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MEMORANDUM

SUBJECT: Use of CALGRID for an Attainment Demonstration

FROM: Joseph A. Tikvart, Leader *J. Tikvart*
Air Quality Modeling Group (MD-14)

TO: Ian Cohen, Regional Ozone Modeling Contact
Regional Office I

We have reviewed your memorandum dated September 5, 1997 requesting concurrence on use of the CALGRID model to demonstrate attainment of the ozone standard for areas in Maine, New Hampshire, Massachusetts, and Rhode Island. In the interest of meeting the April, 1998 attainment demonstration deadline, we can concur with your recommendation. However, we have the following comments regarding the performance comparison of the CALGRID and Urban Airshed Models-Version IV (UAM-IV) models.

Appendix W of 40 CFR Part 51 states that a model performance evaluation protocol should be prepared whenever an alternative to a guideline model is being considered in a regulatory application. The information that you provided does not indicate whether the performance measures and scoring scheme were developed as a precondition to the evaluation. Other comments:

- * It is unclear why August 15-16 were not also included in the evaluation for the 1987 episode.
- * The relevance of Biogenic Emissions Inventory System-Version 2 (BEIS2) in the CALGRID evaluation is unclear.
- * There was no indication that precursor pollutants were considered in the evaluation, as done in other UAM comparisons. Evaluation of precursors has been discussed within Federal Advisory Committee Act, Ozone Transport Assessment Group, and the North

American Research Strategy for Tropospheric Ozone. Some quantitative and temporal comparisons for precursors would have been helpful in supporting the technical basis for using CALGRID.

- * UAM-IV is clearly better for the Unpaired Peak Accuracy test. The significance of this finding for the evaluation and for use in future attainment demonstrations is not addressed.

Please consider the above comments. Nevertheless, if you are satisfied with the results of the performance evaluation as they currently stand, then we concur with your recommendation to use CALGRID for the attainment demonstration modeling. If you have any questions, please feel free to contact me at (919) 541-5562.

cc: Dennis Doll, AQMG (MD-14)
Ellen Baldrige, AQMG (MD-14)
Edwin Meyer, AQMG (MD-14)
Regional Modeling Contacts (Regions I-X)