BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	R08-19
NITROGEN OXIDES EMISSIONS FROM	)	(Rulemaking - Air)
VARIOUS SOURCE CATEGORIES:	)	
AMENDMENTS TO 35 ILL. ADM. CODE	)	
PARTS 211 and 217	)	

NOTICE OF FILING

TO: Mr. John T. Therriault
Assistant Clerk of the Board
Illinois Pollution Control Board
100 W. Randolph Street
Suite 11-500
Chicago, Illinois 60601
(VIA ELECTRONIC MAIL)

Timothy Fox, Esq.
Hearing Officer
Illinois Pollution Control Board
100 W. Randolph Street
Suite 11-500
Chicago, Illinois 60601
(VIA U.S. MAIL)

(SEE PERSONS ON ATTACHED SERVICE LIST)

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Illinois Pollution Control Board **PRE-FILED QUESTIONS FOR THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY SUBMITTED BY THE ILLINOIS ENVIRONMENTAL REGULATORY GROUP,** a copy of which is herewith served upon you.

Respectfully submitted,

By: /s/ Katherine D. Hodge
Katherine D. Hodge

Dated: September 16, 2008

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CERTIFICATE OF SERVICE

I, Katherine D. Hodge, the undersigned, hereby certify that I have served the attached PRE-FILED QUESTIONS FOR THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY SUBMITTED BY THE ILLINOIS ENVIRONMENTAL REGULATORY GROUP upon:

Mr. John T. Therriault
Assistant Clerk of the Board
Illinois Pollution Control Board
100 West Randolph Street, Suite 11-500
Chicago, Illinois 60601

via electronic mail on September 16, 2008; and upon:

Timothy Fox, Esq.
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by depositing said documents in the United States Mail, postage prepaid, in Springfield, Illinois on September 16, 2008.

/s/ Katherine D. Hodge
Katherine D. Hodge

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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	)	R08-19
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PRE-FILED QUESTIONS FOR THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY SUBMITTED BY THE ILLINOIS ENVIRONMENTAL REGULATORY GROUP

NOW COMES the ILLINOIS ENVIRONMENTAL REGULATORY GROUP ("IERG"), by and through its attorneys, Alec M. Davis and HODGE DWYER ZEMAN, and submits the following Pre-Filed Questions for the Illinois Environmental Protection Agency ("Agency") for presentation at the hearing scheduled in the above-referenced matter:

1. The Technical Support Document, at page 5, and again at page 38, describes the NOx reductions that could be achieved by switching to other fuels. In formulating its proposed rule, did the Agency intend to force affected sources to switch fuel sources to achieve compliance?

   a. To what extent does the Agency expect fuel switching will be required to achieve compliance?

   b. To what extent did the Agency consider the availability of alternative fuels?

   c. Does the Agency believe that it is technically and economically feasible for a coal-fired boiler to be converted to used oil or natural gas?

d. Would such a converted boiler then be subject to the more stringent NOx emissions limits applicable to oil and gas boilers?

2. Table 2-1a of the Technical Support Document, at page 6, lists the "Emissions Requirements of Proposed Industrial and Small EGU Boilers RACT Rule." Has the Agency made any determination as to whether the Illinois units affected by this proposed rule can achieve the emissions limits listed in this table?

3. Did the Agency consider the federally approved NOx RACT emission limits from other states for similar affected units when it formulated its proposal?

4. The Agency's Technical Support Document, at page 12, states that circulating fluidized combustion boilers range in size up to 1,075 mmBtu/hour. Is the Agency aware that the largest such boiler affected by this rule is nearly twice that size, and that there are other such boilers which are greater than 1,075 mmBtu/hour?

a. Were the above mentioned large boilers considered in determining the emission limits contained in the proposal?

5. Table 2-2: Data from Cleaver-Brooks Study, on page 14 of the Technical Support Document, provides information on NOx emission rates for gas-fired boilers predominately in the size range of 7 to 33 mmBtu/hour (one boiler had a size of 89 mmBtu/hour). It is IERG's understanding that the Agency is not proposing to establish NOx emission limits for gas-fired boilers in the size range of less than, or equal to, 100 mmBtu/hour. Is this correct?

a. If so, how was the data in this table used to inform the Agency in the setting of NOx limits for gas-fired boilers larger than 100 mmBtu/hour?

b. What is the averaging time for the emission rates shown in Table 2-2?

c. Does the emission data depicted in Table 2-2 represent stack test results? If so, what was the load capacity of the boilers at the time of testing?

d. How much flue gas recirculation was incorporated into each of the boilers listed in Table 2-2?

e. The paragraph that precedes Table 2-2 (the last paragraph on page 13 of the Technical Support Document) states that Table 2-2 shows that low NOx levels can be maintained through "proper planning of boiler configuration." Since the Agency's proposed rule applies to existing boilers, for which boiler configuration modifications can be somewhat restricted, could you please describe the boiler configuration changes that were incorporated into the boilers shown in Table 2-2?

6. Table 2-5, on page 18 of the Agency's Technical Support Document, is identified as representing "uncontrolled" NOx emissions. Does the "Uncontrolled NOx Range" include newer boilers with some NOx control incorporated in their design?

a. How did the Agency utilize the "uncontrolled" ranges listed in Table 2-5 in establishing its proposed RACT limits?

b. Has the Agency relied on a percent reduction target from "uncontrolled" levels in establishing its NOx RACT emission limits?

7. Table 2-12b, on page 31 of the Technical Support Document, presents "Statistics Regarding Performance of Industrial Boiler Types Equipped with Ammonia SNCR." Has the Agency evaluated the coal-fired stoker boilers used in Illinois in

relation to the stokers included in Table 2-12b in terms of boiler design, fuel type, and ammonia slip in order to evaluate their comparability?

8. On page 33 of the Agency's Technical Support Document, the statement is made that "...SCR is viewed as technically feasible for nearly any coal application." Does the Agency believe that SCR is technically feasible for fluid bed boilers?

a. Does the Agency believe that SCR is feasible on all stoker boilers?

b. Do the Agency's proposed NOx emission limits for stoker boilers assume that SCR is a feasible option?

c. What information did the Agency rely upon in determining that SCR is technically feasible on a broad range of ICI boiler types and sizes?

9. Has the Agency performed any analyses of Illinois facilities to determine the potential cost of this rule?

10. Has the Agency gathered or reviewed any information from the last 3 years for costs of NOx retrofit controls for facilities in Illinois or similar to those in Illinois?

11. The Agency's Technical Support Document includes NOx emission limits for categories of emission units that do not, or likely never will, exist in the area covered by this rule. What is the purpose for including these limits?

12. Does the Agency intend its definition of "industrial boiler" (see Section 211.3100, and Sections 217.160 to 166 of the proposed rule) to include cogeneration units and/or heat recovery steam generators that capture waste heat from turbines or engines?

a. If so, has the Agency performed any analysis to determine the technical feasibility and cost for cogeneration units and/or heat recovery steam generators to comply with its proposed rule?

13. Does the Agency intend its definition of "industrial boiler" (*see* Section 211.3100, and Sections 217.160 to 166 of the proposed rule) or "process heater" (*see* Section 211.5195, and Sections 217.180 to 186 of the proposed rule) to include gas-fired chillers that provide cooling for either processes or occupied spaces?

a. If so, has the Agency performed any analysis to determine the technical feasibility and cost for such gas-fired chillers to comply with its proposed rule?

14. The Statement of Reasons, at pages 7-8, states that the NOx RACT State Implementation Plan was required to be submitted to the USEPA by September 15, 2006. And further, that the date for affected sources to comply with the emissions limitations in the proposed rule is May 1, 2010.

a. Based on the federal requirement for the NOx RACT SIP submittal, when does the USEPA require that NOx RACT be implemented?

b. What is the basis for the Agency's selection of May 1, 2010 as the compliance date?

c. In the Agency's deliberations regarding the technical feasibility and cost of compliance for this rule, was any consideration given to the amount of lead-time necessary for various industries to plan, design, construct and test the emission control technologies envisioned by this proposed rule?

d. Does the Agency believe that the amount of time from rule promulgation to the compliance date has a significant bearing on the ultimate cost and feasibility of compliance?

e. Is the concept of "Reasonably Available" a factor of the compliance date such that the technical options and economic cost for Reasonably Available Control Technology would be dependent on the amount of time between rule promulgation and compliance?

15. Section 217.158 of the proposed rule describes the Emissions Averaging Plans. It is IERG's understanding that the Agency is not allowing emission units into an averaging plan if they commenced operation after January 1, 2002, unless they are deemed to be a "replacement unit." Is this correct?

a. What is the basis for the Agency's determination to exclude such units?

b. Has the Agency attempted to assess the impact that such a restriction might have on environmental decision-making at affected facilities?

c. Has the Agency considered how it will make a determination of whether a new unit constitutes a "replacement unit," especially as emphasis is growing to improve energy efficiency and reduce greenhouse gasses, thereby making it unlikely that a "replacement unit" would be exactly the "same" as the unit(s) it replaces?

16. Section 217.154 of the proposed regulation sets forth the performance testing requirements. Both subsections (a) and (b) refer to the date of emission unit construction or modification. Could the Agency please clarify what constitutes

"constructed on or before," and similarly "construction or modification occurs after"? That is, is it the beginning of construction, the completion of construction, the date of issuance of a construction permit?

a. If the terms mean the beginning or completion of construction, please define what constitutes beginning or completion.

17. On page 6 of James Staudt's pre-filed testimony, the statement is made that SCR has been widely used on boilers at industrial facilities.

a. Could you please provide a representative list of such installations, including the boiler type, and identify those that were retrofits?

b. Also, please identify those that used high-sulfur coal, and those that were stoker fired boilers.

18. Does the Agency believe that a >250 mmBtu/hour coal-fired boiler, using Illinois coal, can meet a NOx limit of 0.18 lbs/MMBtu without SCR?

19. On page 6 of James Staudt's pre-filed testimony, it is stated that "SCR can and has been installed to provide NOx reductions at costs below $2,500/ton."

a. What price was used for the cost of ammonia in making this calculation?

b. Does this cost include the cost of replacement of the boiler's air pre-heater?

c. Does this cost include the cost of a wet electrostatic precipitator?

20. On page 6 of James Staudt's pre-filed testimony, he describes the SNCR technology. Is the Agency aware of SNCR applications on industrial boilers using high-sulfur coal?

a. Could you please describe how the formation of ammonium bi-sulfate is managed, to avoid corrosion problems?

b. What provisions need to be made to accommodate boilers with frequent load swings?

c. How does SNCR affect the turn down ratio of the boiler?

21. Does the use of SCR or SNCR affect the ability to beneficially re-use ash?

IERG reserves the right to supplement these Pre-Filed Questions.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL
REGULATORY GROUP

By: /s/ Alec M. Davis
Alec M. Davis

Dated: September 15, 2008

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