



BART - Alternatives to Appendix W

Rick Gillam
U.S. EPA Region 4
Air Modeler's Workshop
March 27-29, 2007

CALPUFF VISTAS Version

- BART Guidelines (70 FR 39162) recommend that CALPUFF be used for individual source visibility assessments
 - References Appendix W
- Issue: BART analyses were done using the VISTAS Version of CALPUFF modeling system even though it is not currently the “regulatory version”
 - OAQPS currently evaluating VISTAS version (CALPUFF 5.756/ CALMET 5.726) for approval as the new regulatory version
 - Projected to complete first phase of review by mid-April

CALPUFF BART Questions

- Some BART modeling done using the “original VISTAS version” (CALPUFF 5.754) and some used “new VISTAS version (CALPUFF 5.756). How should this be addressed in the Regional Haze SIPs?
- What documentation is needed in the RH SIP related to the version of CALPUFF/CALMET used?

New IMPROVE Algorithm

- Many BART facilities have chosen to use the new IMPROVE algorithm in the BART exemption or BART determination modeling.
- EPA has indicated in Q&A documents that BART sources may use either the old or new IMPROVE algorithm
- EPA Region 4 provided a position to VISTAS in Fall 2006 on use of the new IMPROVE algorithm with CALPUFF
 - Related to the spreadsheet developed by Ivar Tombach to implement the new algorithm with CALPUFF/CALPOST.

New IMPROVE Algorithm

- EPA Region 4 position indicated that use of the new IMPROVE algorithm with CALPUFF is a non-guideline modeling approach and should follow Section 3.2 of Appendix W.
- Also States should provide the specific rationale for using the new IMPROVE algorithm
 - Address specific reasons for using it for BART facilities located in the State (e.g., sea salt term for coastal Class I areas)

Sea Salt Term in New IMPROVE Algorithm

- What is the best methodology for estimating sea salt concentration using data from the IMPROVE monitoring sites?
- The IMPROVE Committee recommended using chloride ion concentration in the documentation released with the new IMPROVE algorithm
- Some BART sources have request used of sodium ion or elemental sodium concentration instead of chloride ion.

Sea Salt Term in New IMPROVE Algorithm

- South Carolina requested that EPA Region 4 review an analysis prepared by Ivar Tombach endorsing use of sodium ion (if sodium ion analysis is available).
- EPA Region 4 provided a response to SC last week which indicates that we continue to support the recommendation from the IMPROVE committee to use chloride ion but that a State may choose to allow use of sodium ion for specific applications if adequate technical basis and justification is provided.

Other BART Issues?

