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

March 20, 1989

Kent
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MEMORANDUM

SUBJECT: Proposed Region VI Responses to Louisiana About Modeling Issues

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

TO: Gerald Fontenot, Chief
Air Programs Branch, Region VI (6T-A)

In response to your request the Model Clearinghouse has reviewed your position on the 50km limit for modeling and on the use of actual emissions versus allowable emissions. We offer the following comments:

1. 50km limit for modeling. As you correctly point out, the Guideline on Air Quality Models (Revised) does indicate that the useful distance for the preferred models is 50km. It should be recognized however, that "50km" is not a magic number, inside of which the Gaussian models are reliable and outside of which they are so inaccurate that they should not be used. In fact, a number of Regions/States have used these models as screening techniques (and the Clearinghouse has agreed with their use) well beyond 50km when:

a. there is a regulatory requirement to make an estimate (Class I areas may not be the only situation where there is a need to make an estimate beyond 50km), and

b. the estimate, generally recognized as being a conservative screening technique, does not cause or contribute to a violation of the NAAQS or PSD increments.

To the extent that in the latter case a source is found to cause or contribute to a violation, it may be necessary to apply long-range transport models, on a case-by-case basis.

Attached is a copy of a protocol for the NC TSP SIP revision, developed by Region IV in 1986. (The Model Clearinghouse perspective on that protocol is also attached.) Note that Region IV required the analysis to include "...major sources beyond 50km that could affect the NAAQS analysis." We believe that this concept of modeling beyond 50km can be applied to other

situations, including Louisiana as appropriate. Thus, while the useful distance of the preferred models is 50km, one should not arbitrarily cut off all impacts at that distance. If the source is considered important enough to be modeled, its impact at all grid points should be calculated, and not cut off arbitrarily at exactly 50km.

2. Use of actual emissions versus allowable emissions. As you note, OAQPS (the Model Clearinghouse) is currently preparing a response to this issue and your staff has seen a draft of this response. Thus, our reply is limited to an interpretation of Table 9-1 of the Guideline. We agree that the footnote "***" to Table 9-1 not only allows but requires that if the annual operating factor averaged over the most recent 2-year period is not representative, then a more appropriate factor should be used. The basis for determining the most representative operating factor requires a case-by-case evaluation and judgement, which should be documented. If, in your case, the use of the maximum allowable operating factor is most representative of conditions that will likely occur in the future, then we support your position.

If you have any questions, please contact me.

Attachment

cc: D. deRoeck, NPPB (MD-15)
D. Grano, SDPMPB (MD-15)
S. Reinders, SRAB (MD-14)
D. Wilson, SRAB (MD-14)