



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

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OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

MEMORANDUM

SUBJECT: Regional Haze Regulations and Guidelines for Best Available Retrofit Technology (BART) Determinations

FROM: Joseph W. Paisie, Group Leader *Barb Daddell*
Geographic Strategies Group (MC 504-2) *for*

TO: Kay Prince, Branch Chief
EPA, Region 4

In July 2005, EPA issued BART Guidelines that provide guidance to the States in making BART determinations for large power plants and other BART sources. In the BART Guidelines, we described several approaches that States could use to determine whether a source should be subject to review for BART, or whether it should be exempt from the BART requirements. As you know, BART applies to existing sources of a certain type, age, and size that "emit any air pollutant which may reasonably be anticipated to cause or contribute to any impairment of visibility in any [Class I] area." CAA §169A(b)(2)(A). One approach discussed in the Guidelines for determining that a source does not meet the threshold test for BART is to use the air quality model CALPUFF.

We understand that many States and Regional Planning Organizations (RPOs) are currently considering the use of CALPUFF for making BART determinations. We have received a question asking whether States can, or should, allow sources to use CALPUFF to estimate visibility impacts on a pollutant specific basis, or whether EPA intended CALPUFF to be used to model a source's visibility impacts based on its total emissions of visibility-impairing pollutants. We have also received a question regarding the process for estimating natural background conditions, one of the factors used to estimate a source's impact on visibility. This memo addresses these two questions.

Pollutant-Specific CALPUFF Analyses

Because of the complexity and nonlinear nature of atmospheric chemistry and chemical transformation among pollutants, EPA does not generally recommend that CALPUFF be used on a pollutant specific basis to determine whether a source meets the threshold test for BART. In

certain situations, however, it may be appropriate to do just that. For example, if a State chooses to adopt the Clean Air Interstate Rule (CAIR) program to address emissions of SO₂ and NO_x from electric generating units (EGUs), the CAIR may satisfy the requirements for BART for these pollutants from these sources. However, the State must determine whether its BART-eligible EGUs are subject to review under BART for direct emissions of particulate matter (PM). Because the task of predicting the impacts of PM on visibility is a relatively straight-forward exercise, unlike predicting the impacts of SO₂ and NO_x, we would recommend the use of CALPUFF on a pollutant specific basis to model only the impact of PM emissions on visibility. Using the results of such an analysis, States may then determine whether a source should be subject to review for PM controls, or alternatively, that the source is not subject to BART for PM.

Estimating Natural Visibility Conditions

The BART Guidelines explain that States should estimate a source's impact on visibility by "calculat[ing] daily visibility values for each receptor as the change in deciviews compared against natural visibility conditions." 70 Fed. Reg. 39104, 39162 (July 6, 2005). EPA has provided guidance to the States specifically for the complex task of estimating natural visibility conditions, *see* "Guidance for Estimating Natural Visibility Conditions Under the Regional Haze Rule," EPA-454/B-3-005 (September 2003), but neither the BART Guidelines nor the guidance described above specify whether for purposes of determining whether a source is subject to BART, States should use annual values in calculating natural background visibility estimates or some other averaging period. The preamble to the BART Guidelines, however, states that the BART Guidelines suggest that States use a natural visibility baseline for the 20% best days for determining a source's impact on visibility.

We are clarifying here that the EPA did not intend to limit States to the use of the 20% best visibility days for this comparison through the statement in the preamble describing the BART Guidelines. States may use the 20% best visibility days or an annual average. The BART Guidelines allow for this flexibility, and we believe that either value would allow for States to determine appropriately whether a source is reasonably anticipated to cause or contribute to any impairment in visibility.

I am requesting that in your role as sublead Region for PM and Regional Haze, you transmit this memo to the other Regions. I would like to thank you in advance for your assistance.

If you have any questions about either of these issues, please contact either Kathy Kaufman or Todd Hawes in my office.