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March 20, 2003

Honorable Kathleen McGinty, Chairperson-designee
Environmental Quality Board
Rachel Carson State Office Building
400 Market Street, 16th Floor
Harrisburg, PA 17101

Re: Regulation #7-378 (IRRC #2302)
Environmental Quality Board
Small Sources of NO_x, Cement Kilns and
Large Internal Combustion Engines

Dear Chairperson-designee McGinty:

Enclosed are the Commission's Comments which list objections and suggestions for consideration when you prepare the final version of this regulation. These Comments are not a formal approval or disapproval; however, they specify the regulatory criteria which have not been met.

The Comments will soon be available on our website at www.irrc.state.pa.us. If you would like to discuss them, please contact my office at 783-5417.

Sincerely,

Robert E. Nyce
Executive Director

evp

Enclosure

cc: Honorable Arthur D. Hershey, Majority Chairman, House Environmental Resources and Energy Committee
Honorable Camille George, Democratic Chairman, House Environmental Resources and Energy Committee
Honorable Mary Jo White, Chairman, Senate Environmental Resources and Energy Committee
Honorable Raphael J. Musto, Minority Chairman, Senate Environmental Resources and Energy Committee

Comments of the Independent Regulatory Review Commission

on

Environmental Quality Board Regulation No. 7-378

Small Sources of NO_x, Cement Kilns and Large Internal Combustion Engines

March 20, 2003

We submit for your consideration the following objections and recommendations regarding this regulation. Each objection or recommendation includes a reference to the criteria in the Regulatory Review Act (71 P.S. § 745.5a(h) and (i)) which have not been met. The Environmental Quality Board (EQB) must respond to these Comments when it submits the final-form regulation. If the final-form regulation is not delivered within two years of the close of the public comment period, the regulation will be deemed withdrawn.

1. EQB request in the Preamble for comment in three areas. - Economic impact; Feasibility; Reasonableness.

In the Preamble, Section I, relating to *Public Comments*, the EQB specifically requests comment on three areas, which are pertinent to the regulation. Each of the EQB's questions are discussed below.

The EQB request for comment on Sections 129.201 and 129.202 that allow averaging emissions from two or more boilers to demonstrate compliance. Should these sections allow more flexibility or allow less flexibility?

Averaging

Sections 129.201(b) and 129.202(c) state the owner of two or more sources (boilers or stationary combustion turbines, respectively) "may propose in writing to the Department to demonstrate compliance with this section by averaging emissions from the affected sources.... The Department will approve the averaging proposal in writing."

Commentators have stated that the flexibility of averaging is the most effective manner to achieve compliance. Our concern is that the regulation does not include the criteria the Department of Environmental Protection (Department) will use, and how that criteria will be applied, to decide whether to approve an averaging proposal. Given that these decisions will affect industry and competitiveness, definitive standards need to be established in this regulation.

We also have several questions regarding how averaging would be applied:

- On what basis would the average be calculated? Would the average be based on permitted hours of operation or actual hours? Could an owner average boilers and internal combustion engines together or must they be treated separately?
- How would ownership be established? How would joint ownership of a source be handled?

- Why is averaging limited to sources within the specified five county area? Should “upwind” sources also be included?

We agree that flexibility will allow more cost effective control of emissions. However, as written, the language of the proposed regulation regarding averaging lacks clarity and could be applied inconsistently. The regulation should:

- Specify the particular conditions and calculations for averaging emissions from multiple sources;
- Include or reference the process for reviewing an averaging proposal, the process for appeals and the process for an applicant to make amendments to respond to any concerns raised by the Department; and
- Include timeframes for decisions on applications, given that this process will determine compliance or the need for an alternative strategy. If the review process takes too long or is overly complicated, a business whose averaging proposal is denied would need time to comply using an alternative strategy.

Purchasing Allowances

In regard to flexibility, the proposed regulation does not mention the purchase of allowances to attain compliance. For example, an owner of multiple sources is able to average under this proposed rulemaking, while an owner of a single source has no other option but strict compliance. The Department’s NOx Budget Program allows units operating in the same region to comply by purchasing allowances. Why didn’t the EQB include an option for sources to comply by purchasing allowances?

The EQB request for affected sources to submit detailed information concerning the technical feasibility of the proposed control requirements and potential cost to comply for the affected units in Pennsylvania.

Feasibility

Many commentators stated that they have already added emission controls under prior programs. As a result they argue that any further emission reductions from these sources would be minimal. Others commented that their sources only operate a few hours in a typical year. Some commentators offered that the EQB’s requirements were not technologically feasible. For example, operators of Municipal Waste Combustors (MWCs) claim that the EQB’s requirement for an additional reduction of approximately 51 percent cannot be achieved. Currently, an MWC meeting the Maximum Available Control Technology (MACT) requirements has a minimum efficiency of nine to 58 percent.

Commentators claim the U.S. Environmental Protection Agency (EPA) does not intend to further regulate MWCs based on the EPA’s October 21, 1998 proposed Federal Implementation Plan, which stated, “municipal waste combustors should not be required to reduce emissions beyond that already required by the maximum achievable control technology rules for NOx under Sections 111 and 129 of the Clean Air Act.” The EQB needs to demonstrate that compliance is possible and determine what equipment will be needed to comply. In addition to technical feasibility, the EQB needs to demonstrate that technically feasible solutions are not cost prohibitive.

Potential Costs

Commentators provided calculations demonstrating that the required investment compared to the resulting emission reduction far exceeds the cost estimates in the EQB's Preamble, Section F, relating to *Benefits Costs and Compliance and Compliance Cost*. In the Preamble, costs are presented as dollars per ton, but it is not clear what costs the EQB included in the estimates. It is also unclear what level of operation or reduction is required to achieve estimates in dollars per ton. Some commentators believe their costs per ton would be tens of thousands of dollars.

Some commentators included detailed capital and operating costs in their estimates. Using MWCs as an example, operators claim compliance with the proposed standard would cost approximately \$12,000 per ton of NO_x, compared with the EQB's estimate of \$1,500 to \$3,500 per ton. Additionally, another commentator stated the capital cost of a Continuous Emission Monitoring System (CEMS) is more than \$150,000, with annual operating costs greater than \$50,000. Yet another commentator stated that the cost of CEMS effectively prevents sources from opting into the NO_x Budget Program.

In conclusion, on the EQB's question on technical feasibility and potential costs, for the sources selected in the final-form rulemaking, the EQB should:

- Describe the control equipment available to achieve compliance with the proposed rulemaking;
- Provide detailed estimates of the costs including a breakdown of components such as additional equipment needed to comply and the costs of monitoring and reporting;
- Provide a detailed explanation of how those costs were developed; and,
- Explain why the control of these sources is the most cost effective alternative for Pennsylvania to achieve compliance with the National Ambient Air Quality Standards (NAAQS).

The EQB request for comment on whether the regulation should apply statewide and for the entire year.

A majority of the commentators disagree with applying these requirements statewide and for the entire year. They are concerned that the costs for maintaining and enforcing such a program will outweigh the environmental benefits achieved and are not consistent with the intended purpose of this regulation.

The EQB's stated purpose of this rulemaking is to reduce ozone by reducing ozone season NO_x emissions. To expand this rulemaking to apply for the entire year is outside the stated purpose for this rulemaking. How would application of these standards statewide and for the entire year bring the Commonwealth into compliance for the ozone months?

If the EQB decides to apply this regulation statewide and for the entire year, the EQB needs to demonstrate why this is needed in order to comply with NAAQS. In addition, the EQB would have to justify why these sources must comply outside the ozone season, while similar sources, such as those in the NO_x Budget Trading Program in Chapter 145, Subchapter A must comply only within the ozone season.

Advanced Notice of Final Rulemaking

If the EQB adds language to the final-form regulation in response to comments on these issues, it should consider either using a separate proposed rulemaking or publishing the language in an Advanced Notice of Final Rulemaking. Otherwise, the legislature, public and the Commission will not have had an opportunity to review and comment on the specific regulatory language in comparison to the opportunity for comment on a proposed rulemaking.

2. Opt-in provisions. - Reasonableness.

This rulemaking appears to limit “opt-in” to two specific circumstances: Section 129.201(a)(2) for boilers greater than 250 million BTU/hour and Section 129.202(a)(2) for stationary combustion turbines greater than 250 million BTU/hour. “Opt-in” is not mentioned for the other sources affected by this rulemaking including stationary internal combustion engines, boilers less than 250 million BTU/hour and cement manufacturing. We note these sources may not meet the existing definition of “unit” in Section 145.2, which may in turn preclude them from the “opt-in process” in existing Chapter 145. Why didn’t the EQB include amendments in this rulemaking that would allow these other sources to “opt-in”?

3. Compliance by the May 1, 2005 deadline. - Reasonableness; Feasibility; Need.

In Sections 129.201(a), 129.202(a), 129.203(b), 145.113, 145.143 and 145.144(a)(1), the EQB imposes a compliance deadline of “May 1, 2005.” Commentators have stated that it will be difficult to comply by that deadline. For example, commentators stated that planning, construction and installation of control equipment and CEMS could take 18 months to three years. The EQB should explain why this deadline is reasonable, feasible and necessary.

4. Exemptions. - Need; Economic impact; Exempting smaller sources; Reasonableness; Feasibility.

The EQB has exempted emergency gas turbines and fire-fighting turbines in Chapter 129.202(b). Has the EQB considered further exemptions for units that are not run for many hours in the ozone season such as electric generation peaking units, emergency back up generators and power generation sources used for research, development and testing purposes? Compliance with this proposed rulemaking may not be feasible given the cost of compliance versus the amount of actual time these energy sources are used. We also question how many tons of reduction these sources represent and the cost per ton for them to comply. The EQB should explain the need to regulate these sources and why this is cost effective.

CHAPTER 121. GENERAL PROVISIONS

5. Section 121.1. Definitions. - Reasonableness; Consistency with existing statutes.

Stationary internal combustion engine

This definition applies to any stationary internal combustion engine that is “carried or moved from one location to another and remains at a single site at a building, structure, facility or installation *for more than 30 days.*” (Emphasis added.) A commentator interprets Section 209(e) of the Clean Air Act (42 U.S.C. § 7543(e)) as requiring installation for 12 months. The commentator notes that the definition of “nonroad engine” in 40 CFR § 90.3 uses the timeframe of 12 months. Why did the EQB use 30 days?

CHAPTER 129. STANDARDS FOR SOURCES
ADDITIONAL NO_x REQUIREMENTS

6. General. - Economic and fiscal impact; Feasibility; Reasonableness.

Waste to energy facilities.

Commentators have argued that MWCs should be exempt from the requirements of this rulemaking for reasons including: the difficulty of predicting emissions due to the variability of fuel; the facilities have already implemented MACT; the limits set by this regulation may not be achievable; and these facilities provide other environmental benefits. The EQB should explain why these facilities were chosen for further reductions. Additionally, the EQB should explain what equipment will work at these facilities to achieve compliance and provide the associated costs of installation and operation of this equipment.

7. Section 129.201. Standards for boilers; Section 129.202. Standards for stationary combustion turbines; and Section 129.203. Standards for stationary internal combustion engines. - Clarity.

Subsections 129.201(b), 129.202(c) and 129.203(c) state, “The Department *will* approve the averaging proposal in writing.” (Emphasis added.) The word “will” implies all proposals will be approved. If the Department intends to exercise discretion, these provisions should be rewritten to state proposals will be considered and that Department action will be in writing.

8. Section 129.203. Standards for stationary internal combustion engines. - Feasibility; Reasonableness.

Paragraph (b)(1)

This paragraph requires an emission limit “for a spark-ignited engine of 1.5 grams of NO_x per brake horsepower-hour.” A commentator has stated that this standard is technically infeasible, and will not be met on most lean burn engines. Further, an engine control efficiency average close to 3.0 grams of NO_x per brake horsepower-hour is feasible and would result in an 82 percent NO_x reduction. The EQB should explain how the 1.5 grams of NO_x per brake horsepower-hour could be met.

CHAPTER 145. INTERSTATE POLLUTION TRANSPORT REDUCTION
SUBCHAPTER B. EMISSIONS OF NO_x FROM STATIONARY INTERNAL
COMBUSTION ENGINES

9. Section 145.115. Reporting, monitoring and recordkeeping. - Need; Feasibility; Reasonableness.

Subsection (c)

This subsection states that an owner or operator of a unit subject to compliance shall “maintain records necessary to demonstrate compliance...at the facility at which the unit is located.” Is it necessary to keep the records at the facility? The EQB should explain the need for onsite recordkeeping requirements as opposed to allowing a source to keep records at a centralized location.

SUBCHAPTER C. EMISSIONS OF NO_x FROM CEMENT MANUFACTURING

10. Section 145.143. Standard requirements. - Feasibility; Economic impact.

One commentator explained why low NO_x burners are not technically feasible or cost effective. As stated in our earlier comment on feasibility, the EQB needs to demonstrate that compliance is possible and what equipment will be needed to comply. In addition to technical feasibility, the EQB needs to also demonstrate that technically feasible solutions are not cost prohibitive.

Commentators have stated that the alternative control allowed in Subsection (3) is overly restrictive because it is based on actual 1990 emissions. Commentators believe the regulation should allow an uncontrolled 1990 baseline. Why did the EQB use the actual 1990 emissions?

11. Section 145.144. Reporting, monitoring and recordkeeping. - Reasonableness.

Subsection (b) requires CEMS, but does not allow any alternatives. Chapter 145 allows other sources the opportunity to use alternatives to CEMS, including proposed Section 145.115(b)(1)(ii). Why did the EQB foreclose the opportunity for cement kilns to comply using an alternative monitoring method?

INDEPENDENT REGULATORY REVIEW COMMISSION

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Date: March 20, 2003
of Pages: 7

Comments: We are submitting the Independent Regulatory Review Commission's comments on the Environmental Quality Board's regulation #7-378 (IRRC #2302). Upon receipt, please sign below and return to me immediately at our fax number 783-2664. We have sent the original through interdepartmental mail. You should expect delivery in a few days. Thank you.

Accepted by: Shirley A. Wright Date: 3/20/03