

US EPA ARCHIVE DOCUMENT

SUBJECT: Emissions Data Usage in the Determination of Boundaries of Nonattainment for 8-hr. Ozone and PM2.5

FROM: Tom Helms  
Joe Paisie  
Phil Lorang

TO: Air Program Managers  
Regional Emission Inventory, Ozone, and PM2.5 Contacts

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This e-mail and attachment provide guidance to Regions, States and Tribes on the use of an emission inventory snapshot for the year 1999, based on draft Version 3 of the 1999 National Emission Inventory (NEI). This snapshot will be stored, for ease in making corrections, in a spreadsheet called "countyemissions99", and will be used by EPA in the determination of boundaries of nonattainment during the designation process. This memo applies to both boundaries for the 8-hour ozone NAAQS and for the PM2.5 Particulate Matter NAAQS.

The following four bullets summarize the issues that this e-mail and attachment will address:

- Emissions data are important in the determination of boundaries of a nonattainment area because the nonattainment area must include not only areas that violate the air quality standard but also areas that contribute to nearby violations of the standard.
- This e-mail provides guidance to Regional Offices related to documentation of correct emission estimates for use in determining boundaries for nonattainment areas, particularly boundaries that are related to emission issues.
- The Regional Offices should inform their States of this guidance. This e-mail requests that the agencies review, and where necessary revise, the emission data presented in "countyemissions99" so that important discrepancies in inventory versions can be resolved and so that adequate documentation exists to support technically and legally the boundaries of the nonattainment areas.
- Existing data have been compiled to aid in this review and revision process, and this e-mail identifies the location of those compilations.

The schedules are very tight, States and Tribes are to recommend by July 15, 2003, boundaries for the 8-hour ozone designations and similarly are to recommend by February 15, 2004, boundaries for the PM2.5 particulate matter designations. EPA encourages the

coordination of the two boundary determination processes, including the use of the similar emission and demographic factors for adjusting the boundary recommendations. Emissions are one of those important factors, however EPA recognizes that emissions data is constantly changing and that adjustments to the emission estimates based on new information may be desirable during this boundary determination process. Also EPA believes it is important to have available an emissions data set that can be shared and used by all parties involved in the process of defining boundaries.

Therefore EPA is proposing to put on a public web site a spreadsheet style data-set, originally based on the current draft NEI99v3, that can be modified and updated easily throughout both the ozone and PM2.5 designation boundary process. The attachment to this e-mail addresses the procedures that will be followed to use and maintain a web-based, spreadsheet version of the NEI99v3 data and the procedures for rapidly responding to requests for modifications in the emissions estimates to correspond to States', locals' and Tribes' best 1999 information on their emission sources. This updated spreadsheet information will be the data that EPA, and we hope States and Tribes, will use to address the factor that considers the emissions in the boundary determination process.

Staff in EPA's regional offices and the Office of Air Quality Planning and Standards are available for assistance and consultation throughout the designation process. Questions on this guidance, or about the emissions data, or about the process of incorporating emission revisions for the purpose of this designation process into the use of this proposed data set may be directed to the list of contacts at the end of the attachment 1. The Regional Offices should make this guidance available to the States and Tribes and should work closely with them to ensure they understand how this resource can be used by them in designations.

Attachment - "Attachment to Message Titled: Emissions Data Usage in the Determination of Boundaries of Nonattainment for 8-hr Ozone and PM2.5, dated June 9, 2003."

Titled: Emissions Data Usage in the Determination of Boundaries of Nonattainment for 8-hr Ozone and PM2.5

The designation of both ozone and PM2.5 are on a tight schedule :

States and Tribes are to recommend boundaries for designations of the 8-hour ozone standard to EPA by July 15, 2003. This date is based on the February 27, 2003, memorandum from Jeffrey Holmstead concerning "Extension for States and Tribes to Submit Air Quality Designation Recommendations for the 8-Hour Ozone National Ambient Air Quality Standards (NAAQS)" (See [http://www.epa.gov/ttn/naaqs/ozone/ozonetech/des\\_recom\\_ext\\_022703.pdf](http://www.epa.gov/ttn/naaqs/ozone/ozonetech/des_recom_ext_022703.pdf)).

A similar memorandum for recommending boundaries for designation of the PM2.5 Standard was signed by Jeffrey Holmstead on April 1, 2003 requesting that Governors of States and the Tribes, if they so choose, make recommendations for nonattainment areas for particulate matter less than or equal to 2.5 microns in size (PM<sub>2.5</sub>) by February 15, 2004. (See [http://www.epa.gov/ttn/oarpg/t1/memoranda/naqsf\\_gda.pdf](http://www.epa.gov/ttn/oarpg/t1/memoranda/naqsf_gda.pdf)).

After States and Tribes make their recommendations, the Regional Offices and EPA will follow the procedures in the designation memorandum referenced above and the EPA administrator will promulgate final designations on April 15, 2004 for ozone and on December 15, 2004 for PM2.5.

The purpose of this e-mail is to draw your attention to the need for a common data-set of air pollutant emissions data to be used by each State, Tribe and by EPA, to provide information on how to access recently updated emissions data that EPA is making available to help meet this data need, and to request your assistance in ensuring that the emissions information utilized by the states and EPA is correct and consistent with regard to aspects that could materially affect a recommended or final designation.

The March 28, 2000 memorandum from John Seitz on "Boundary Guidance on Air Quality Designations for the 8-Hour Ozone National Ambient Air Quality Standards (NAAQS or Standard)" and the similar April 1, 2003 memorandum from Jeffrey Holmstead on "Designation for the Fine Particle National Ambient Air Quality Standards" both list the factors a State or Tribe should consider in determining whether to recommend area boundaries that are larger or smaller than a metropolitan statistical area or consolidated metropolitan area (C/MSA). (See <http://www.epa.gov/ttn/naaqs/ozone/ozonetech/des00328.htm>) (See [http://www.epa.gov/ttn/oarpg/t1/memoranda/naqsf\\_gda.pdf](http://www.epa.gov/ttn/oarpg/t1/memoranda/naqsf_gda.pdf))

In some cases, the most appropriate nonattainment area boundary may be larger than the C/MSA. For example, if sources located in a county or on Indian lands outside the C/MSA contribute to violations within the C/MSA, States or Tribes should consider whether it would be appropriate to expand the nonattainment area to include the area in which those sources are located. In other cases, a smaller nonattainment area may be more appropriate. However, the decision made on the emission sources is only one of the many other factors that need to be considered in the complete analysis.

A State or Tribe wishing to propose larger or smaller nonattainment area boundaries than those matching the C/MSA or boundary of the tribal land, should address how each of the factors in these guidance memos affect the drawing of nonattainment area boundaries and how the resulting recommendation is consistent with the definition of nonattainment in §107(d)(1) of the Act.

Several of the factors in these guidance memos relate directly to emissions. For example, (1) Emissions and air quality in adjacent areas (including adjacent C/MSAs), (2) Level of control of emission sources, and (3) Regional emission reductions (e.g., NO<sub>x</sub> SIP call or other enforceable regional strategies).

It will facilitate the process of recommendations and designations for the states and EPA to have access to emissions information on all sources in all counties under consideration, and for that information to be complete, accurate, and consistent. Obviously, many states maintain emission inventories for pollutants relevant to the ozone and PM<sub>2.5</sub> designations, but not all maintain it for all source types in all counties that will be under consideration. EPA does maintain estimates covering all counties and source types, as part of the National Emissions Inventory (NEI).

We are announcing by this e-mail that we have posted on the WEB, a spreadsheet file named “countyemissions99.xls” at <http://www.emissionsonline.org/nei99v3/index.htm>. This is a spreadsheet of national emissions data, initially populated with the current emission inventory information in the NEI 99v3 and a set of web pages containing extensive information on county-level emissions, in a number of useful summary formats for use in boundary decisions. We expect this information will be useful to EPA headquarters and regional officials involved in the designations process, we hope you will similarly inform State and Tribal air agency officials so that they are aware of the information being considered by their EPA counterparts and by neighboring State agencies. This information may be especially useful for situations in which states themselves lack estimates.

This information has been drawn from the 1999 NEI.<sup>1</sup> With a few exceptions for specific source types, it is EPA’s practice to seek and incorporate state, local, and tribal emissions estimates into the NEI. Therefore, there will be many specific situations in which the information we have posted is the same as the in-house information already available to and being considered by state air agency officials. However, at any given time, state estimates may not match the estimates in the NEI. This can happen for a number of reasons including update cycle mismatch between the state and EPA, the processing delay required to incorporate state data, correction of errors in one version but not both, etc. Consequently, the information we have posted at

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<sup>1</sup>Specifically, we developed the posted information from draft version 3 of the 1999 National Emissions Inventory for criteria air pollutants. This draft inventory was released for public review on March 11, 2003. Further information on the intended purposes for this inventory, how this draft inventory was developed, its limitations, etc. is available at <http://www.epa.gov/ttn/chief/net/index.html#1999>. We corrected four specific, evident errors in this draft inventory before creating the summaries described in this message, but otherwise the summaries are consistent with the draft version 3 inventory documented at this website.

<http://www.emissionsonline.org/nei99v3/> may not match some current state, local, or tribal emissions values.

To help ensure that the emission estimates that EPA considers as it makes its decisions on designations are materially the same as state estimates where they exist and are reliable, we are seeking state review of this information to help identify and resolve material discrepancies or errors as soon as possible. This will help make sure that differences in information do not cause avoidable differences in the state and EPA approaches to designations. State, local, or Tribal agencies which will be assisting their governors and tribal leaders to make recommendations for designations should review the data and notify us of situations in which it does not correctly represent local conditions to such a degree that the problem is material to the designation process. The process for notification is described below.

We urge states, or tribes to review this data very soon, since aligning state, tribal and EPA understanding of county-level emissions would be desirable – before governors, tribal leaders, submit their recommendations – and will allow the designations process to proceed more satisfactorily for all involved. We request that states, and tribes provide feedback on the emissions information by June 25, 2003.

We also urge you to raise to our attention only the discrepancies that are likely to be material, or to highlight such material discrepancies if they are submitted as a more comprehensive set of suggested corrections. The purpose here is to make sure that changes are made that are large enough that they would make a difference in the decision on designation. We are not trying to include all possible corrections to the 1999 NEI in this short-timeframe process. The significance of a discrepancy/correction will depend on context, so no single tonnage cutoff can be given. We are trying to eliminate problems such as units errors that make estimates incorrect by an order of magnitude or more, major sources assigned to the wrong county that significantly affect one or both counties' emissions total, etc.

EPA realizes for Tribes that the EI is based on county level information particularly for area and mobile sources. We recognize that this is not truly reflective of tribal boundaries, and hope to work with the Tribes in the future to address these issues.<sup>2</sup> However, we believe that the tribes with their own EI's should review this information and make corrections based on their data. Tribes without EI's can use this information to help inform their recommendations.

Finally, it is important to provide an explanation as to why a change is needed, as described in further detail below.

It is not necessary for certain states to notify us of certain needed corrections, because they have already done so. The 1999 NEI data has been under development for about two years, and air agencies and the public have had opportunities to submit data and to provide recommendations for changes and corrections. However, at this time the most recent set of submitted changes

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<sup>2</sup>Note: County totals include sources on Tribal lands and therefore may not agree with State totals that exclude such sources.

have not been in our hands long enough to be incorporated, and so the information posted at <http://www.emissionsonline.org/nei99v3/index.htm> does not reflect them.<sup>3</sup> We will be considering these already submitted revisions as we formulate EPA's approach to designation decisions.

**The Special Website (See: <http://www.emissionsonline.org/nei99v3/index.htm>) is being set up for this spread sheet data set.**

The new website contains many summary presentations of the emissions information, both to assist States, Tribes and agency staff in understanding the emissions characteristics of each C/MSA and its neighboring counties, and to facilitate identification and correction of discrepancies. The following data files are located there:

- One file, named CountyEmissions99, provides the 1999 annual summary of emissions for each county within the C/MSA plus adjacent countys, with each counties emissions also separated into six major categories. The six major source categories are electric generating units (EGUs), non-EGU point sources, highway mobile sources, nonroad mobile sources, area sources, and miscellaneous area sources. This file will provide the quickest view of the relative emissions contributions of the individual counties, and the source type composition in each county. Using this data file, likely will also be the easiest way to do a high-level check of the posted emissions values against those held by the state or local air agency, by comparing county totals or sub-totals by major source categories.
- Other files provide lists of individual point sources within each county and their emissions. These source lists will help isolate the reasons for any discrepancy in the EGU or non-EGU totals shown in the first data file.
- Other files provide a breakdown of the county or C/MSA inventory by 13 source subcategories (called a "Tier 1 report" and also by a large number of very detailed subcategories (called a "Tier 3 report"). This file may help state agency officials consider whether the emissions in given counties come from source types that are already subject to control, or sources that are possible opportunities for further emission reduction.
- Maps are being created to show the C/MSA boundaries and the relative source and monitor locations.

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<sup>3</sup>Requests for changes have been received from the following states but are still in the process of incorporation: AL, AZ, CA, ID, KS, LA, MA, MI, MN, ND, NH, NM, NV, OK, PA, RI, SC, TN, TX, VA, WV. Only criteria pollutants will be changed through this process.

- Maps are available to show tribal boundaries.<sup>4</sup>
- Bar graphs are being created to easily identify source categories and large emitting counties.

As we receive information from you that allows us to make corrections, we will revise and re-post CountyEmissions99 from time to time. We will also post a list of the changes that have been made with each revision and re-posting of this file. Because of the time and cost involved in preparing the other data files and the maps, they will not be re-generated and re-posted as corrections are made. However, a warning message will be posted drawing attention to the two items that will be kept current.

### **How to Inform EPA of Needed Corrections**

If you identify a discrepancy<sup>5</sup> that you believe should be cleared up to assist the designations process, we request that you take several steps:

- Provide us the values that you believe correctly represent the annual emissions of the county in question. These may be your estimates for 1999 (preferred), or your estimates for a more recent year. We ask that you provide us this information by adding your estimates to the data file CountyEmissions99 that is posted on the website. Specific instructions on how to make these changes are included with CountyEmissions99. You can fill in the emissions for all or some of the six major categories, and/or for the county totals. This is the surest way for us to understand your numbers. You can reduce the size of the data file to make it easier to use and to send it to us by deleting counties not in your state.
- E-mail these files to both [kuykendal.bill@epa.gov](mailto:kuykendal.bill@epa.gov) and [navin.brian@epa.gov](mailto:navin.brian@epa.gov). In the e-mail, please provide any additional explanation that will help us understand the problem and how you think it should be corrected. If you simply provide alternative county totals with no explanation, the goals of this process will not be met. If we do not have enough information to verify the appropriateness of your suggested correction, we will only be

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<sup>4</sup> Reservation boundaries which EPA has available are for Federally Recognized Tribal Lands and are based on information provided by the U.S. Bureau of Indian Affairs, and the inclusion or exclusion of specific areas does not constitute an independent determination by EPA.

<sup>5</sup> The corrections specified here are those major corrections that may effect the selection of an area into or out of the nonattainment boundary determination. They are not meant to correct all minor, or major, corrections that States, Locals or Tribes may see and need to correct in the NEI. EPA has a separate process for making those corrections and that process should be followed to correct the NEI.

able to make designation participants aware that different estimates exist but we may not be able to support your estimate.

- Please also provide in the e-mail contact information for the State, Local, or Tribal person who can provide further information by telephone if needed.

It will greatly assist this effort if each state or local agency had one comprehensive communication with us for all corrections for all counties under its jurisdiction for purposes of emission inventory development.

### **How This Process Relates to the Completion of the 1999 NEI**

Although the material corrections you e-mail to us as requested above will be quickly incorporated into the posted copy of CountyEmissions99, revisions sent this way may not necessarily make it into the final 1999 NEI version 3, which we are aiming to complete September 30, 2003. The NEI data base behind these spreadsheet summaries requires that a greater amount of detail accompany most types of emissions corrections. Revisions that you wish to have incorporated into the 1999 NEI (so that they are represented in all subsequent uses of the 1999 NEI) must also be submitted in the format and through the transmittal channel normally used in the formal NEI revision process. Submittals must come through the central data exchange (CDX) (<http://www.epa.gov/ttn/chief/nif/cdx.html>) and must use the NEI input format (NIF) structure (<http://www.epa.gov/ttn/chief/nif/index.html>). Although the comment period for the 1999 NEI has closed, EPA will accept and attempt to incorporate additional 1999 NEI revisions that pertain to significant errors identified in this nonattainment area designation process, until it is too close to the September 30 completion date for incorporation to be possible. This “drop dead” date is not yet known with certainty, but will likely be no later than August 1 and possibly earlier.

### **Questions?**

Contact Bill Kuykendal (919) 541-5372 ([kuykendal.bill@epa.gov](mailto:kuykendal.bill@epa.gov)) or Brian Navin (919) 541-4950 ([navin.brian@epa.gov](mailto:navin.brian@epa.gov)) if you have questions about the emissions data or the process of getting and incorporating revisions for purposes of the designation process.

Contact Roy Huntley (919) 541-1060 ([huntley.roy@epa.gov](mailto:huntley.roy@epa.gov)) or Laurel Driver (919) 541-2859 ([driver.laurel@epa.gov](mailto:driver.laurel@epa.gov)) if you have questions related to the completion of the 1999 NEI. Roy Huntley can address questions on stationary sources, Laurel Driver those on mobile sources.

Contact Barry Gilbert (919) 541-5238 ([gilbert.barry@epa.gov](mailto:gilbert.barry@epa.gov)) if you have questions about the designation process for ozone or have questions about the web sites as it relates to the ozone designation process .

Contact Tom Rosendahl (919) 541-5314 ([rosendahl.tom@epa.gov](mailto:rosendahl.tom@epa.gov)) if you have questions about the designation process for PM2.5 or have questions about the web sites as it relates to the PM2.5 designation process .