

US EPA ARCHIVE DOCUMENT



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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Governor

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Commissioner

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August 10, 2012

VIA FEDERAL EXPRESS AND ELECTRONIC MAIL

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RE: Request for Reconsideration and Stay of Final Rule "Air Quality Designations for the 2008 Ozone National Ambient Air Quality Standards for Several Counties in Illinois, Indiana, and Wisconsin", Docket ID No. EPA-HQ-OAR-2008-0476

Dear Administrator Jackson and Assistant Administrator McCarthy:

The Indiana Department of Environmental Management (IDEM) respectfully requests that the U.S. Environmental Protection Agency (U.S. EPA) grant reconsideration and stay the effectiveness of the portion of U.S. EPA's final rule published on June 11, 2012, titled "Air Quality Designations for the 2008 Ozone National Ambient Air Quality Standards for Several Counties in Illinois, Indiana, and Wisconsin" that applies to Lake and Porter counties, Indiana. This Petition for Reconsideration is filed pursuant to Section 307 of the Clean Air Act, 42 U.S.C. § 7607. IDEM requests reconsideration based on U.S. EPA's failure to fully consider and provide adequate responses to the record before the agency in this rulemaking.

U.S. EPA proposed designation boundaries under the 2008 ozone standard for Indiana via letter to Governor Daniels dated December 9, 2011. Indiana was in agreement with U.S. EPA's proposed designation boundaries. However, on January 31, 2012, U.S. EPA issued a second letter to Governor Daniels updating its boundary

recommendations to include Jasper, Lake, and Porter counties in Indiana as part of the Chicago nonattainment area. U.S. EPA based the revised proposal on 2011 data certified by the State of Illinois on December 7, 2011, which contained a monitored violation at the Zion, Illinois monitor. U.S. EPA proposed to designate Jasper, Lake, and Porter counties nonattainment despite the fact that all five monitors within these Indiana counties measure some of the lowest ozone concentrations within the state, and maintain air quality values well below the standard. Indiana did not agree with U.S. EPA's revised proposal, and on April 13, 2012, the state submitted a detailed rebuttal to the record that included modeling, meteorological, and monitoring data analyses to support the designation of Jasper, Lake, and Porter counties as attainment or attainment/unclassifiable under the 2008 ozone standard. On May 31, 2012, U.S. EPA signed and announced its final designation action, which included Lake and Porter counties as part of the greater Chicago nonattainment area.

In the May 31, 2012 final action, U.S. EPA agreed with the information provided by Indiana on April 13, 2012, as it pertained to Jasper County, and that Indiana county was rightfully designated attainment/unclassifiable. Based on the information contained within its record for the May 31, 2012 final action, it is clear that U.S. EPA reviewed and considered the information provided by IDEM as it related to Jasper County. However, it does not appear that U.S. EPA gave fair consideration to the detailed information specific to Lake and Porter counties. Additionally, U.S. EPA failed to address several of the critical points and issues provided to the record by Indiana concerning this matter.

U.S. EPA's responses to IDEM's comments on this rulemaking were deficient and not in accordance with the law. U.S. EPA should reconsider its designation of Lake and Porter counties in Indiana as nonattainment of the 2008 ozone standard because the agency failed to fulfill its obligations in responding to Indiana's comments on the proposal. According to U.S. EPA's own statements, the agency was to apply a five-factor¹ analysis to determine whether areas should be designated as nonattainment². More importantly, while U.S. EPA might begin with a "presumptive" boundary of a combined statistical area (CSA) for determining nonattainment areas, the "framework for area-specific boundary analysis" was to rest on the agency's analysis of the five-factors³.

Indiana complied with U.S. EPA's proposed framework for specifying nonattainment area boundaries for the Chicago-Naperville, IL-IN-WI CSA ("Chicago CSA"), and produced in response to U.S. EPA's revised proposal, a detailed examination

¹ As U.S. EPA noted in its Addendum to Responses to Significant Comments on the State and Tribal Designation Recommendations for the 2008 Ozone National Ambient Air Quality Standards (NAAQS) for Section 3.2.5.1. Chicago-Naperville, IL-IN-WI Area, in footnote 2, the agency originally proposed nine factors, but "combined several closely related factors" into the resultant five-factor analysis.

² Letter from Robert J. Meyers, Principal Deputy Assistant Administrator, U.S. EPA Office of Air and Radiation, to Regional Administrators, Regions I-X (Dec. 4, 2008), Attachment 2; Addendum to Responses to Significant Comments on the State and Tribal Designation Recommendations for the 2008 Ozone National Ambient Air Quality Standards (NAAQS) for Section 3.2.5.1. Chicago-Naperville, IL-IN-WI Area (May 2012), page 7 and hereinafter referenced as, "U.S. EPA Addendum").

³ Letter from Robert J. Meyers to Regional Administrators, Attachment 2.

of the five factors that supported excluding all of Indiana's counties, Lake, Porter, and Jasper, from the proposed nonattainment area. U.S. EPA is given great deference by courts when it reaches reasoned conclusions in its rulemakings; however, it also has "an obligation to deal with newly acquired evidence in some reasonable fashion" during this process *Catawba County v. EPA*, 571 F.3d 20, 45 (D.C. Cir. 2009); see also *U.S. v. Novia Scotia Food Products Corp.*, 568 F.2d 240, 252 (2nd Cir. N.Y. 1977) ("It is not in keeping with the rational process to leave vital questions, raised by comments which are of cogent materiality, completely unanswered.") This is where U.S. EPA failed with respect to comments submitted by Indiana.

Indiana's comments regarding this matter spoke to each of the five factors for Lake, Porter, and Jasper counties. For example, Indiana raised the serious issue regarding Illinois' noncompliance with its state implementation plan (SIP) by altering its vehicle emissions testing (VET) program. The comments on this topic were far-reaching, but included that no Indiana counties should be included in the Chicago CSA because the largest contributor to the monitored violation was the State of Illinois, and Indiana as a result of geographical and political boundaries (one of the five factors) had no authority to correct this issue to ensure attainment in the CSA⁴. U.S. EPA dismisses this argument by stating "our analysis supports including Lake and Porter counties as part of the designated nonattainment area because they contribute to the violation of the ozone NAAQS at the Zion monitor". There is no consideration given, at any point, in the U.S. EPA Addendum to Indiana's true concerns with Illinois' VET program or how this would affect the five-factor analysis. U.S. EPA's utter lack of response to this cogent and material comment is indicative of the agency's approach to IDEM's comments as a whole.

Similarly, IDEM's explanation of how Pickaway and Ross counties in Ohio, Point Coupee Parish in Louisiana, Roane County in Tennessee, and Berks and Lancaster counties in Pennsylvania were introduced as evidence of disparate treatment given to Lake, Porter, and Jasper counties in Indiana⁵. For every one of the counties identified by IDEM as receiving disparate treatment from U.S. EPA, IDEM asked for the agency to consider their ramifications not just on Jasper, but also Lake and Porter counties. However, in the U.S. EPA Addendum, U.S. EPA, after identifying IDEM's comments on these other counties, simply stated, "Since we have concluded that Jasper County should be designated as unclassifiable/attainment based on updated information recently submitted by the State of Indiana, any concerns about whether a designation of Jasper County would be inconsistent with actions for other areas is moot."⁶. Clearly, there was no examination of the work done by IDEM for Jasper County, but more glaring, there is no discussion of the comment with respect to Lake and Porter counties. Because U.S.

⁴ See, e.g., U.S. EPA Addendum at page 9, 14.

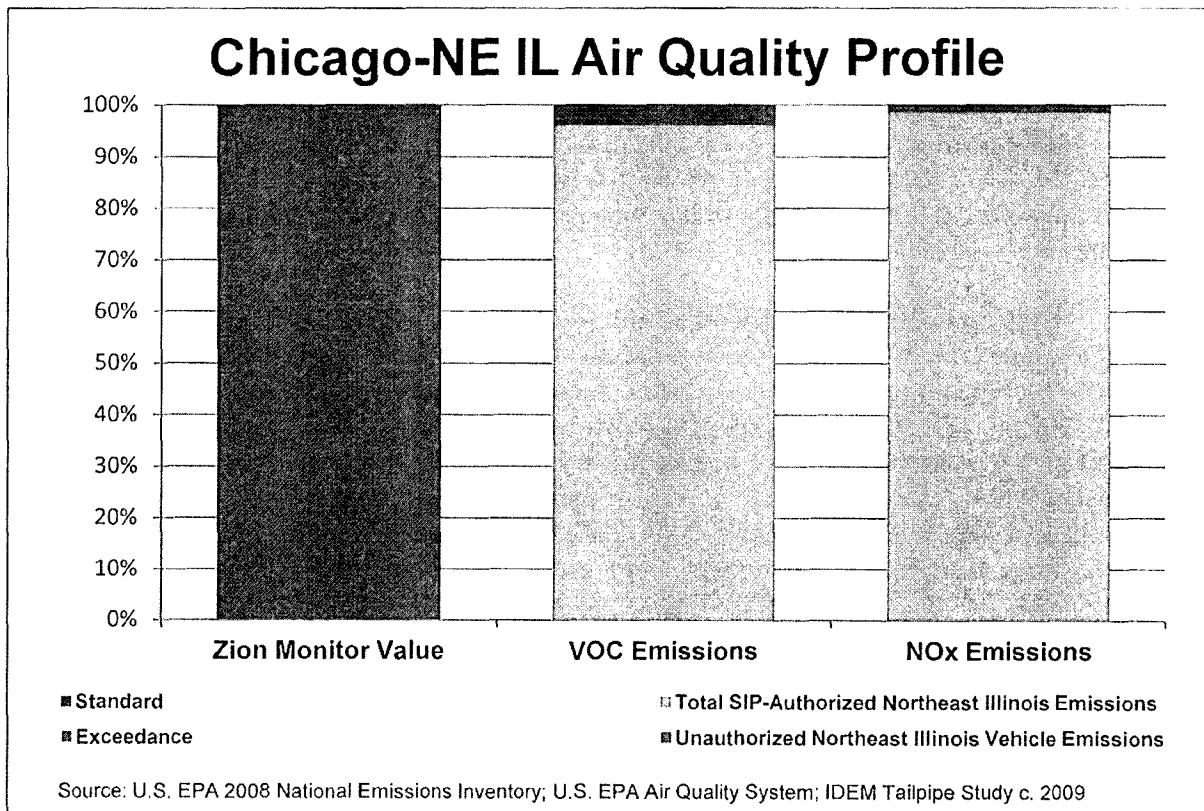
⁵ Indiana 120-Day Response to U.S. EPA's Revised Designations for the 2008 8-Hour Ozone National Ambient Air Quality Standard (Apr. 13, 2012), Enclosure 1, pages 31-37.

⁶ U.S. EPA Addendum, page 9 (emphasis added).

EPA's responses to IDEM's comments were deficient and not in compliance with law, IDEM requests that the agency reconsider this rulemaking.

As IDEM demonstrated in its April 13, 2012 rebuttal to U.S. EPA's proposed nonattainment boundaries, the primary cause of the less than 1% violation of the standard at the Zion, Illinois site is a 2007 action by the State of Illinois that exempted all pre-1996 vehicles from its vehicle emission testing (VET) program. The VET program would have reduced emissions of volatile organic compounds (VOC) and nitrogen oxide (NO_x) emissions, both of which form ozone. If these vehicles had continued to be tested and repaired as needed, there is no doubt that the Zion, Illinois monitor would have measured air quality below the standard consistent with the other 20 monitors in the Illinois and Indiana portions of the CSA.

The chart below demonstrates how the Zion, Illinois monitor barely exceeds the standard. The potential vehicle VOC and NO_x emissions reduction from the unauthorized testing program change are larger than the amount of ozone that exceeded the standard.



Illinois never received approval from the U.S. EPA to make this change to its vehicle emission testing program; meaning that the change was unauthorized and contravenes Illinois' federally mandated State Implementation Plan (SIP) as well. This is an issue that the U.S. EPA has failed to address from a regulatory perspective, as well as within the record concerning this matter. IDEM requests that U.S. EPA address this issue and reconsider the designation of Lake and Porter counties as nonattainment as a result.

U.S. EPA has indicated on multiple occasions that data provided by Illinois and Wisconsin demonstrate that Lake and Porter counties contribute to exceedances measured at the Zion, Illinois site. However, the data provided by Illinois and Wisconsin are not specific to the Zion monitor site, nor are the data specific to the exceedance days that occurred during the period representing a violation of the standard (2009 through 2011). IDEM expressed concern about this in the record, and provided meteorological data and analysis that was specific to the Zion monitoring site for the four highest days of 2009, 2010, and 2011. Additionally, IDEM's data and analysis included the same level of information for Lake and Porter counties (where the emissions of concern originate) for the same days of 2009 through 2011. IDEM's data and analysis does not conclusively demonstrate whether Lake and Porter counties consistently contribute to ozone concentrations measured at the Zion site. The data provided by Illinois and Wisconsin that U.S. EPA relied upon did not go beyond the 2008 ozone season, and was not specific to the Zion monitoring site or the exceedance days that led to a violation of the standard. Although IDEM's data and analysis is much more relevant to the matter than that provided by Illinois and Wisconsin to U.S. EPA in early 2009, U.S. EPA cites the Illinois and Wisconsin information as more relevant in its final action. Furthermore, U.S. EPA cited earlier work conducted by the Lake Michigan Air Directors Consortium (LADCO) in its final action to support its conclusion that Lake and Porter counties contributed to the monitored violation at the Zion site. However, the LADCO work U.S. EPA cited is not specific to the Zion monitor or the applicable time period. Additionally, due to the significant reduction of nitrogen oxides that has occurred incrementally since 2004, photochemistry and precursor sensitivity has changed substantially within the modeling domain. Therefore, consideration of any modeling, meteorological, or monitoring data analysis must focus on the most recent available data in order to be useful. IDEM contends that U.S. EPA has not adequately demonstrated that Lake and Porter counties contributed to the monitored violation at the Zion site, nor does the most current available data present conclusive evidence that Lake and Porter counties consistently contribute to elevated ozone concentrations at the Zion site.

In its final action, U.S. EPA acknowledges the May 1, 2012, certification of Wisconsin's 2011 monitoring data that includes a monitored violation of the standard at the Chiwaukee Prairie site in Kenosha County, Wisconsin. U.S. EPA states that its inclusion of portions of Kenosha County within the nonattainment area is not based on the monitored violation because the agency did not have sufficient time to properly evaluate the data and associated impacts.^{7,8} However, since the Chiwaukee Prairie site is

⁷ U.S. EPA Addendum at footnote 4.

located within the boundaries of the nonattainment area defined by U.S. EPA, it represents the controlling site for the entire nonattainment area at the time of designation. Therefore, the nonattainment boundary should have been evaluated with careful consideration given to what is causing and contributing to ozone concentrations measured at the Chiwaukee Prairie site. Due to the fact that the Chiwaukee Prairie site possesses the highest value within the nonattainment area, and has traditionally represented the highest ozone monitored values for the region historically, this site will be the central focus of all planning requirements going forward. U.S. EPA's failure to properly evaluate cause and contribution for this site, while at the same time relying on it to further support its perfunctory conclusion, has resulted in undue and disproportionate regulatory burden for Lake and Porter counties, Indiana.

Wisconsin's certification of the 2011 monitoring data prior to U.S. EPA's final action, and U.S. EPA's admitted recognition of that 2011 data, presents critical implications that were not part of the record for IDEM to properly evaluate and comment on in advance of U.S. EPA issuing final designations. Additionally, U.S. EPA's recognition of the significance of the Chiwaukee Prairie site and admission that the agency was not analyzing contribution to the violation highlights the U.S. EPA's indefensible deficiency in its disregard for the thorough analysis provided by IDEM of Milwaukee's contribution to the Chicago CSA nonattainment area. Finally, the manner in which U.S. EPA codified the nonattainment boundaries, which includes the Chiwaukee Prairie monitoring site, further supports Indiana's claim that the inclusion of Lake and Porter counties within the Chicago nonattainment area is arbitrary and capricious. This is supported by the fact that U.S. EPA assessed Lake and Porter counties in a fashion inconsistent with how other contributing areas were assessed, and later excluded, and the fact that counties that contribute significantly more than Lake and Porter counties to the Chiwaukee Prairie site were not evaluated but were excluded from the nonattainment boundary.

IDEM provided U.S. EPA with reputable regional modeling information that demonstrated that Milwaukee contributed equally or greater than Lake and Porter counties to the Zion monitor site in Northeast Illinois. Furthermore, IDEM and LADCO had previously provided U.S. EPA with similar modeling that shows that Milwaukee is a much larger contributor to the Chiwaukee Prairie, Wisconsin monitor site than Lake and Porter counties. Not only did U.S. EPA not address this critical point in its final action, the agency's final action exacerbated IDEM's concern. As a result of there being monitored violations in both Illinois and Wisconsin's portions of the nonattainment area at the time of designation, the exclusion of Milwaukee becomes even more critical. According to U.S. EPA policy, Indiana is not eligible for redesignation until all monitor sites in Illinois and

⁶ U.S. EPA's recognition of timing constraints is also noteworthy because, since its April 13, 2012 submission, IDEM has argued that U.S. EPA's acceptance of last-minute monitoring data, coupled with its artificial, self-imposed deadline for determining the nonattainment boundaries for the Chicago CSA have led to less-than-rigorous analysis of contribution to the nonattainment monitored at the Zion site. As this Petition to Reconsider describes, U.S. EPA's terse and rushed analysis has resulted in a flawed rulemaking.

Wisconsin's portion of the area attain. This means that Lake and Porter counties are subject to additional regulation and further emission reductions until attainment is measured throughout the nonattainment area, including in Kenosha County, Wisconsin. However, the Milwaukee area is not subject to any regulatory burden, planning obligations or liability, even though its contribution to the Kenosha County site is equivalent to that of Lake and Porter counties. The data that U.S. EPA relied on to evaluate Lake and Porter counties were also readily available for Milwaukee, Wisconsin. A fair portion of this data was even part of the record prior to designations being finalized. Although the data would suggest that whatever action was to be taken would be consistent for both areas, final action was, in fact, inconsistent. Therefore, U.S. EPA should exclude Lake and Porter counties from the Chicago-Kenosha County nonattainment area based on the same data and rationale that U.S. EPA used to exclude Milwaukee, Wisconsin.

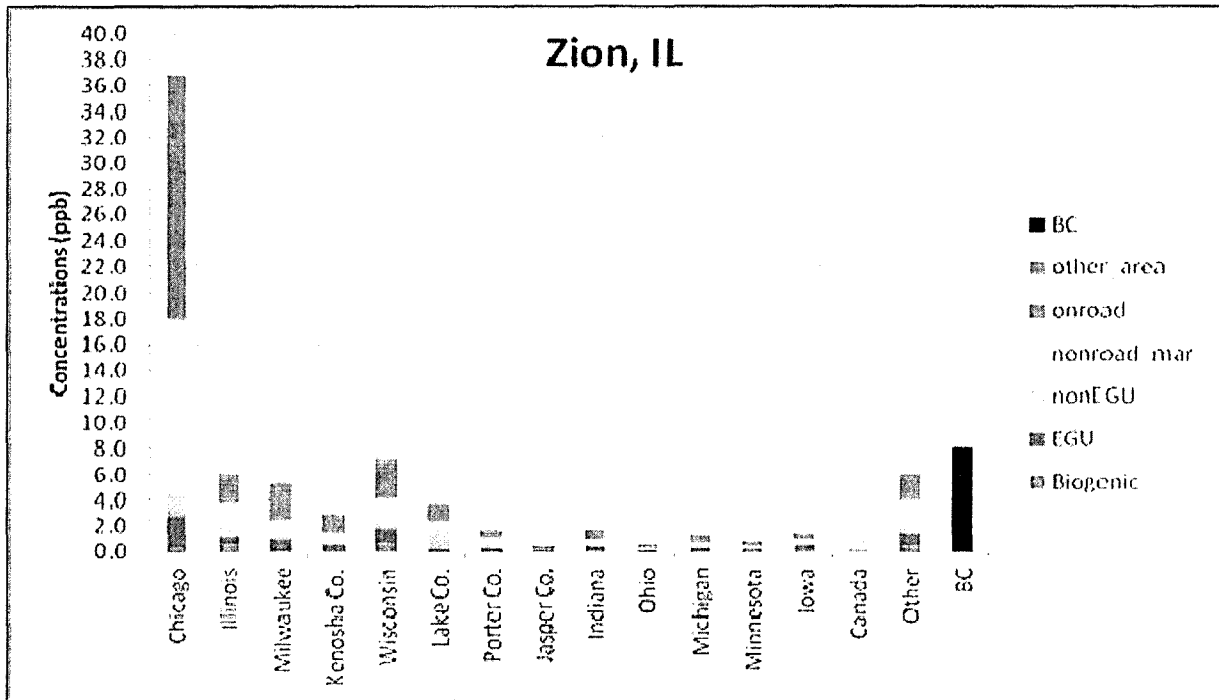
During the 120-day consultative process concerning designations, IDEM expressed concern with regard to national consistency. IDEM also expressed concern with regard to whether Lake and Porter counties were being evaluated fairly. Upon review of U.S. EPA's technical support documentation regarding final designations, IDEM found examples of U.S. EPA's failure to handle Lake and Porter counties in a fair and consistent manner in the record. For example, the emissions data U.S. EPA references for Lake and Porter counties are overestimated and do not account for reductions that have been realized in recent years, particularly in the point source sector. Additionally, U.S. EPA compared Lake and Porter counties emission ratios to just Indiana's portion of the CSA, while it compared other portions of the CSA to the CSA in its entirety.⁹

LADCO recently performed photochemical modeling, using the Comprehensive Air Quality Model (CAMx) and most recent emissions inventories and model updates. This modeling was performed to support designation processes and attainment demonstrations for the six-state LADCO region, consisting of Indiana, Illinois, Michigan, Minnesota, Ohio and Wisconsin.

Ozone source apportionment trace (OSAT) results prepared by LADCO to show the impact on the Zion, Lake County, Illinois ozone monitor are outlined below in Chart 1. The results are listed by the amount of ozone contributed in parts per billion (ppb) by each region modeled (total amount of each bar) and by the emission sector (colored portions of each bar, corresponding to each emission sector for the modeled region).

⁹ See, e.g., Illinois-Indiana-Wisconsin Supplement, Area Designations for the 2008 Ozone National Ambient Air Quality Standards, at page 13, *available at* http://www.epa.gov/ozonedesignations/2008standards/rec/eparesp/R5_revised_TSD.pdf (Lake and Porter counties' VOC and NOx emissions are compared to "emissions for the Indiana portion of the [Chicago CSA]" while those from Kenosha County, Wisconsin are deemed "comparatively small" and compared only to "the low-emissions counties in the Illinois and Indiana portions of the [Chicago CSA].").

Chart 1

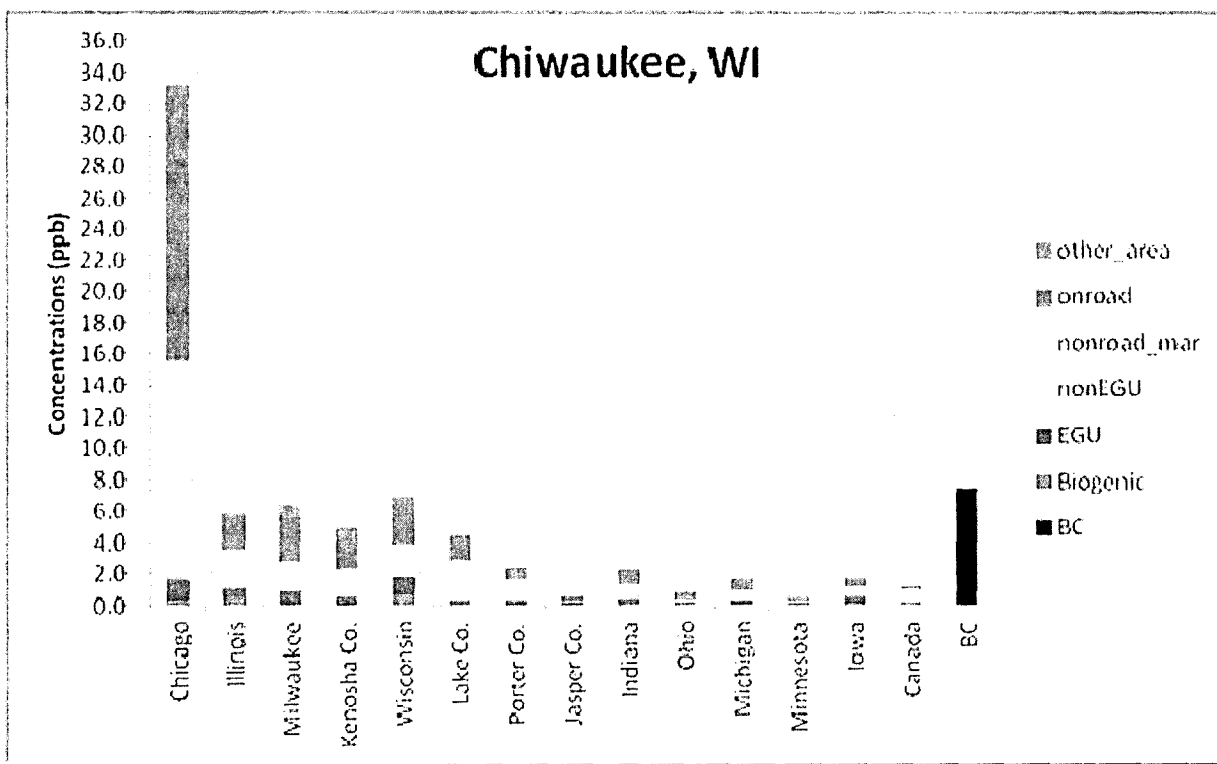


Based on the LADCO OSAT modeling results for the Zion monitor, Porter County accounted for 0.0017 parts per million (ppm) and Lake County, Indiana accounted 0.0037 ppm at the Zion, Lake County, Illinois ozone monitor. The rest of the State of Indiana contributed 0.0018 ppm to ozone concentrations at the Zion ozone monitor. In comparison, the Chicago, Illinois portion of the Chicago nonattainment area contributed 0.037 ppm, the State of Wisconsin (minus the Milwaukee area) contributed 0.0073 ppm, the State of Illinois (minus the Chicago nonattainment area) contributed 0.0061 ppm, while the Milwaukee, Wisconsin area was shown to contribute 0.0053 ppm to ozone concentrations at the Zion monitor.

Emission sector contributions vary according to the regions. Lake County, Indiana contributions to ozone at Zion were shown to be from non-electrical generating units (non-EGU) sources (0.00161 ppm) and onroad (mobile) emissions (0.001 ppm), with lesser contributions from offroad and marine/aircraft/rail (0.00057 ppm), area (0.0002 ppm), and EGU emissions (0.00017 ppm). Porter County, Indiana contributions to ozone at Zion included non-EGU sources (0.00049 ppm) and onroad (mobile) emissions (0.00049 ppm), as well as offroad and marine/aircraft/rail emissions (0.0004 ppm), and EGU emissions (0.00017 ppm).

The OSAT results prepared by LADCO to show the impact on the Chiwaukee, Kenosha County, Wisconsin ozone monitor are outlined below in Chart 2. The results are listed by the amount of ozone contributed in ppb by each region modeled (total amount of each bar) and by the emission sector (colored portions of each bar, corresponding to each emission sector for the modeled region).

Chart 2



Based on the LADCO OSAT modeling results, Porter County accounted for just 0.0024 ppm and Lake County, Indiana accounted for 0.0044 ppm at the Chiwaukee, Kenosha County, Wisconsin ozone monitor. The rest of the State of Indiana contributed 0.0022 ppm to ozone concentrations at the Chiwaukee ozone monitor. In comparison, the Chicago, Illinois portion of the Chicago nonattainment area contributed 0.033 ppm, the State of Wisconsin (minus the Milwaukee area) contributed 0.0069 ppm, the Milwaukee area contributed 0.0065 ppm, the State of Illinois (minus the Chicago nonattainment area) contributed 0.0059 ppm, while Kenosha County, Wisconsin contributed 0.005 ppm to ozone concentrations at the Chiwaukee monitor.

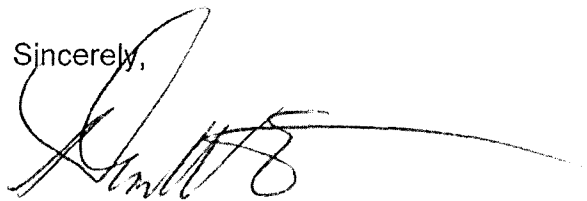
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Lake and Porter counties likely contribute a relatively small portion to ozone concentrations at Zion and Chiwaukee, an amount U.S. EPA chose to define as significant. However, the level of contribution represented for Lake and Porter counties is very comparable to that which is represented for either entire or portions of areas that U.S. EPA designated attainment under the standard. Additionally, upon looking at the source sectors, roughly half of the contribution is from on-road and off-road source sectors. Indiana already is controlling these sources to the extent possible. National measures would be needed to reduce this sector further. Due to the variety and complexity of sources contributing to the total non-EGU sector, controls would be difficult to achieve, very costly, and ineffective from a cost-benefit perspective. Even controlling this sector at 50%, the reduction gained would be less than 1 ppb, which would be of little regional benefit. Therefore, Indiana requests that U.S. EPA reconsider its action and designate Lake and Porter counties as attainment to be consistent with the manner in which the agency handled other areas contributing within the region.

Section 107(d)(4)(A)(iv) of the Clean Air Act does not require nonattainment boundaries for areas classified as marginal to be based on metropolitan statistical boundaries. However, the record concerning this matter suggests that Lake and Porter counties were assessed and handled in a more critical fashion than other contributing areas solely because they reside within the CSA. Indiana requests that U.S. EPA reconsider the nonattainment area boundaries.

For the reasons outlined above, IDEM requests that U.S. EPA grant reconsideration and stay the effectiveness of the portion of EPA's final rule published on June 11, 2012, and titled "Air Quality Designations for the 2008 Ozone National Ambient Air Quality Standards for Several Counties in Illinois, Indiana, and Wisconsin" that applies to Lake and Porter counties, Indiana. IDEM believes that if U.S. EPA fully considers the detailed information provided by IDEM throughout this rulemaking process that U.S. EPA will reasonably conclude that Indiana's Lake and Porter counties should be excluded from the Chicago nonattainment areas. If you have any questions or require clarification concerning the information contained within this petition, please feel free to contact Keith Baugues, Assistant Commissioner, at (317) 232-8222, or kbaugues@idem.in.gov.

Sincerely,



Thomas W. Easterly
Commissioner