



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION I  
JOHN F. KENNEDY FEDERAL BUILDING  
BOSTON, MASSACHUSETTS 02203-0001

11/12/96

Steve Dennis  
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Department of Environmental Protection  
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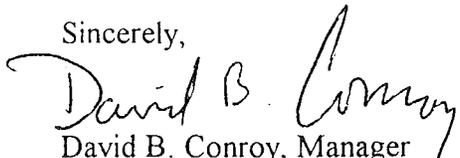
Dear Mr. Dennis:

EPA Region 1 and EPA OAQPS have reviewed your draft Technical Memorandum dated October 18, 1996 requesting to use CALGRID in place of UAM IV for your attainment demonstration for ozone. While we feel CALGRID does have potential, there are some concerns which must be addressed. We suggest revising the document to address the following three items:

- 1) The single episode presented in the report is not sufficient to make the determination that one model performs better than the other. EPA believes that model performance for a minimum of three primary episode days is required in order to make a judgement regarding the acceptability of CALGRID. Performance comparisons for all primary days should be included in the final report. This should be readily doable by Massachusetts given that EarthTech is scheduled to run CALGRID for all of the episodes previously run by Massachusetts.
- 2) The report indicates BEIS2 was used with both CALGRID and UAM-IV. It is our understanding that the chemistry used in CALGRID is the same as that used in UAM-IV. Furthermore, through the OTAG process it has been determined that UAM-IV chemistry does not handle the increased isoprene in the BEIS2 inventory correctly. Thus, the accuracy and credibility of modeling done to date using UAM-IV with BEIS2 has been questioned. Current EPA guidance specifically recommends using BEIS with UAM-IV. In UAM-IV modeling, BEIS2 is recommended only to be used as a sensitivity check. Thus, we feel that the final report should address why BEIS2 is appropriate and should be accepted for use with CALGRID.
- 3) The report indicates eddy diffusivity was set to .02 m<sup>2</sup>/s in UAM-IV and 1 m<sup>2</sup>/s in CALGRID. Is it appropriate for these models to use different values? The report should provide rationale why the models need different values. Otherwise, it might appear this parameter was changed to give one model an advantage over the other.

If you have any questions about these items, please contact Ian Cohen at 617-565-3568.

Sincerely,

  
David B. Conroy, Manager  
Air Quality Planning Unit



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