

**U.S. Environmental Protection Agency
Advisory Council on Clean Air Compliance Analysis
Air Quality Modeling Subcommittee**

Public Teleconference
August 11, 2010
12:00 noon – 1:00 p.m. Eastern

Minutes of the Meeting

Participants:

Members of Air Quality Modeling Subcommittee: Ted Russell (Chair), Dave Allen, David Chock, Paulette Middleton, Ralph Morris, Jim Price, Chris Walcek (see Attachment A: Roster)

Council Members: Jim Hammitt (Council Chair)

EPA Staff: Stephanie Sanzone (Designated Federal Officer), SAB Staff Office; Jim DeMocker, Office of Air and Radiation

Other: Andrew Childers, BNA Daily Environment Report; Molly Davis, Inside Washington; Leland Deck, Stratus Consulting; Jim Neumann, Industrial Economics; Henry Roman, Industrial Economics; Tyra Walsh, Industrial Economics

Purpose:

The purpose of the teleconference meeting was to discuss additional materials provided by the EPA regarding air emissions inventories and air quality modeling scenarios prepared for the Second Section 812 Prospective Study.

Summary of Discussions:

The meeting was announced in the Federal Register¹ and proceeded according to the meeting agenda². Stephanie Sanzone, Designated Federal Officer for the Air Quality Modeling Subcommittee (AQMS), convened the call at 12:00 p.m. Eastern Time and called the roll. Dr. Ted Russell, Chair of the AQMS, noted that the objective for the meeting was to consider information provided by EPA regarding adjustments to PM_{2.5} emissions estimates, as summarized in a June 14, 2010³ memorandum to Jim DeMocker from consultants at Industrial Economics, Inc. (IEc).

The following is a summary of the issues discussed and conclusions reached during the meeting.

Dr. Russell briefly summarized the AQMS activities prior to this meeting, noting that the subcommittee had reviewed the modeling report prepared to support the Second Prospective Study of Benefits and Costs of the Clean Air Act (the Section 812 study), and had found it appropriate for developing inputs needed for the 812 study. However, he noted that the AQMS had requested further information on EPA's process for using the Modeled Attainment Test Software (MATS) to process emissions estimates for primary particulate matter (PM) from the original analysis. At its May 4, 2010, meeting, the Advisory Council on Clean Air Compliance Analysis (the Council) approved the AQMS report and approved the AQMS approach for reviewing the subsequent revisions. The Council requested that the agency provide a

memorandum summarizing the methods and results of the PM adjustments, and asked the AQMS to review the memorandum and report back to the Council.

Dr. Russell noted that the purpose of today's meeting is to look at that memorandum, dated June 14, 2010, to see if it satisfies the Council's request. The memorandum presents the results of the reprocessing of emissions and MATS applied using monitoring data from 2000.

Jim DeMocker, EPA Office of Air and Radiation, thanked the panel for agreeing to look at this issue a final time, noting that the agency appreciated the helpful recommendations in the AQMS report. He noted that the Council and AQMS recommendations regarding the need for more detail on data choices and the interpretation of the results would be incorporated in a revised integrated 812 report, as would recommendations for future analyses (e.g., ammonia, climate/criteria pollutant interactions). He summarized the content of the June 14 memorandum, which includes adjustment to area sources and non-EGU point sources, with adjustment factors applied to CMAQ grid cell values. He noted that the memorandum explains the MATS process and shows the results of each processing step and documents the comparisons of CMAQ data with and without adjustment factors and the MATS processing results with and without adjustments.

Subcommittee members noted that the adjustments and MATS processing were an improvement, but asked about some anomalous results (e.g., a large difference between the crustal component with and without the CAAA for Tucson and Miami). Several members noted that the report might need a caveat that these anomalous results might be creating an over-estimate of the "crustal" benefit of CAAA. The 812 Project Team noted that it might be possible to check for plausible explanations in CAA program requirements (e.g., construction is a major source that is affected by the CAA) for areas where there are large differences between with and without CAAA scenarios.

Subcommittee members concluded that the June 14 memorandum provides a concise and understandable description of the process, and the results show that the adjustments meet the objectives of the 812 project.

Dr. Russell noted that the AQMS preferred a technical memorandum from the EPA, rather than from the contractors. He noted also that the memorandum did not address uncertainties, which is an important issue for the Council. He recommended that there be an additional cover memo from the EPA to address the question of uncertainties and how to interpret the results in the report. Mr. DeMocker noted that this issue would be taken up in the context of the integrated 812 report.

AQMS members agreed that the final integrated 812 report should reference the June 14 memorandum, and recommended that the agency prepare a cover note to describe the role and reason for the attached contractor memorandum and to discuss uncertainties. Several members also recommended that when PM benefits are estimated, the report should include the stacked bar charts to separate out which components of PM have a high degree of certainty (e.g., sulfate reductions) versus others that are less certain (e.g., crustal material, OC).

Dr. Russell agreed to draft a letter to the agency to indicate that the Council/AQMS had reviewed the June 14 memorandum and found the PM results appropriate for use in the 812 study context, note some questions with findings for crustal results for some cities and that these

should be reflected in the discussion of uncertainty in the 812 report. He noted further that the letter would indicate that the description of the process was clear and concise, and that an agency cover memorandum would be desirable to accompany the contractor memorandum. He noted that after AQMS concurrence the draft AQMS letter would need to be reviewed and approved by the Council.

The DFO adjourned the teleconference at 1:00 p.m.

Respectfully Submitted:

Certified as Accurate:

/signed/

/signed/

Stephanie Sanzone
Designated Federal Officer
EPA SAB Staff Office

Dr. Armistead (Ted) Russell,
Chair
Air Quality Modeling Subcommittee
Advisory Council on Clean Air
Compliance Analysis

NOTE AND DISCLAIMER: The minutes of this public meeting reflect diverse ideas and suggestions offered by panel members during the course of deliberations at the meeting. Such ideas, suggestions and deliberations do not necessarily reflect consensus advice from the panel. The reader is cautioned not to rely on the minutes to represent final, approved, consensus advice and recommendations offered to the Agency. Such advice and recommendations may be found in the final advisories, commentaries, letters or reports prepared and transmitted to the EPA Administrator following the public meetings.

**U.S. Environmental Protection Agency
Advisory Council on Clean Air Compliance Analysis
Air Quality Modeling Subcommittee, Augmented
with Members of the Council**

CHAIR

Dr. Armistead (Ted) Russell, Professor, Department of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, GA

COUNCIL MEMBERS

Dr. James K. Hammitt (COUNCIL Chair), Professor, Center for Risk Analysis, Harvard University, Boston, MA

Mr. Richard L. Poirot, Environmental Analyst, Department of Environmental Conservation, Vermont Agency of Natural Resources, Waterbury, VT

SUBCOMMITTEE MEMBERS

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Dr. David Chock, Independent Consultant, Bloomfield Hills, MI

Dr. Paulette Middleton, President, Panorama Pathways, Boulder, CO

Mr. Ralph Morris, Managing Principal, Air Sciences Group, Environ International Corporation, Novato, CA

Dr. James Price, Senior Scientist, Air Quality Division, Texas Commission on Environmental Quality, Austin, TX

Dr. Chris Walcek, Senior Research Scientist, Atmospheric Sciences Research Center, State University of New York, Albany, NY

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Materials Cited

The following meeting materials are available on the Council Web site, <http://www.epa.gov/advisorycouncilcaa>, at the [August 11, 2010 AQMS Meeting](#) page.

¹ Federal Register Notice Announcing the Meeting (75 FR 37794 - 37795)

² Agenda for March 11, 2010 Teleconference

³ Memorandum to Jim DeMocker, EPA, from Tyra Walsh, Henry Roman and Jim Neumann, Industrial Economics, Inc.: Description of the Adjustment to the Primary Particulate Matter Emissions Estimates and the Modeled Attainment Test Software Analysis (MATS) Procedure for the 812 Second Prospective Analysis, June 14, 2010