UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

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OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

MEMORANDUM

SUBJECT: Guidance on Establishing Emissions Baselines under Section 185 of the Clean Air Act (CAA) for Severe and Extreme Ozone Nonattainment Areas that Fail to Attain the 1-hour Ozone NAAQS by their Attainment

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TO: Regional Air Division Directors, Regions I-X

The purpose of this memorandum is to provide guidance on establishing the "baseline amount" for the imposition of penalty fees under section 185 of the Clean Air Act (CAA) for severe and extreme areas that fail to attain the 1-hour ozone national ambient air quality standards (NAAQS) by their attainment date.[1] Under section 185, major stationary sources of volatile organic compounds (VOC) and nitrogen oxides (NOx) in severe and extreme ozone nonattainment areas are subject to penalty fees in these circumstances for emissions in excess of 80 percent of the baseline amount.[2] Under the CAA, the affected States generally should impose the fees on such sources based on their "baseline amount," which generally is based on applicable source emissions information in the attainment year inventory. However, where source emissions are irregular, cyclical or otherwise vary significantly, the CAA provides that the U. S. Environmental Protection Agency (EPA) may issue guidance providing an alternative method to calculate the baseline amount. This memorandum contains such guidance for an alternative method for calculating the emissions baseline.

Background

Section 185 of the CAA requires States to impose fees on major stationary sources of VOC and NOx in severe and extreme ozone nonattainment areas that fail to

[1] For background on the 1-hour standard, its revocation and relationship to the section 185 fee provisions, see the following documents: 40 CFR 50.9(b); 69 FR 23951 at 23968 (April 30, 2004); 70 FR 44470 (August 3, 2005); and South Coast Air Quality Management Dist. v. EPA, 472 F.3d 882 (D.C. Cir. 2006).
[2] While section 185 expressly mentions only VOC, section 182(f) extends the application of this provision to NOx, by providing that "plan provisions required under [subpart D] for major stationary sources of [VOC] shall also apply to major stationary sources ... of [NOx}."

attain the ozone national ambient air quality standard (NAAQS or standard) by their attainment date. In 1990, the CAA set the fee as $5,000 per ton of VOC and NOx emitted by the source during the calendar year in excess of 80 percent of the "baseline amount" for each year beginning after the attainment date until the area is redesignated to attainment for ozone [see section 185(b)(1)]. The fee must be adjusted for inflation based on the Consumer Price Index (CPI) on an annual basis. For 2007, the penalty fee would be $8,040 based on the CPI.[3]

The CAA further states that the computation of a source's "baseline amount" must be the lower of the amount of actual or allowable emissions under the permit applicable to the source (or if no permit has been issued for the attainment year, the amount of VOC and NOx emissions allowed under the applicable implementation plan) during the attainment year. The CAA also provides that EPA may issue guidance on the calculation of the "baseline amount" as the lower of the average actuals or average allowables over a period of more than one year in cases where a "source's emissions are irregular, cyclical or otherwise vary significantly from year to year."

Alternative Method for Calculating "Baseline Amount"

Under the presumptive calculation method provided in the CAA, a State would calculate the "baseline amount" for each source that may be affected by the section 185 penalty fees by determining the actual emissions for a source (e.g., by reviewing the State emissions inventory for the applicable attainment year) or by reviewing the permits for such source to determine the source's allowable emissions. In some cases, however, the amount calculated for a particular source in the attainment year may not be considered representative of the source's normal operating conditions. In these cases, the CAA allows for use of an alternative calculation method for sources whose annual emissions are "irregular, cyclical, or otherwise vary significantly from year to year."

We believe an acceptable alternative method that could be used for calculating the "baseline amount" for such sources would be the method for calculating "baseline actual emissions" found in EPA's regulations for Prevention of Significant Deterioration of Air Quality (PSD) (40 CFR 52.21(b)(48)).[4] "Baseline actual emissions" is defined in the PSD rule for purposes of establishing a pre-change average emissions rate to be a baseline emissions rate for sources proposing to undergo physical or operational changes that result in an emissions increase. This definition of "baseline actual emissions" enables a source to calculate its baseline rate using the actual operational data from a period other than the period immediately preceding a proposed change in order to select a period of time that is more representative of the source's normal operation. Under the PSD regulations, sources generally may use the relevant source records for any

[3] See http://www.bls.gov/cpi/ which provides a tool for calculating adjustments based on the CPI.
[4] This alternative method is provided for States to use at their discretion when they conclude that the "baseline amount" as calculated under section 185(b)(2) is not appropriate for purposes of setting the section 185 penalty fee because the source's emissions vary significantly from year-to-year.

24-consecutive month period within the past 10 years ("2-in-10" concept) to calculate an average actual annual emissions rate (tons per year).[5]

In the PSD context EPA determined that is fair and reasonable for a source to use a 10-year look back period for calculating "baseline actual emissions" because it allows the source to consider a full business cycle in setting a baseline emissions rate that represents normal operation of the source for that time period. However, the PSD rule's "2-in-10" concept does not apply to electrical utility steam generating units. For utilities, the PSD rules require use of a 24-consecutive month period within the past 5 years, or a different 5 year historical period if the State determines that it is more representative of normal source operations for a particular source.[6]

The PSD rules require adequate source information for the selected 24-consecutive month period.[7] As indicated in the PSD rules, the data (needed to calculate the actual emissions factors, utilization rate, etc.) must adequately describe the operation and associated pollution levels for each emissions unit. Otherwise, another 24-consecutive month period must be selected (40 CFR 52.21(b)(48)(i)(*d*) and (ii)(*e*). Once calculated, the average annual emissions rate must be adjusted downward to reflect (1) any noncompliant emissions[8] (40 CFR 52.21(b)(48)(i)(*b*) and (ii)(*b*), and (2) for each non-utility emissions unit, the most current legally enforceable emissions limitations[9] that restrict the source's ability to emit a particular pollutant or to operate at the levels that existed during the 24-month period that was selected (40 CFR 52.212(b)(48)(ii)(*c*).

For a source with emissions units capable of burning more than one type of fuel, the current emissions factors must be related to the fuel or fuels that were actually used during the selected 24-consecutive month period. For example, when calculating the baseline emissions for a source that burned natural gas for a portion of the 24-month period and fuel oil for the remainder, the PSD rules require States to retain that fuel apportionment, but to also use the current legally enforceable emissions factors for natural gas and fuel oil, respectively, to calculate the baseline emissions. If, however, the

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[5] In establishing the "2-in-10" concept for the PSD rules, EPA relied on a 1997 study of business cycles for several industries. The study examined the business fluctuations for certain source categories using industry output data for the years 1982 to 1994, inclusive, based on the Office of Management and Budget's SIC codes for individual industries (OMB, 1987).

[6] For utilities, we determined that a 5-year cycle, rather than a 10-year cycle, generally was appropriate for addressing the emissions variability associated with demand for electricity as influenced by annual variability in climate and economic conditions as well as changes at other plants in the utility system that affect dispatch of a particular plant.

[7] The adequacy of given source operating data for the selected time period is to be determined on a case-by-case basis by the reviewing authority.

[8] The result of this restriction is that the plant capacity utilized during a particular period of time (assuming that capacity was within allowable levels) may be referenced, but not the non-compliant pollution levels. The second restriction similarly limits baseline emissions to levels that are consistent with current legally allowable emissions rates.

[9] Such legally enforceable emission limits would include, but not be limited to, any State, or Federal requirements such as RACT, BACT, LAER, NSPS and NESHAP, processing limits, fuel limitations, or other limitations voluntarily accepted by the source for netting, emissions offsets or the creation of emission reduction credits.

source is no longer allowed or able to use one of those fuel types, then the calculations must assume use of the currently allowed fuel for the entire 24-month period. This applies to sources that use multiple feedstock or raw materials, which may vary in use during the source's ongoing production process.

The intent of this guidance document is to set forth EPA's views on the issues discussed herein. The statutory provisions and EPA regulations described in this document contain legally binding requirements. This document is not a regulation in itself nor does it change or substitute for those provisions and regulations. Thus, it does not impose legally binding requirements on EPA, States or the regulated community. EPA and other decision makers retain the discretion to adopt approaches on a case-by-case basis that differ from those described in this guidance where appropriate. When EPA issues final rules based on its views, those rules will be binding on the States, the public and EPA as a matter of law. We will work with your staff to answer any additional questions including how this guidance applies to individual sources that are covered by emissions cap-and-trade programs.

If you have any questions on the section 185 fee provisions, please contact Denise Gerth at 919-541-5550, and if you have questions on the alternative method for calculating the emissions baseline based on the PSD rule, please contact Dan DeRoeck at 919-541-5593.