July 15, 2009

Address

Dear TBD:

Thank you for agreeing to review the attached document, *Development of Emission Rates for Light-Duty Vehicles in the Motor Vehicle Emissions Simulator*. The document consists of four chapters, covering major areas of model development. The first chapter describes development of modal emission rates for HC, CO and NOx for gasoline-powered light-duty vehicles, along with projection of emissions deterioration, for vehicles in model years 1980-2021. The second chapter describes a similar analysis for particulate matter emissions from light-duty vehicles, based primarily on the 2004 Kansas-City Light-Duty Particulate Study, supported by data from other studies and published literature. The third chapter describes development of emission rates for light-duty diesel-powered vehicles, combined with modal data from light heavy-duty diesel vehicles. The fourth and final chapter briefly describes development of rates representing crankcase emissions.

We are submitting this document to you for peer review of the validity of the selected methods and underlying assumptions, their consistency with the current science as you understand it, and the clarity and completeness of the presentation. The attached list of charge questions is designed to focus your review on specific topics related to the quality of the model inputs and their documentation. For this review, no independent data analysis or information summary is required. Rather, we ask that you assess whether the information provided is representative of the state of current understanding in relevant scientific, professional, or academic disciplines.

In making comments, we ask that you distinguish between recommendations for clearly defined improvements that can be readily made based on data or literature available to EPA, and improvements that are more exploratory or dependent on information not readily available to EPA. The comments should be sufficiently detailed to allow a thorough understanding by EPA or other parties familiar with the subject matter.

Your comments should be provided with a cover letter that states your name, the name and address of your organization, what material was reviewed, a summary of your expertise and qualifications, and a statement that you have no real or perceived conflicts of interest. Please submit one printed copy of the letter and comments, and an additional electronic copy of the comments in MS Word or WordPerfect format. The electronic copied may be submitted on CD, or as email attachments.

Please send the comments to:

James Warila,
U.S. Environmental Protection Agency
Assessment and Standards Division
Office of Transportation and Air Quality
2000 Traverwood Drive
Ann Arbor, MI 48105

When the report is finalized, we will include your comments as an attachment. We would appreciate your not divulging the peer review materials or your comments to outside parties until we make them public.

If possible, we would also like to receive the results of this review by August 14, 2009. If you have any questions about what is requested to complete this review, or if you need additional background material, please contact James Warila, phone (734) 214-4951 (e-mail: warila.james@epa.gov). If you have any questions about the EPA peer review process itself, please direct them to Ms. Ruth Schenk by phone (734-214-4017) or e-mail (schenk.ruth@epa.gov).

You will receive a flat fee of $3,000 for this peer review. This fee was calculated based on an estimated 30 hours of review time at a rate of $100 per hour. In your cover letter please indicate the number of hours spent on the review; spending fewer or more hours than our estimate will not affect the fee paid for this work, but it will help us improve our future estimates. A purchase order form is also included showing payment information. You may expect to receive payment in full within forty-five (45) days of submitting your comments. To ensure correct payment, include the purchase order number on the invoice. Please send your invoice directly to:

RTP Finance
Mail Drop MC-D143-02
109 T.W. Alexander Drive
Research Triangle Park, NC 27711

Thank you again for your time and consideration.

Sincerely,

John Koupal, Director
Air Quality Modeling Center
Assessment and Standards Division
Office of Transportation and Air Quality

Enclosure
cc (w/o enclosures):
J. Warila, ASD
N. Cooper, ASD

ADDENDUM: PEER REVIEW CHARGE QUESTIONS

1. Does the presentation give a description of selected data sources sufficient to allow the reader to form a general view of the quantity, quality and representativesness of data used in the development of emission rates? Are you able to recommend alternate data sources might better allow the model to estimate national or regional default values?

2. Is the description of analytic methods and procedures clear and detailed enough to allow the reader to develop an adequate understanding of the steps taken and assumptions made by EPA to develop the model inputs? Are examples selected for tables and figures well chosen and designed to assist the reader in understanding approaches and methods?

3. Are the methods and procedures employed technically appropriate and reasonable, with respect to the relevant disciplines, including physics, chemistry, engineering, mathematics and statistics? Are you able to suggest or recommend alternate approaches that might better achieve the goal of developing accurate and representative model inputs? In making recommendations please distinguish between cases involving reasonable disagreement in adoption of methods as opposed to cases where you conclude that current methods involve specific technical errors.

4. In areas where EPA has concluded that applicable data is meager or unavailable, and consequently has made assumptions to frame approaches and arrive at solutions, do you agree that the assumptions made are appropriate and reasonable? If not, and you are so able, please suggest alternative sets of assumptions that might lead to more reasonable or accurate model inputs while allowing a reasonable margin of environmental protection.

5. Are the resulting model inputs appropriate, and to the best of your knowledge and experience, reasonably consistent with physical and chemical processes involved in exhaust emissions formation and control? Are the resulting model inputs empirically consistent with the body of data and literature that has come to your attention?