its NO<sub>x</sub> emissions by more than 22% and its SO<sub>2</sub> emissions by more than 14%. Additionally, this source will be regulated further by future control requirements (e.g., the Clean Air Interstate Rule) regardless of the county's attainment status.

*Meteorological Analysis:*

The predominant wind direction for Southwest Indiana is from the Southwest-South-Southeast. Therefore, since Gibson County is north of Vanderburgh County and due west of Dubois County, and considering the monitored violations are associated with an annual standard, Gibson County is not upwind of either county with a monitored violation within the region. Gibson County is directly upwind of Knox County, where a background monitor registers values below the daily and annual standard and are consistent with other Midwestern background values. Additionally, IDEM has evaluated wind rose plots for dates that there were high daily PM 2.5 concentrations in both Vanderburgh and Dubois counties. This analysis indicated that Gibson County was not upwind and unlikely contributed to PM 2.5 concentrations on dates that daily concentrations were above 20 µg/m<sup>3</sup>.

**Pike County:**

Additional Information for EPA's Consideration:

*Emissions Characteristics and Controls:*

IDEM has quality assured emissions data for the two power plants located in Pike County for 1999 through 2003. These data also show that annual NO<sub>x</sub> and SO<sub>2</sub> emissions fluctuate from year to year.

Hoosier Energy Ratts Station	NO <sub>x</sub>	SO <sub>2</sub>
1999	3669	17182
2000	4524	23052
2001	4631	21424
2002	3989	18054
2003	3723	17603

IPL Petersburg	NO <sub>x</sub>	SO <sub>2</sub>
1999	20475	53511
2000	22593	43264
2001	22517	42056
2002	19952	47179
2003	18149	42592

There are only two major sources in Pike County, both are power plants (Hoosier Energy-Ratts Station and IPL Petersburg Generating Station). From 1999 to 2003, the IPL facility has reduced its NO<sub>x</sub> emissions by over 11% and its SO<sub>2</sub> emissions by over 20%. Additionally, these sources will be regulated further by future control requirements (e.g., the Clean Air Interstate Rule) regardless of the county's attainment status.

*Meteorological Analysis:*

The predominant wind direction for Southwest Indiana is from the Southwest-South-Southeast. Pike County is due west of Dubois County and northeast of Vanderburgh County. Based on the prevailing wind direction, it is unlikely that sources within Pike County contribute significantly to PM 2.5 concentrations in Vanderburgh or Dubois counties.

*Discussion:*

Pike County is a rural county with a total population of around 14,000. Pike County is not part of the Evansville MSA, thus is not part of the presumptive nonattainment boundary for the Evansville area. However, it appears that Pike County was targeted for nonattainment evaluation because it is adjacent to counties that are part of the MSA, and adjacent to Dubois County where there is a monitored violation of the standard. Although there are two power plants in Pike County, there are several rural counties with power plants that are more directly upwind of the Evansville area. These plants could be impacting PM 2.5 concentrations more so than Pike County, yet U.S.

EPA did not evaluate these counties under the emissions scoring system but proposed them as attainment.

**Spencer County:**

Additional Information for EPA's Consideration:

*Emissions Characteristics and Controls:*

Countywide area, onroad and nonroad (combined) NO<sub>x</sub> emissions in Spencer County have decreased by nearly 21% since 1999. Countywide NO<sub>x</sub> emissions from point sources have declined by more than 10% since 1999. Additionally, countywide SO<sub>2</sub> emissions have decreased by nearly 30% for area, onroad and nonroad sources combined, and by nearly 23% for point sources. The Indiana Michigan Power-Rockport plant has installed low NO<sub>x</sub> burners and over fire air on its units to achieve significant year-round reductions in NO<sub>x</sub> and SO<sub>2</sub>. From 1999 to 2003, this facility has reduced NO<sub>x</sub> by over 10% and SO<sub>2</sub> by more than 15%. Additionally, this source will be regulated further by future control requirements (e.g., the Clean Air Interstate Rule) regardless of the county's attainment status. The facility's emissions trend is referenced in the table below.

Indiana Michigan Power-Rockport	NO <sub>x</sub>	SO <sub>2</sub>
1999	37982	66932
2000	37030	63466
2001	35006	57370
2002	34014	51550
2003	34125	56785

*Discussion:*

Spencer County is a rural county with a total population of around 21,000. Spencer County is not part of the Evansville MSA, thus is not part of the presumptive nonattainment boundary for the Evansville area. There is a background PM 2.5 monitor located in the northern portion of Spencer County. This monitor maintains a value (13.9) that is below the annual standard and is consistent with other background values across the Midwest. It appears that Spencer County was targeted for nonattainment evaluation because it is adjacent to Warrick County, which is part of the MSA, and upwind of Dubois County, where there is a monitored violation of the standard. Although there are two major sources (both upwind of the background monitor) in Spencer County, including a power plant, it should be noted that there are several rural counties with power plants that are more directly upwind of the Evansville area. These plants could be impacting PM 2.5 concentrations more so than Spencer County, yet U.S. EPA did not evaluate these counties under the emissions scoring system but proposed them as attainment.

### **Regional Discussion Concerning Southwest Indiana:**

IDEM continues to recommend that only Vanderburgh and Dubois counties be designated nonattainment and that these counties should be separate nonattainment areas for the PM 2.5 standard. Should U.S. EPA designate counties in addition to Vanderburgh and Dubois as nonattainment, IDEM feels strongly that the region should be split into two separate nonattainment areas. If Warrick and/or Gibson counties are designated nonattainment, since they are part of the Evansville MSA, they should be designated as part of the Evansville nonattainment area. However, if Pike and/or Spencer counties are designated nonattainment, they should be designated in conjunction with Dubois County as a separate rural nonattainment area. Indiana will gladly consult with U.S. EPA on this matter further, if desired.