

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region 6  
1445 Ross Avenue, Suite 1200  
Dallas, Texas 75202

August 25, 1989

Reply To: 6T-AN

MEMORANDUM

DATE: August 25, 1989

SUBJECT: Texas Air Control Board (TACB) Inquiry Regarding Allowable  
Emissions in PSD NAAQS Analyses

FROM: William B. Hathaway  
Director  
Air, Pesticides & Toxics Division (6T)

TO: John Calcagni  
Director  
Air Quality Management Division (MD-15)

I have attached for your information a recent letter from TACB that discusses the implications of your March 16, 1989, memorandum that clarified the use of Guidelines on Air Quality Models (Revised) Table 9-1 emissions in PSD NAAQS analyses. I have also included my reply to TACB.

No specific response to this memo is expected, but I do encourage your attention to point three in TACB's letter, which discusses the implications of the March 16 memo on inventorying baseline sources. I believe that this calculation of "potential to emit" may be required in many states.

Should you have questions or comments, please call me or have your staff call Jim Yarbrough.  
Thank you.

Attachments

cc: William Laxton (MD-14)

AUG 25 1989

REPLY TO: 6T-AN

Mr. Steven Spaw, P.E.  
Deputy Executive Director  
Texas Air Control Board (TACB)  
6330 Highway 290 East  
Austin, Texas 78723

RE: Your August 3, 1989, Letter About Allowable Emissions in Prevention of Significant Deterioration (PSD) Modeling for National Ambient Air Quality Standards (NAAQS)

Dear Mr. Spaw:

Thank you for your August 3, 1989, letter providing the TACB's viewpoints on John Calcagni's recent decision about the use of allowable emissions in NAAQS analyses. I would like to respond to the points you raised in your letter in the order you presented them.

First, you mentioned that the change to allowable emissions in modeling background sources represents "a significant change in the PSD rules." Based upon input from my staff, I believe that the use of allowables does not signal a change in the PSD regulations; instead, it changes the 1980 PSD Workshop Manual (which itself is currently being revised), which was designed as an implementation aid and was not subjected to public comment before its release. For Texas PSD applicants, I believe that the change from the use of actuals to allowables in PSD NAAQS analyses was neither disruptive nor surprising. Since at least early 1988, Region 6 has commented to PSD applicants that emissions as noted in Table 9-1 of the Guideline on Air Quality Models (Revised) or allowable emissions must be used in PSD NAAQS analyses. In fact, most PSD applicants had been using allowables in modeling background sources (both for NAAQS and PSD increments) before that time. Further, I understand that State permit modeling requires the use of allowable emissions of background sources in determining compliance with air quality standards.

Thus, given the nature of the Workshop Manual as an aid (not a regulation), the length of time Region 6 advised TACB of the need for this change prior to my May 9, 1989, letter, the rationale provided in John Calcagni's March 16, 1989, memo (previously forwarded to TACB), and the provisions of my May 9, 1989, letter, I believe that this decision does not constitute a change in the PSD program of the type necessary to warrant federal rulemaking procedures.

Second, you made the suggestion this decision is inconsistent with the Alabama Power court case results. Based upon my staff's analysis of your discussion and the Alabama Power case, I do not believe the use of allowable emissions for PSD NAAQS modeling is restricted by the Alabama Power decision. In your August 3 letter (page 2) the statement is made "The sum of the baseline and PSD increment should equal the value that is compared to the NAAQS." I disagree and I believe this is one source of confusion in this complicated issue. In PSD modeling the NAAQS should be compared against the total air quality. The total air quality is the sum of concentrations due to current point sources (including those explicitly modeled using emissions as defined in Table 9-1 of the Guideline and those not modeled); concentrations due to current area and mobile sources; concentrations due to natural sources and the predicted concentrations resulting from the applicant's proposed new emissions. Because total air quality is dependent upon modeled results, the emission inputs to the modeling influence the total air quality. John Calcagni's March 16, 1985 memo recognized the correctness of applying Guideline Table 9-1 (e.g., allowable) emissions over actual emissions in calculating total air quality. I believe it is based upon similar logic to that behind the Texas policy for air quality standards -- namely, requiring emissions inputs as near to legally allowable emissions as practicable.

Third, you made the point that this action would increase workload requirements for regulatory agencies. The Region 6 - TACB discussions are proceeding on the most efficient way to estimate "potential to omit" for baseline sources and to incorporate these numbers into TACB's Point Source Data Base System (PSDB). This is a necessary step to realize full application of John Calcagni's March 16 memo. However, I do not believe this is a decisive issue in halting use of allowable emissions for all affected (i.e., including non-baseline) sources. Please note that I remain interested in identifying a mutually agreeable way to compile such a "potential to omit" data base, and I appreciate your comment.

Fourth, you mentioned that this decision will have a significant impact on the regulated community. As our staffs have discussed several times, it is not our intention to unfairly restrict further growth in industrialized areas of Texas. However, in a PSD modeling analysis, it is necessary to compute a total air quality concentration that is a reasonable reflection of what explicitly modeled background sources can legally emit. John Calcagni's March 16, 1989 memo relates these specifics. Because many Texas PSD sources in industrialized areas of the State have provisions for burning fuel oil but rarely, if ever, do so, I suggest that a plan be proposed that industry agree to a reduction in its permitted emissions of (in this case) sulfur dioxide. This will decrease the probability that a NAAQS violation will be modeled in a PSD analysis. Finally, although I can appreciate the reference in your August 3 letter (page 2) to page 52718 of the August 7, 1980, Federal Register, this passage relates to calculating increment consumption without total air quality to compare against a NAAQS.

I hope that this provides additional information regarding the Region 6 policy in applying Guideline Table 9-1 emissions in PSD NAAQS modeling. Additional discussions will be pursued by our staffs in an effort to effect this policy as smoothly and equitably as possible. Please do not hesitate to call me with any further questions you may have.

Sincerely yours,

[Original signed by GERALD FONTENOT]

William B. Hathaway  
Director  
Air Pesticides & Toxics Division (6T)

**TEXAS AIR CONTROL BOARD**  
6330 HWY. 290 EAST, AUSTIN, TEXAS 78723, 512/451-5711

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August 3, 1989

Mr. William B. Hathaway  
Director  
Air, Pesticides and Toxics Division (6t)  
U.S. ENVIRONMENTAL PROTECTION AGENCY  
Region 6  
1445 Ross Avenue, Suit, 1200  
Dallas, Texas 75202

Re: Clarification of Use of  
Allowable Emissions

Dear Mr. Hathaway:

This is in response to your letter of May 9, 1989 regarding the use of allowable emissions in Prevention of Significant Deterioration (PSD) National Ambient Air Quality Standards (NAAQS) analyses.

The Texas Air Control Board (TACB) staff has conducted a preliminary review of the March 15, 1989 memo from Mr. John Calcagni on Use of Allowable Emissions for NAAQS Impact Analyses Under the Requirements for PSD. We believe it would be appropriate for the Environmental Protection Agency (EPA) to go through proper federal rulemaking procedures before moving from the use of actual emissions to the use of allowable emissions for the NAAQS analysis performed in PSD permit review. There are four primary reasons we believe this would be appropriate:

- (1) The use of allowable emissions represents a significant change in the PSD rules. The PSD regulations at 40 CFR 52.21(k) state that, "All estimates of ambient concentrations required under this paragraph shall be based on the applicable air quality models, data bases, and other requirements specified in the "Guideline on Air Quality Models (Revised)" (1986), which is incorporated by reference." Page 1-1 of the "Guideline on Air Quality Models (Revised)" (GAQM) states, "This guideline recommends air quality modeling techniques that should be applied to State Implementation Plan (SIP)[FOOTNOTE 1] revisions for existing sources and to new source reviews [FOOTNOTE 2], including PSD[FOOTNOTE 3]." Reference 3 is the "Prevention of Significant Deterioration Workshop Manual, 1980" (Manual). Page I-C-20 of the Manual states, Emissions inventories for the last two categories are for the purpose of demonstrating compliance with the applicable NAAQS and should be gathered and compiled in a similar manner to the increment emissions

inventory. For existing sources, this inventory should be based on actual emissions if data are available." The "last two categories" of emission inventories refers to inventories of (1) existing emission sources, and (2) permitted sources which are not yet operating. This is a clear statement that actual emissions should be used for the NAAQS analysis. To change to the use of allowable emissions for the NAAQS analysis, the Manual should be changed and since it is referenced in the GAQM which is incorporated in the PSD regulations by reference, the only proper process for making this change is to follow the appropriate federal rulemaking procedures.

- (2) The use of allowable emissions represents a significant departure from the PSD program's reliance on actual emissions consistent with the Alabama Power court case.

We believe that the general import of the PSD rules as established consistent with the Alabama Power court case clearly indicates that the NAAQS analysis should be performed with actual emissions. The comments in the Federal Register (FR) of August 7, 1980 state that the baseline and PSD increment should be determined with actual emissions. Furthermore, the baseline should be established with monitoring data, which reflects actual emissions. Specifically on page 52718 of the August 7, 1980 FR, "Increment consumption or expansion is directly related to baseline concentration. Any emissions not included in the baseline are counted against the increment. The complementary relationship between the "baseline" and "increment" concepts supports using the same approach for calculating emissions contributions to each. Since the Alabama Power decision and the statute both provide that actual air quality be used to determine baseline concentrations, but provide no guidance on increment consumption calculations, EPA has concluded that the most reasonable approach, consistent with the statute, is to use actual source emissions, to the extent possible, to calculate increment consumption or expansion." The sum of the baseline and PSD increment should equal the value that is compared to the NAAQS. If both parts of the sum are to be determined with actual emissions, the only logical conclusion is that the sum should be determined with actual emissions. Thus, it is inconsistent and contrary to the intent of the August 7, 1980 FR and the Alabama Power court case to use allowable emissions to calculate the concentrations to be compared to the NAAQS while performing the air quality review for PSD permits.

- (3) The use of allowable emissions would impose a significant increased workload on state (or federal) regulatory agencies.

The Point Source Data Base (PSDB) maintained by the TACB contains permit allowable emissions and actual emissions. For sources that are not permitted, it does not contain the value for the "potential to emit" which is the only interpretation for all tables for these

sources. "Potential to emit" would be the lower of: (1) the highest emission rate the source could emit without undertaking a modification requiring a state or federal permit, or (2) the emission rate limitation established consistent with state or federal rules applicable to the source. To collect this data for the PSDB, the TACB would have to conduct an extensive inventory of all non-permitted sources in Texas. This would be an expensive and time-consuming effort that would need to be addressed through grant negotiations. Furthermore, this would increase the resources required in evaluating each PSD permit application which should also be addressed through grant negotiations. Federal rulemaking procedures would allow all affected parties the chance to comment on the resource impacts of this requirement and for those impacts to be considered in establishing the final rules. As discussed at our meeting on June 7, 1989, we are preparing resource estimates to assist both agencies in examining this issue.

- (4) The use of allowable emissions may have a significant impact on the regulated community which should be considered through the rulemaking process.

The result of moving to allowable emissions will be that it may not be possible to issue PSD permits involving increases in sulfur dioxide emissions in large areas of Harris, Galveston, Jefferson, Orange and Nueces counties. This is based upon a study performed by Radian Corporation for the TACB in 1978 which showed large areas exceeding the NAAQS in these counties if the sources were modeled at permit allowable emissions. This result is in direct conflict with the quote on page 52718 of the August 7, 1980 FR, "EPA believes it is unwise to restrict source growth based only on emissions a source is permitted to emit but which in many instances have not been and are not likely to ever be emitted." Federal rulemaking procedures could allow all interested parties the chance to comment on the impact of these proposed changes.

We look forward to resolving this matter as part of our current dialogue regarding PSD permitting matters.

Sincerely,

Steve Spaw, P.E.  
Deputy Executive Director

cc: Mr. Robert E. Layton, Jr., Regional Administrator, U.S. Environmental Protection Agency, Region 6, Dallas