



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
RESEARCH TRIANGLE PARK, NC 27711

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OFFICE OF  
AIR QUALITY PLANNING  
AND STANDARDS

**MEMORANDUM**

**SUBJECT:** Clarification of Region 6 Clearinghouse Request on "Proposed Screening Technique for Class I Increment Analysis"

**FROM:** Richard A. Wayland, Director *Richard A. Wayland*  
Air Quality Assessment Division (C304-02)

**TO:** Jeff Robinson, Chief  
Air Permits Section (6PD-R)

The purpose of this memorandum is to provide clarification on language in the April 18, 2008 memo from Region 6 to our Model Clearinghouse for concurrence on their proposed screening techniques for Class I increment analysis. Based on review of the Region 6 memo by EPA's Office of General Council (OGC), it is necessary to provide these clarifications to be consistent with guidance in EPA's *Guideline on Air Quality Models* ("Guideline"), published as Appendix W to 40 CFR Part 51, and current interpretation of that guidance by OGC. We are therefore providing the language changes outlined below to the Region 6 memo to ensure this consistency with the Guideline.

The first clarification relates to the characterization by Region 6 of requirements under the Guideline contained in the first paragraph of their "Background" section, i.e.,

"Our regulatory interpretation is that removal of increment consuming sources without consideration of their potential contribution to an increment impact analysis is prohibited under Section 7.2.1.1(a) of 40 CFR Part 51, Appendix W (*Guideline on Air Quality Models* ("Guideline"))."

The review by OGC necessitates the following language change:

"Our understanding is that removal of sources in the affected areas from an emissions inventory without consideration of their potential contribution to an increment impact analysis is inappropriate under Section 7.2.1.1(a) of 40 CFR Part 51, Appendix W (*Guideline on Air Quality Models* ("Guideline")). This provision establishes the objective to include the impact of all increment consuming sources in the design concentration."

The second clarification relates to the fourth paragraph of their “Background” section, i.e.,

“In response to our request to include all increment-contributing sources, the applicant proposed the use of an alternative approach to identify sources to be eliminated from the modeled increment inventory. We continue to believe that it is in appropriate to use screening techniques to eliminate sources from the modeled increment inventory. However, we also recognize the unique computational challenge this may create with modeling several hundred sources for the three simulation years using the CALPUFF modeling system. Therefore, while we continue to believe it inappropriate to eliminate sources from the model increment inventory, we believe that screening techniques can be used to provide a preliminary and conservative estimate of the impact of more distant sources in a cumulative increment analysis without the necessity of explicit characterization of such sources in a refined modeling application.”

The review by OGC necessitates the following language change:

“In response to our request to include all increment-contributing sources, the applicant proposed the use of an alternative approach to identify sources to be eliminated from the modeled increment inventory. We generally believe that it is inappropriate to use screening techniques to eliminate sources from the modeled increment inventory. However, we also recognize the unique computational challenge this may create with modeling several hundred sources for the three simulation years using the CALPUFF modeling system. Therefore, we believe that screening techniques can be used to provide a preliminary and conservative estimate of the impact of more distant sources in a cumulative increment analysis without the necessity of explicit characterization of such sources in a refined modeling application.”

The third, and final, clarification relates to the first paragraph of their “EPA Region 6 Evaluation” section, i.e.,

“The most correct method from both a technical and regulatory perspective should have been to include impacts from all increment affecting sources (both consuming and expanding sources), rather than using screening techniques to eliminate the impacts of some sources from an inventory. However, recognizing the potential computational challenge of modeling several hundreds sources for three simulation years with the CALPUFF modeling system, we believe it should be possible to utilize a combination of screening and refined modeling techniques to estimate the cumulative contribution to increment. Exceedances of the 24-hour SO<sub>2</sub> increment have already been identified by previous modeling; therefore, EPA Region 6 seeks to implement a method to account for the potential impacts of increment consuming sources, but to focus the inclusion of the additional increment affecting sources to areas that our analysis indicates a higher potential for cumulative impact with the current source under review.”

The review by OGC necessitates the following language change:

“The preferred method from both a technical and regulatory perspective is to include emissions from all sources in the affected area (both increases and decreases) rather than using screening techniques to eliminate the emissions of some sources from an inventory. However, recognizing the potential computational challenge of modeling several hundred sources for three simulation years with the CALPUFF modeling system, we believe it is possible to utilize a combination of screening and refined modeling techniques to estimate the cumulative contribution to increment from all sources in the area. Exceedances of the 24-hour SO<sub>2</sub> increment have already been identified by previous modeling; therefore, EPA Region 6 seeks to implement a method to account for the potential impacts of all sources in the area, but to focus the explicit characterization of source emissions to areas where our analysis indicates a higher potential for cumulative impact with the current source under review.”

This memorandum will be added to the Model Clearinghouse record along with the original request memo from Region 6 and the OAQPS model clearinghouse response memo.

cc: Bill Harnett  
Tyler Fox  
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Michael Ling  
Roger Brode