

**COMMENTS AND RESPONSES ON
AND
RECOMMENDATION FOR ADOPTION**

**PROPOSED MISSOURI'S RECOMMENDATION FOR
AREA BOUNDARY DESIGNATIONS FOR THE
2012 ANNUAL FINE PARTICULATE MATTER
NATIONAL AMBIENT AIR QUALITY STANDARD**

On November 21, 2013, the Missouri Air Conservation Commission held a public hearing concerning Missouri's Recommendation for Area Boundary Designations for the 2012 Annual Fine Particulate Matter (PM_{2.5}) National Ambient Air Quality Standard (NAAQS). Based on a technical evaluation of emissions data, weather patterns, and other information, the Missouri Department of Natural Resources' Air Pollution Control Program (Air Program) recommends the entire State of Missouri be designated attainment/unclassifiable for 2012 annual PM_{2.5} NAAQS. The following is a summary of comments received before the printing of this briefing document and the Air Program's corresponding responses. If the Air Program receives additional comments before the end of the comment period on November 29, 2013, a summary of the additional comments received and the Air Program's corresponding responses will be included as an addendum to this briefing document at the December 5, 2013 Missouri Air Conservation Commission meeting.

The document has not been reprinted in the briefing document due to its volume. The entire document is available for review at the Missouri Department of Natural Resources' Air Pollution Control Program, 1659 East Elm Street, Jefferson City, Missouri, 65101, (573)751-4817. It is also available online at <http://dnr.mo.gov/env/apcp/stateplanrevisions.htm>.

The Air Program recommends the commission adopt the boundary recommendation as proposed. If the commission adopts this recommendation, it will be the Air Program's intention to submit this recommendation to the U.S. Environmental Protection Agency (EPA).

SUMMARY OF COMMENTS: At the time this briefing document was printed, the Air Program had received one (1) comment from EPA.

COMMENT #1: EPA commented that they have reviewed our recommendation and will take the information into account when determining the final designations by December 2014. They stated that Missouri must provide clear technical support demonstrating that Missouri sources are not impacting the violating monitor in Illinois and that they do not consider the technical justification provided in our recommendations to provide conclusive evidence that Missouri sources are not impacting the violating monitor in Illinois. They expressed their intention to continue to work with Missouri throughout the designation process. They also stated that if they determine that modifications to our recommendations may be necessary, they will inform the state through the 120-day letter process as outlined in the Clean Air Act and provide the state an opportunity to respond to any modifications prior to finalization of the designations. They also expressed appreciation to the Air Program for sharing early drafts of the technical analyses with EPA.

RESPONSE: The Air Program would like to recognize EPA Region 7 for their valuable assistance in reviewing early drafts and providing comments on the technical analyses supporting this boundary recommendation. Based on air quality data from 2010-2012, no monitors in Missouri are violating the newly revised PM_{2.5} standard, including four monitors located in the St. Louis metropolitan statistical area (MSA). Because the Clean Air Act defines “nonattainment area” as encompassing a NAAQS violation as well as nearby sources that contribute to the violation, our boundary recommendation effort concentrated on determining the contribution of Missouri sources to any violating monitors in surrounding states. There are two violating monitors in the Illinois portion of the St. Louis MSA, one in East St. Louis and the other in Granite City.

Based on recent air monitoring data and trends, the monitor located in East St. Louis, Illinois is expected to attain the 2012 annual PM_{2.5} NAAQS after monitoring data for 2013 is available, in which case any contribution analysis on the PM_{2.5} concentrations recorded at this monitor would no longer be necessary. Therefore, this response focuses on the violation in Granite City, Illinois.

The Air Program emphasizes that EPA’s April 2013 guidance for area designations for the 2012 annual PM_{2.5} NAAQS was followed when developing the technical analyses in support of this recommendation. The guidance indicates there is no presumptive nonattainment boundary and directs states to perform weight of evidence analyses to determine appropriate boundaries. The guidance also provides no clear definition of “nearby sources that contribute to the violation.” Key passages from the guidance are highlighted below.

From page 5 of the guidance:

*Although the CBSA or CSA, as appropriate, is the starting point for the EPA’s evaluation of contribution, the EPA does not intend it to be a presumed nonattainment area boundary...
the EPA believes that the weight of evidence approach to determining area boundaries for initial nonattainment area decisions could, under proper circumstances, result in a nonattainment area consisting of single counties or partial counties.*

From page 11 of the guidance:

*the EPA is not setting a threshold contribution level or bright line test for determining whether an area should be included within the boundaries of a given nonattainment area...
the EPA believes that the contribution determination should be made through a case-by-case evaluation of the relevant factors and circumstances in each nonattainment area.*

From page 14 of the guidance:

Finally, all of the above assessments must be aggregated or synthesized into a consistent narrative that describes the relationship between sources in the analysis area and the

measured violation. This synthesis should represent a collective “weight of evidence” regarding the most appropriate boundaries for the nonattainment area.

Because there is no presumptive nonattainment boundary and no bright line test for determining whether an area should be included in a nonattainment area, determinations for nonattainment area boundaries should be based on a weight of evidence approach. The Air Program’s interpretation of this guidance is that, in order to be excluded from a nonattainment area boundary, it is not necessary to demonstrate that Missouri sources have zero contribution to a violation. Instead, a weight of evidence approach should be used to evaluate the relevant factors and circumstances in the St. Louis area that support the inclusion/exclusion of Missouri areas in the nonattainment area. The Air Program has conducted these analyses and synthesized the information into a narrative identifying the relationship between sources in the immediate area of the violating monitors and the measured violations.

The violating monitor in Granite City is located less than one mile from two major sources of direct PM_{2.5} emissions in Illinois and less than five miles from a compliant monitor on the Missouri side. The Air Program conducted a series of data analyses and determined that the local, Illinois sources are the nearby sources causing the violation at the Illinois monitor. In addition, these analyses demonstrate that Missouri sources in the St. Louis MSA have a minimal or negligible impact on this violating monitor. See Appendix A of the boundary recommendation document for the complete narrative and details of the analyses performed.

There were similarities between this situation and the recent boundary designation process for the 2010 1-hour Sulfur Dioxide (SO₂) NAAQS. In that case, the violating SO₂ monitor was in Kansas City, Missouri, and all monitors located in Kansas were in compliance. Even though two nearby Kansas SO₂ emission sources were impacting the violating Missouri monitor, areas in Kansas were not included in the final Kansas City, Missouri SO₂ nonattainment area. The Air Program’s preliminary State Implementation Plan (SIP) modeling shows that these two Kansas SO₂ sources located within 10 km of the area have a combined contribution of nearly 50% of the level of the 1-hour SO₂ NAAQS at receptors in the nonattainment area. In contrast, our weight of evidence evaluation for this PM_{2.5} boundary designation process shows that Missouri sources’ combined contribution to the Granite City, Illinois monitor is far less than 50% of the level of the 2012 PM_{2.5} NAAQS. The Clean Air Act definition of “nonattainment area” doesn’t change from one NAAQS to another, and we ask that EPA treat these two situations consistently and designate the Missouri side of the St. Louis area attainment for the 2012 PM_{2.5} NAAQS. If this is not the final action, the Air Program would like to understand the criteria EPA uses for determining “nearby sources that contribute to the violation” for nonattainment area boundary purposes and whether these criteria change for different NAAQS designation processes.

The Air Program is confident that our weight of evidence analysis is complete, conclusive and conforms to EPA boundary determination guidance for this NAAQS. Missouri has no violating monitors for this NAAQS, and our analysis demonstrates that Missouri sources in the St. Louis MSA have a minimal impact on the violating monitor in Granite City, Illinois. We stand by our recommendation that the entire State of Missouri be designated attainment/unclassifiable for the 2012 annual PM_{2.5} NAAQS.

We understand that EPA will notify us of any changes to our recommendation and provide an opportunity to respond with additional supporting information through the 120-day letter process. In order for us to respond appropriately to the 120-day letter and make the strongest possible case for the State of Missouri, we request that EPA provide specifics on the Missouri sources they've determined to be contributing and identify the particular data sets they are considering.

The Air Program appreciates EPA's input on early drafts of our recommendation and willingness to continue working with the state throughout the remainder of the boundary designation process.

No changes were made as a result of this comment.