Draft Guidance on the Preparation of Clean Air Act Section 179B Demonstrations for Nonattainment Areas Affected by International Transport of Emissions

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Public draft available for review

Support Center for Regulatory Atmospheric Modeling (SCRAM)







SCRAM RSS Feed Subscribe to this feed to

receive updated information automatically

This website provides access to air quality models and other mathematical simulation techniques used in assessing control strategies and source impacts.

Air Quality Models

- Dispersion Modeling
- Photochemical Modeling
- Receptor Modeling

Modeling Applications and Tools

- Photochemical Modeling Applications
- Photochemical Modeling Tools
- Dispersion Modeling Applications
- Multipollutant Modeling Applications

Announcements

01/13/2019 - The Draft Guidance on CAA 179B Demonstrations is now available for review.

12/06/2019 - A Model

Clearinghouse Concurrence Memorandum to Region 6 regarding the use of AERCOARE-AERMOD as an alternative model in the Gulf of Mexico (SPOT DWP) has

 "EPA will accept feedback on the draft guidance through March 10, 2020. Interested stakeholders can submit comments to Docket ID No. EPA-HQ-OAR-2019-0668. For more information on submitting comments to the docket, see the memorandum to this Docket ID."



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179B Relief and Applicability

Section 179B relief is limited to nonattainment area requirements, and only speaks to relief from (1) the attainment demonstration requirement and (2) the requirement that EPA determine whether an area failed to attain by the attainment date (and reclassify as appropriate). It does not specifically address EPA authority to do any of the following:

- Exclude monitoring data influenced by international transport from regulatory determinations related to an area's designation as attainment or nonattainment (however, if an exceedance or violation is event-related, it may be able to qualify as an exceptional event, as described in Section 3.2 of this guidance).
- Classify an area with a lower classification than indicated by actual air quality;
- Relax any mandatory control measures associated with the area's classification;
- Redesignate a nonattainment area to attainment without meeting the other attainment plan requirements of CAA section 107(d)(3); or
- Address interstate transport SIP obligations under CAA section 110(a)(2)(D)(i), the "good neighbor" provision.

Despite the title of section 179B ("International Border Areas"), EPA has twice affirmed in recent years its interpretation that this provision is not restricted to areas adjoining international borders. As explained in these instances, and as further detailed later in this document, domestic ozone air quality can be affected by sources of emissions located across United States borders in Canada and Mexico, and under certain circumstances, from sources in other continents. Additionally, in his April 12, 2018, Memorandum for the Administrator of the Environmental Protection Agency ("Promoting Domestic Manufacturing and Job Creation — Policies and Procedures Relating to Implementation of Air Quality Standards"), the President directed EPA to "not limit its consideration of demonstrations or petitions to those submitted by States located on the borders of the United States with Mexico or Canada, but rather consider[] section 179B demonstrations or petitions submitted by any State, including but not limited to those located in the Western United States." Nevertheless, EPA recognizes that technical demonstrations for non-border areas may necessitate additional technical rigor and resources, as explained below.

- 179B relief is limited to:
 - Allow SIP modeling that does not show attainment
 - Prevent a reclassification if attainment date passes without attaining the standard
- Not just border areas.
 - This was decided in previous implementation rules
 - border areas with shared airsheds may be more obvious



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Focus: Intl Anthropogenic Emissions

1.3. Scope and Definition of International Emissions

This guidance provides examples of recommended technical analyses that an air agency can consider demonstrating either that:

- 1) its SIP would be adequate to show attainment but for international emissions; or
- 2) the area would have attained the NAAQS by the area's attainment date but for international emissions.

EPA expects section 179B demonstrations to be developed in a manner consistent with the CAA principles and practices used in attainment plans. The overall plan requirements for nonattainment areas, as identified in Subpart D of the Act, call for plans to include provisions that: (i) provide for implementation of reasonably available control measures, (ii) require reasonable further progress, (iii) include a comprehensive inventory of actual emissions from all sources, (iv) identify and quantify the allowable emissions from major new or modified stationary sources, (v) require permits for new of modified major stationary sources, and (vi) include emission limitations and such other control measures as may be necessary or appropriate to provide for attainment. Each one of these mandatory planning requirements is linked to anthropogenic emissions. To promote consistency between the nonattainment planning requirements and the corresponding section 179B provisions for relief from certain elements of those requirements, EPA recommends that section 179B demonstrations focus on the contribution to ambient concentrations attributable to international *anthropogenic* emissions. Specifically, states are required to evaluate and adopt controls on domestic anthropogenic

demonstrations should focus on contributions from non-U.S. anthropogenic sources as opposed to nonanthropogenic sources on either side of the border.⁸

For purposes of this guidance, the terms "international sources" and "international emissions" therefore mean, respectively, anthropogenic sources located outside of the U.S, and anthropogenic emissions emanating from sources located outside of the U.S. Emissions from offshore areas (extending 200 nautical miles from U.S. shores) where U.S. federal laws govern emission sources are not considered to be international emissions for purposes of this guidance.⁹

- "International sources" and "International emissions" mean "anthropogenic"
 - To be consistent with the Clean Air Act
 - All five mandatory provisions of a SIP focus on anthropogenic emissions



Overall Process for Developing a Section 179B Demonstration

Step 1 – Air
agency contacts
its EPA Regional
office to discuss
section 179B
regulatory
interests and
conceptual model

Step 2 – Air agency begins gathering information and developing analyses for a demonstration. Step 3 – Air agency submits draft section 179B demonstration to EPA Regional office for review and discussion.

Step 4 – Air agency submits final section 179B demonstration and EPA makes an approval determination.

Recommend air agency consult with EPA before and during development of a section 179B demonstration



Technical Overview

- Conceptual model drives analysis design
- Demonstration includes
 - Ambient Observations
 - Emissions
 - Meteorology
 - Modeling results
- Lines of evidence depend on the conceptual model
 - Less complex conceptual models use fewer lines of evidence
 - More complex conceptual models use more lines and strength of evidence
- Final: Weight of Evidence

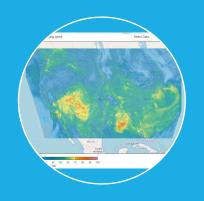
Conceptual Model



Ambient
Composition and
Meteorology
Analysis



Comprehensive Emissions Analysis



Modeling Analysis

Lines of evidence evaluated separately, weighed together



More details at Feb 12 1PM Eastern webinar

QUESTIONS?

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