January 1, 1995

MEMORANDUM

SUBJECT: De Minimis Values for NO_X RACT

FROM: G. T. Helms, Group Leader
Ozone Policy and Strategies Group (MD-15)

To: Air Branch Chief, Region I - X

This memorandum presents information that we think would be useful to you as you are reviewing RACT rules with respect to de minimis values for NO_X RACT. It was extensively coordinated with the OGC and the NO_X work group

The RACT requirements apply to major stationary sources in certain ozone nonattainment areas and throughout an ozone transport region. A source generally consists of several units which emit pollutants to the atmosphere. The sum of emissions from all units at a facility determines if a unit is major and, thus, subject to the RACT requirements. However, certain units at a facility may be so small that it is clear that no controls are reasonably available for those units, although RACT would still apply at the other units within the facility.

Regulatory agencies have typically included exemptions for very small emission units in their VOC RACT rules. The reason for the exemptions is that control regulations at very small units are generally not reasonable, considering technological and economic feasibility. A 15 pound/day cut-off level first appeared in 1966 in Rule 66 which was adopted by Los Angeles county The 3 pound/hour and 15 pound/day cut-offs were subsequently adopted into the Code of Federal Regulations, 40 CFR part 51, Appendix B in 1971. After the first CTG's were issued, EPA developed model regulations for VOC RACT. This guidance appeared in April 1976 and included the 3 pound/hour and 15 pound/day exemptions for 15 VOC source categories. Unless specified differently in other guidance, the EPA continues to recommend these cut-off levels as criteria for regulatory agencies to consider as they adopt or revise their VOC RACT rules.

As a result of the new NO_X RACT requirements in the Clean Air Act Amendments of 1990, regulatory agencies are required to develop and adopt NO_X RACT rules. In the process of drafting these rules, many agencies have included exemptions for very small NO_X emission sources for the same reason noted above VOC rules. Unlike the VOC rules, however, there is no well established precedent with respect to NO_X Further, the values adopted by the various agencies include a wide

range of exempt sources. Thus, it is difficult to give a specific de minimis value or range of such values for NO_X as for VOC. The purpose of this memorandum is to provide technical data that may be used to evaluate NO_X de minimis for various categories of sources.

Technical data on NO_X de minimis levels is contained in attachments to this memorandum. The technical data are primarily derived from information contained in the recently completed NO_X alternative control techniques (ACT) documents for four source categories as follows:

Stationary Gas Turbines
Internal Combustion Engines
Process Heaters
Boilers (Watertube Boilers; Firetube Boilers)

These ACT documents provide comprehensive data on the full range of potential NO_X controls for each source category, including the economic and technological feasibility of various control processes.

In the evaluation of NO_X de minimis levels, the following factors should be considered:

1. Emission rates for various source sizes (for example pound/hour)

2. cost-effectiveness of controls.

3. Total emissions for a source category above various cut-off levels.

4. Total number of sources in a category above various cut-off levels.

5. Exemptions contained in adopted State and local regulations.

6. Units which meet the Act definition of a major source should generally not be considered de minimis.

As a result of this review, EPA does not recommend specific de minimis values, but presents the attached factors as a guide in the development and review of State de minimis rules. In addition, we strongly recommend that de minimis values be based on more than one factor.

If you have any questions please contact Ted Creekmore of staff at 919-541-5699.

Attachment

CC: NO_X Work Group Members, Sally Shaver

TABLE 5--STATE BOILER DE MINIMIS RULES FOR INDUSTRIAL/COMMERCIAL BOILERS (INCLUDES FIRETUBE AND WATERTUBE)[67]

STATE/DATE	RULE	COMMENT
OH	<10 MMBtu/hr	
MI	<_100 MMBtu/hr	
LA 11/17/93	< 80 MMBtu/hr	
TX 11/17/93	< 100 MMBtu/hr	
NESCAUM 11/17/93	50--100 MMBTU/hr case by case	
NJ 11/17/93 3/25/94	Overall:25 t/y < 137 lbs/d 5/15-9/15	
NY 11/17/93 3/28/94	Overall: 3 lbs/hr;15 lbs/day	
CN 3/28/94	< 5 MMBtu/hr	only tuneups required
CA 3/28/94 S. Coast	< 2 MMBtu/hr	Varies from 2-5 MMBtu/hr
Ventura	< 1 MMBtu/hr	1-5 MMBtu/hr
San Diego	< 5 MMBtu/hr	
SF Bay Area	< 1 MMBtu/hr	1-5 MMBtu/hr
S. Basin	< 5 MMBtu/hr	
NH 3/28/94	< 30 MMBtu/hr	
MASS 3/28/94	< 20 MMBtu/hr (with PTE <25 TPY) operate >1000 hrs per yr	
MA 3/28/94	<50MMBtu/hr	
RI 3/24/94	< 50 MMBtu/hr-only tuneups required	

[67]"Generally, it is not clear whether these de minimis values refer to whole plants (NJ, NY) or individual units.