



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
230 SOUTH DEARBORN ST.  
CHICAGO, ILLINOIS 60604

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MAR 25 1991

Michael Koerber  
Technical Director  
Lake Michigan Air Directors Consor  
2350 East Devon Avenue, Suite 242  
Des Plaines, Illinois 60018

*Attachment*

REPLY TO ATTENTION OF:

Dear Mr. Koerber:

This letter is in response to your ozone modeling guidance request dated February 13, 1991. In your letter, you presented requests concerning the approval by the United States Environmental Protection Agency (USEPA) of the use of a non-reference version of the Urban Airshed Model (UAM) in the Lake Michigan Ozone Study (IMOS). We understand your concerns in this issue and appreciate the opportunity to comment on this issue relatively early in the planning process. The comments which follow have been coordinated with the Source Receptor Analysis Branch (SRAB) in USEPA's Office of Air Quality Planning and Standards (OAQPS).

With regard to the sole use of a revised version of the UAM without a side-by-side comparison with the reference (regulatory) version of the UAM, the USEPA recognizes that the IMOS model development will be the product of a major cooperative effort between the States bordering Lake Michigan, the USEPA, and contractors involved in the project. It is also recognized that a number of changes have been made in the UAM to allow for its improved application in areas near large bodies of water and that the use of the UAM for even a limited number of simulated days will involve a significant expenditure of time and funds. It is further noted that a substantial database for assessing the model's performance will be developed as the result of this effort. Under these circumstances, the USEPA agrees that, subject to the provisions below, a side-by-side comparison of the revised and reference modeling results is not needed at this time. The provisions governing this decision are the following:

1. A detailed protocol providing for model performance evaluations using the developed database must be agreed to by the States and USEPA prior to implementation.
2. At a minimum, the performance tests of the revised version should include those identified in the Guideline for Regulatory Application of the Urban Airshed Model. The final version of this guidance will be available in June of this year. You will be sent a draft copy of this guideline when it becomes available for your comment, but you must remember that the guidance is subject to change prior to its final release.

3. Model performance must fall within or surpass the performance ranges of the earlier, reference version of the UAM. Ranges for past performance of the reference version of the UAM will be included in the previously mentioned guidance document.

If any of these provisions are not met, a side-by-side comparison of the revised UAM and the reference UAM would be required by USEPA.

With regard to the use of the modeling package developed for the IMOS outside of the IMOS domain, the extent to which the model is to be customized for the IMOS is unclear at this time. Further, it is unclear how extensive the database required to support the model needs to be. Given these concerns, the USEPA's position is that a straight forward use of the IMOS-derived modeling system outside of the IMOS domain would not be acceptable without an intensive field study for the area in question and an adequate performance evaluation subject to the provisions discussed above or a side-by-side comparison of the modeling results with those obtained from the use of the reference UAM. The revised version of the UAM must be shown to perform better than the regulatory version of the UAM in any area where a revised version of the UAM is to be used.

The above guidance should adequately address your current concerns. If you have any questions on this guidance, please contact Edward Doty at 312-886-6057. The USEPA looks forward to further cooperation with the Lake Michigan Air Directors Consortium, States, and contractors in this ozone model development effort.

Sincerely yours,



David Kee, Director  
Air and Radiation Division

cc: LADCO Technical Steering Committee Members



5/2 Directors *Received*  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Office of Air Quality Planning and Standards  
Research Triangle Park, North Carolina 27711

*copy* *Keep Receipt AT&B AFB*  
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April 26, 1991

MAY 01 1991

REGULATION DEVELOPMENT BRANCH  
U.S. EPA, REGION V

MEMORANDUM

SUBJECT: Use of Nonguideline Versions of Urban Airshed Model

FROM: Joseph A. Tikvart, Chief *Edwin Z. Long for JRT*  
Source Receptor Analysis Branch (MD-14)

TO: Regional Modeling Contact  
Regions I-X

As you are aware we will soon be applying the Urban Airshed Model (UAM) to a number of ozone nonattainment areas across the country. One such application will be in the Lower Lake Michigan area, including Chicago. The Lake Michigan Air Directors Consortium, who will be doing the modeling, has proposed to conduct an extensive study to improve on UAM for application to this area. They have asked Region V for permission to use the modified UAM that comes out of the study for the ozone State Implementation Plan.

Attached is a letter from Region V to the Consortium, granting them permission to use the model that comes out of the study. Note that the permission to use this nonguideline model is granted without the usual requirement for a side-by-side (Interim Procedures) type of model evaluation because of the extensive study on which this application will be based. However, the letter also indicates that if the model is to be used outside of the study area, the standard performance evaluation would be required.

This letter is being furnished to you in the anticipation that you may also receive requests to modify UAM, or perhaps to apply the Lower Lake Michigan version of the model. Unless the State plans to conduct an extensive model development study, comparable in scope to the Lake Michigan study, any nonguideline version of UAM will need to undergo a performance evaluation, pursuant to Section 3.2.2 of the Guideline on Air Quality Models (Revised).

Attachment

cc: D. Grano  
E. Meyer