UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711
February 15, 1989

Steve
AI

MEMORANDUM

SUBJECT: Denver PM_{10} SIP

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

TO: Douglas M. Skie, Chief
Air Programs Branch, Region VIII (8AT-AP)

In response to your request, the Model Clearinghouse has reviewed your draft letter to the State of Colorado regarding PM_{10} modeling procedures for Denver and offer the following comments.

Regarding your guidance to the State on background concentrations (Paragraph 1), our staffs have had discussions with respect to the use of Limon and Estes Park data for background. We agreed that these data (averaged together) could be used for determining the annual background level. We also suggested that you attempt to follow existing guidance with respect to the 24-hour background levels. Thus, while your guidance in Paragraph 1 may indeed be the only thing that can be done, please make sure it is consistent with Section 4.0 and 5.0 of Appendix D of the PM_{10} SIP Development Guideline. Also, whatever procedure is finally agreed upon should be spelled out in a written modeling protocol before any modeling is done, to avoid misunderstandings later and to promote consistency of approach.

Regarding your response to the base year actual/allowable emissions (Paragraph 2), the intended use of the base year model estimates is not clear to us. If these estimates are to be used for purposes of comparison to air quality data or for purposes of refining emission inventories through use of receptor models, then the actual emissions are appropriate to use in the dispersion model. However, if the base year model estimates are to be used for establishing the design value, then allowable emissions (to the extent that sources have current emission limits) should be used.

In regard to your Paragraph 5 (Use of the RAM model), there is no need to provide direction to the State on how to calculate annual averages from the 24-hour estimates. The RAM model

calculates the annual average automatically (unless you specifically direct the model not to do so) from the 1-hour estimates. Also, we do not think that the expected annual modeled mean should be determined through rolling 3-year averages. Section 6.3 of the PM_{10} Development Guideline indicates that a simple average of the five, 1-year annual means is the appropriate indicator of the expected annual mean, for comparison with the statistical form of the NAAQS. To cover these concerns, we suggest that you replace the last three sentences of Paragraph 5 with:

> Compliance with the annual mean is established when the 5-year average of the annual modeled means at all receptors is less than or equal to 50 $\mu g/m^3$.

If you have any further questions, please have your staff contact Dean Wilson (FTS 629-5683) or Ken Woodard (FTS 629-5351).

cc: S. Reinders, SRAB (MD-14)
M. Smith, SDPMPB (MD-15)
D. Stonefield, SDPMPB (MD-15)
K. Woodard, SDPMPB (MD-15)

FY 89 MODEL CLEARINGHOUSE MEMORANDA

Date	Region	Subject
10/11/88	VI	Use of ISC UNAMAP 6, Change 7
11/07/88	VI	Compilation of Most Recent, Available 5-Year Meteorological Data By Texas
11/08/88	V	State of Indiana Meteorological Preprocessor Program
11/09/88	VI	Information Regarding Refinery Tank Farms and Their Rural/Urban Designation
11/09/88	VI	Request for Use of ISC 6.2
11/21/88	VI	Request for Use of ISCST and ISCLT Version 6.2 in Twin Oak Steam Electric Station PSD Application
11/28/88	VI	Request for Use of ISCST and ISCLT Version 6.2 in Formosa Plastics PSD Application
01/30/89	VIII	E. Helena Lead SIP
02/08/89	IV	Yates Power Plant GEP SIP
02/10/89	VIII	Denver PM_{10} SIP