UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

OCT 9 0 1992

MEMORANDUM

SUBJECT: Demonstrating Attainment of the Ozone National Ambient Air Quality Standards (NAAQS) with the Urban Airshed Model (UAM) for St. Louis

FROM: Joseph A. Tikvart, Chief
Source Receptor Analysis Branch, TSD (MD-14)

TO: Royan W. Teter, Regional Ozone Modeling Contact
Air Planning and Development Section, Region VII

In response to your request, the Model Clearinghouse has reviewed the Regional Office proposal to allow a potential modeled exceedance in the St. Louis UAM demonstration for ozone. The Missouri Department of Natural Resources (DNR) is proposing to model 12 of the highest ranked ozone days occurring during four meteorological episodes from 1987-1991. This far exceeds the Environmental Protection Agency's (EPA) guidance on the number and type of days to be modeled. Furthermore, the proposed episode days described in the Photochemical Modeling Protocol for the St. Louis Metropolitan Area represent the highest ranked ozone days in the St. Louis airshed.

Consensus has been reached that one modeled exceedance may be accepted for the St. Louis UAM Application. For clarification, a modeled exceedance refers to any simulated ozone value >0.12 ppm. Therefore, we understand that the St. Louis UAM demonstration will indicate values $\leq$0.12 ppm for every hour and every grid cell for all modeled days except one. A limit will not be imposed on the number of values >0.12 ppm for the single day when an exceedance occurs, consistent with the way in which ozone NAAQS are typically interpreted.

Since the highest ranked ozone episodes for all meteorological regimes are proposed for modeling, we believe the attainment test remains sufficient. The DNR could have chosen to model a minimum of 3 days and meet minimally acceptable criteria suggested by EPA's Guideline for Regulatory Application of the UAM. However, assurance that designed ozone precursor control strategies will be successful is strengthened by considering 12 high ozone days in the modeling demonstration. Consequently, we

believe the procedure being followed in the St. Louis demonstration is consistent with the spirit of Section 6.4 of the Guidance for Regulatory Application of the Urban Airshed Model. In that section we note that States may opt for more comprehensive statistical testing of modeling results in estimating attainment. Use of a much larger number of episodes with some modeled exceedances is consistent with this notion. We understand that this optional approach has been approved by the Regional Office and is included in the protocol.

If you have any questions, please contact Ned Meyer at 919-541-5594.

cc: E. Doty, Region V
D. Grano, MD-15
N. Meyer, MD-14
R. Scheffe, MD-14
D. Wilson, MD-14

FY-93 MODEL CLEARINGHOUSE MEMORANDA

Date	Region	Subject
10/7/92	IV	Response to Proposal to Allow Credit for a Stack Height Increase at the Dade County Resource Recovery Facility, Dade County, Florida
10/28/92	V	Demonstrating Attainment of the Ozone National Ambient Air Quality Standards (NAAQS) with the Urban Airshed Model (UAM) for Detroit
10/28/92	VII	Demonstrating Attainment of the Ozone National Ambient Air Quality Standards (NAAQS) with the Urban Airshed Model (UAM) for St. Louis
10/28/92	IV	Attainment Demonstrations using the Empirical Kinetics Modeling Approach (EKMA)