

## VISTAS BART CALPUFF Modeling Protocol RECORD OF REVISIONS

As of 31 August 2006

Revision Number	Date	Description of Changes
--	Dec. 22, 2005	None – Original Document
1	Jan. 23, 2006	Corrected the text on page 5 to state that the 98 <sup>th</sup> percentile value is calculated for the Class I area rather than at a specific receptor in the Class I area
2	Mar. 9, 2006	<ol style="list-style-type: none"> <li>1. Made minor changes to subheadings on pages 36, 40, and 43 to use consistent terminology for initial modeling.</li> <li>2. Made changes to indicate that ALM is not to be used for the initial modeling – Deleted parenthetical comment at the top of page 43 concerning “Background ammonia concentration” and revised the text after “Ammonia Limiting Method (ALM)” in the lower third of the page.</li> <li>3. Expanded discussion of “Natural background light extinction” on page 43 to explain how the EPA default haze conditions values can be used to provide the input needed for applying Method 6 in CALPOST.</li> <li>4. Added mention on page 46 of the ammonia limiting method as one of the refinements included in the finer grid modeling approach and explained that monthly-average diurnal profiles of NH<sub>3</sub> concentrations from 2002 CMAQ modeling will be used as input.</li> <li>5. Changed CALPUFF model options on page 42 to recommend using Pasquill-Gifford (P-G) dispersion coefficients instead of turbulence-based dispersion coefficients such as EPA has recently approved for use in AERMOD. This change is made in response to instructions from EPA Region IV that using AERMOD-like dispersion coefficients in CALPUFF would be a non-guideline model application.</li> <li>6. Added a footnote to page S-3 to indicate that P-G dispersion coefficients are to be used instead of turbulence-based coefficients. A comment was added on page 19 concerning the same point.</li> <li>7. Throughout the document, changed the number of the current VISTAS version of CALPUFF to 5.754.</li> </ol>

Revision Number	Date	Description of Changes
3	July 18, 2006	<ol style="list-style-type: none"> <li>1. Made changes throughout the document to reflect that future work will be done by TRC Environmental instead of Earth Tech.</li> <li>2. On pages S-3, 50, and elsewhere, removed mention of using CMAQ outputs as background for POSTUTIL nitrate reappportionment calculations.</li> <li>3. On page 4 and elsewhere, changed expected date of EPA's promulgation of BART trading guidance from "early 2006" to just "2006".</li> <li>4. In footnote 5 on pages 5 and 6 and in footnote 14 on page 41, as well as elsewhere, indicated that either annual average or best 20% days natural conditions can be used, at the discretion of the State, as the reference level for calculations of source impacts on visibility.</li> <li>5. Mentioned on page 34 that exemption analyses should include PM for all sources, NH<sub>3</sub> for only a few large sources, and need not address VOCs. Provided detailed justification for this on pages 36 through 38.</li> <li>6. On page 44, added discussion of options for developing speciation profiles and provided links to sources of information.</li> <li>7. Made substantial changes to the CALPOST and POSTUTIL Configuration discussion on pages 45 and 46, to clarify that POSTUTIL is not to be used to repartition nitrate in the initial modeling and to reflect alternative approaches to calculating the natural background extinction. (Annual average extinction, monthly extinction using monthly f(RH), or 20% best natural days extinction.) Expanded the discussion of how to implement these different levels within CALPOST.</li> <li>8. On page 49, pointed out that POSTUTIL may be used to repartition nitrate in the finer grid analyses. Also, deleted the (incorrect) statement that CALPOST would have to be recoded to calculate the 98<sup>th</sup> percentile visibility impact.</li> <li>9. On page 54, indicated that the final VISTAS version of the CALPUFF system will include a new one-step POSTUTIL procedure. At the bottom of the page added a link to sample VISTAS data files and CALPUFF screening calculations.</li> <li>10. Made minor, non-substantive editorial changes at several places in the report.</li> </ol>

Revision Number	Date	Description of Changes
3.1	August 16, 2006	Corrected error on page 46 concerning f(RH) settings, which was introduced in Revision 3 (item 7 above).
3.2	August 31, 2006	On page 43, deleted instruction to describe background SO <sub>4</sub> and TNO <sub>s</sub> using CMAQ results, which should have been deleted as part of Revision 3 (item 2 above).

**Note: The page numbers that are cited for a revision apply only for that revision. Page numbers may have changed from one version to the next.**