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 the **PRE-FILED TESTIMONY OF DEIRDRE K. HIRNER ON BEHALF OF THE ILLINOIS ENVIRONMENTAL REGULATORY GROUP** and **PRE-FILED TESTIMONY OF DAVID J. KOLAZ ON BEHALF OF THE ILLINOIS ENVIRONMENTAL REGULATORY GROUP,** copies of which are herewith served upon you.

Respectfully submitted,

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

Dated: November 25, 2008

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CERTIFICATE OF SERVICE

I, Katherine D. Hodge, the undersigned, hereby certify that I have served the attached PRE-FILED TESTIMONY OF DEIRDRE K. HIRNER ON BEHALF OF THE ILLINOIS ENVIRONMENTAL REGULATORY GROUP and PRE-FILED TESTIMONY OF DAVID J. KOLAZ ON BEHALF OF 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 November 25, 2008; and upon:

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by depositing said documents in the United States Mail, postage prepaid, in Springfield, Illinois on November 25, 2008.

/s/ Katherine D. Hodge
Katherine D. Hodge

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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PRE-FILED TESTIMONY OF DEIRDRE K. HIRNER ON BEHALF OF 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 TESTIMONY OF DEIRDRE K. HIRNER for presentation at the December 9, 2008, hearing scheduled in the above-referenced matter.

Pre-Filed Testimony of Deirdre K. Hirner

I. INTRODUCTION

My name is Deirdre K. Hirner, and I am the Executive Director of IERG. I am here today to provide information on the proposed rule, with respect to IERG and its member companies. IERG is a not-for-profit Illinois corporation affiliated with the Illinois State Chamber of Commerce. IERG is composed of 55 member companies that are regulated by governmental agencies that promulgate, administer or enforce environmental laws, regulations, rules or other policies. On behalf of its member companies, IERG has attended outreach meetings, reviewed drafts of the proposed rule, provided comments to Illinois Environmental Protection Agency ("Illinois EPA" or "Agency") on drafts of the Proposed Rule and participated in Illinois Pollution Control Board ("Board") proceedings in this matter. IERG appreciates the opportunity to participate in this rulemaking and offers these comments for consideration by the Board.

The Illinois EPA stated that its proposal is intended to specifically satisfy the State's obligation to submit a State Implementation Plan ("SIP") to address requirements for major stationary sources of NOx, referencing Sections 7502 and 7511a of the Clean Air Act ("CAA"), 42 U.S.C. §§ 7502 and 7511a. Section 7502(c)(1) states that the nonattainment plan provisions provide for the implementation of all reasonably available control measures . . . and . . . attainment of the national primary ambient air quality standards. 42 U.S.C. § 7502(c)(1). Section 7511a(b)(2) requires that state implementation plans include provisions to require reasonably available control technologies for major stationary sources of VOCs located in the nonattainment areas. 42 U.S.C. § 7511a(b)(2).

The Illinois EPA's proposal, as submitted, presents a rule that is not designed to achieve the requisite reasonably available control technologies ("RACT"). Rather, the Agency proposes a plan for NOx "controls" that IERG maintains to be well beyond RACT, and which NOx "controls" are not "reasonable and cost effective" as the Agency contends. *See* Statement of Reasons, R08-19 at 1 (Ill.Pol.Control.Bd. May 9, 2008) ("Statement of Reasons").

II. COMMUNICATIONS WITH ILLINOIS EPA

IERG has been pleased to have the opportunity to engage in dialogue with the Agency during the process of developing this proposed rule. IERG generally agrees with the Agency's characterization of its outreach program and acknowledges that it proposed the regulations after interested parties reviewed the proposal and discussed the issues with the Illinois EPA. *Id.* at 13. IERG concurs that the Agency took many of IERG-

Members' concerns under consideration; however, several provisions identified by IERG as problematic with regard to implementation have been, and continue to be, included in the proposed rule.

IERG's input into the development of the proposed rule is best illustrated by the following timeline detailing IERG's participation in this rulemaking process.

5/26/2005 At an ERG-41 Workgroup meeting, the Agency described potential control programs under consideration, among them "tighter RACT applicability for both VOC and NOx with expanded geographical areas."

9/23/2005 At an ERG-41 subgroup meeting, the Agency informed Members that current LADCO modeling showed that additional reductions, beyond CAIR, were needed to reach attainment (of ozone and $PM_{2.5}$) by 2009. The Agency stated it intended to develop proposals to achieve the additional reductions, including a state-wide NOx RACT rule.

10/14/2005 IERG Staff identified limitations of the current LADCO modeling on which the Agency's September 23, 2005 statement appears to have been made, including:

1. The model did not include revisions the Illinois EPA made to the emissions inventory as a result of IERG's survey of its Members as provided to the Illinois EPA;

2. The model did not include emissions reductions from consent orders that would occur between 2002 and 2015;

3. The model did not include any voluntary emissions reductions which were on the way, but not yet formalized in permits; and,

4. The model did not provide for additional reductions that could result from early adoption of later CAIR rule requirements.

10/17/2005 At an Illinois EPA meeting, the Agency indicated it may target the following source types for the NOx RACT proposal:

- Boilers <250 mmBtu/hr;
- EGUs <25 MW;
- Process Heaters;
- Cement Kilns;
- Internal Combustion Engines;
- Lime Kilns;
- Glass Melting Furnaces; and,
- Steel Plants.

10/19/2005 IERG Staff identified concerns with the Illinois EPA's approach, including:

1. The inability of the Illinois EPA to specify the reductions needed in terms of tonnages;

2. The inaccuracy of modeling; and,

3. The lack of regional participation in control strategies.

12/2/2005 IERG continued to evaluate alternative modeling being done by an industry consortium of which IERG is a member, intended to address perceived shortcomings in the LADCO modeling.

4/20/2006 IERG formalized the input it would provide to the Illinois EPA at its first NOx RACT workgroup meeting. Specifically:

1. That while the CAA requires RACT for all non-attainment areas, Illinois had, in the past, received a waiver from developing a NOx RACT rule, because analysis had shown that it would not be effective in reducing ozone;

2. That the Illinois EPA believed that state-wide NOx RACT would improve both ozone and $PM_{2.5}$ air quality levels, beyond that required by the CAA; and,

3. That preliminary alternative modeling results showed that "on-the-books" controls were nearly adequate to reach attainment and that discussions had begun with the Illinois EPA and LADCO to discuss the modeling approach.

4/27/2006 IERG participated in the first Illinois EPA stakeholder meeting for the NOx RACT rule, at which time:

1. The Illinois EPA stated that the CAA obligates NOx RACT in non-attainment areas. It further stated that because NOx, a precursor to both ozone and $PM_{2.5,}$ is a "transport pollutant" the proposed rule would be applicable state-wide.

2. The Illinois EPA again described the units targeted by the proposal:

   - Industrial boilers > 50 mmBtu/hr;
   - Process heaters > 50 mmBtu/hr;
   - All cement kilns;
   - Lime kilns > 50 mmBtu/hr;
   - Glass melting furnaces > 50 tons/day;
   - Iron and steel reheat, galvanizing, and annealing furnaces > 40 mmBtu/hr; and,
   - Other sources > 100 ton/year NOx potential to emit.

3. The Illinois EPA stated that it considered $2000/ton of NOx reduction to be "reasonable" though not necessarily a breakpoint for what constitutes RACT.

4. The Illinois EPA stated it was considering stack testing and CEM for all units.

5. IERG stated that it appeared that the Agency did not consider reductions of NOx from mobile sources.

6. IERG presented continuing questions regarding:

   a) The accuracy of modeling;
   b) The amount of NOx reductions needed to achieve attainment; and,
   c) The proper choice and levels of controls needed for required NOx reductions.

6/13/2006 In anticipation of a meeting with the Illinois EPA, IERG Staff distributed a spreadsheet of the Agency's proposed limits and associated controls and costs and a spreadsheet of the emissions inventory relied upon by the Illinois EPA. Staff requested Members review the data for accuracy and be prepared to discuss it at the meeting.

6/23/2006 IERG circulated a report that described the Illinois Proposed NOx RACT limits for ICI boilers and OTC and other state limits for such boilers that had been approved by the USEPA as RACT. (A copy of the report is attached as Exhibit A). Based on review of the materials, IERG determined:

1. The Illinois EPA's proposed limits are more stringent than those implemented in nearly any other state in the country;

2. The proposed limits appear to be beyond RACT, and they appear to be intended to reach the 8-hour ozone and $PM_{2.5}$ attainment demonstration; and,

3. That recent modeling indicates that the level of controls proposed may well be beyond what is necessary to demonstrate attainment.

7/27/2006 Representatives of IERG, the Illinois Chamber, the Chemical Industry Council of Illinois, the Illinois Manufacturers Association, the Illinois Petroleum Council, and the Illinois Energy Association met with Director Doug Scott to discuss industry's concerns with the Agency's development of 8-hour ozone and $PM_{2.5}$ SIPs, which included:

1. The fact that the modeling relied upon did not reflect monitored reality;

2. That the controls the Illinois EPA considered necessary to achieve attainment would place an undue burden on industry, and could adversely impact Illinois' economy;

3. That additional (refined) modeling could potentially show that significantly lower control levels could achieve attainment; and

4. Industry committed to work with the Illinois EPA to achieve attainment.

5. IERG sent a follow-up letter to Director Scott reiterating the concerns of industry, and requesting that he join Kevin Kessler, the Acting Director of the Bureau of Air Management at the Wisconsin Department of Natural Resources, in requesting additional modeling efforts by LADCO.

8 - 9/2006 IERG prepared a draft of alternative language to submit to the Illinois EPA as a NOx RACT rule.

11/13/2006 IERG sent its alternative to the Illinois EPA with an accompanying letter, explaining:

1. IERG believes the NOx RACT rule should only apply to ozone non-attainment areas;

2. That the limits proposed by IERG would fall within the USEPA requirements for RACT;

3. IERG felt the Agency's proposed limits were closer to BACT, and if adopted, would result in the most stringent NOx regulations in the country;

4. IERG highlighted important points of its draft alternative rule including:

   a. Exception for units subject to state or federal enforcement orders requiring NOx reductions;
   b. Annual Combustion Tuning as RACT for industrial boilers between 50 and 100 mmBtu/hr;
   c. Limit for 100-250mmBtu/hr boilers using natural gas set at 0.15lb/mmBtu;
   d. Limit for 100-250mmBtu/hr boilers using fuel oil or coal set at 0.20lb NOx/mmBtu or 30% reduction from uncontrolled
   e. Limit for "coal-fired stoker boiler, a bubbling bed fluidized bed boiler, or a pulverized coal-fired boiler" of 0.40lb/mmBtu;
   f. Limit for industrial boilers >250mmBtu/hr: All fuels: 0.17lb NOx/mmBtu or 30% reduction from uncontrolled;
   g. Allowed alternative methods for calculating limits and reductions to be approved by the Agency for all categories and limits;
   h. Set limits for all process heaters >100mmBtu/hr at 0.15lb/mmBtu, except for those burning residual fuel oil, >100mmBt/hr (MD) to be 0.20 lb/mmBtu;
   i. Specifying for cement kilns, RACT should be the same as limits already in the NOx SIP Call rules,

except for Short Dry Kilns, which were the same as the Illinois EPA proposed limits;

j. Specifying a rolling 30-day average for CEM data;

k. Including placeholders for the possibility of trading, averaging, and variance provisions, detailing testing, monitoring, and reporting requirements; and,

l. IERG did not specify limits for iron and steel facilities, citing ongoing discussions.

2/21/2007 IERG attended a meeting with Director Scott and Air Bureau Chief Laurel Kroack, to discuss various air regulatory rulemakings.

1. With regard to ozone, IERG was informed that the Illinois EPA intended to submit a request for re-designation (as in attainment) for ozone.

2. However, the administrators informed IERG that the Agency remained steadfast in its insistence for the need for a state-wide applicable RACT rule, stating that it was necessary for PM.

4/10/2007 IERG provided a letter to the Agency explaining the basis for the alternative rule, and attached documents evaluating the effectiveness and costs of various control technologies, as well as the NOx RACT rules in place in other states. IERG explained that the alternative rule limits fall within the wide range of values in other states, showing that they would be approved by the USEPA as meeting the requirement for RACT.

6/28/2007 IERG Staff informed Members that the Illinois EPA would soon post a draft rule; and further informed Members that, while the Agency had expressed no desire to include a trading program for non-EGUs, some sort of averaging provisions were envisioned by the Agency.

7/31/2007 The Illinois EPA informed IERG that the most recent version of its draft rule included limits that were essentially the same as those originally proposed, the Agency was willing to talk about the possibility of trading, and the "RACT" rule would address both ozone and $PM_{2.5}$.

8 - 9/2007 IERG analyzed the draft to assess:

1. Whether the limits were an issue for Member facilities;

2. If statewide applicability was an issue for Member facilities;

3. Whether trading should be an option;

4. Whether Member facilities have issues with compliance deadlines; and,

5. Whether the averaging plan provisions in the draft rule would be of benefit.

10/4/2007 IERG met with the Illinois EPA and LADCO to discuss updated modeling results. These showed, as IERG had long contended based on alternative modeling, that with "on-the-books" controls and NOx RACT limits, the ozone standard would be met on schedule, and that $PM_{2.5}$ would be met everywhere in Illinois except Granite City. The Agency informed IERG that it would update its proposal for the NOx RACT rule, most significantly, limiting applicability to the ozone and $PM_{2.5}$ non-attainment areas.

10/2007 IERG prepared comments on the Agency's July draft rule, and forwarded them to the Illinois EPA for its consideration. The comments:

1. Agreed with the Illinois EPA decision to limit the applicability to ozone and PM2.5 nonattainment areas;

2. Objected to any provisions extending the applicability to units outside the nonattainment areas;

3. Suggested provisions be included to allow compliance determinations to be made by measuring emissions in the common stack or flue for units that exhaust to a common stack;

4. Suggested that units less than 250mmBtu/hr not be subject to 40 CFR Part 60 or Part 75 monitoring requirements, unless otherwise required by federal or State regulation; and also that such units not be required to employ a CEM;

5. Suggested that the rule contain a provision allowing for case-by-case determination of RACT through the permitting process;

6. Suggested that being subject to, and complying with CAIR and CAMR rules should be specified as RACT; and that Subpart U should be retained, and units in compliance with that rule also be deemed in compliance with ozone season RACT;

7. Stated that the compliance date, January 1, 2009, was not achievable, given the RACT limits proposed;

8. Made corrections to the language of the averaging plan provisions;

9. Suggested an exemption for natural gas-fired auxiliary boilers less than or equal to 250mmBtu/hr, located at the site of an EGU, and used for start-up and/or plant heating, and having a capacity factor less than or equal to 20%;

10. A suggestion that the threshold for boilers be those >100mmBtu/hr, to conform with the NSPS categorization for such boilers;

11. Provided a distinction for coal boilers converted to natural gas combustion, and for coke oven gas; and,

12. Clarified that the limit for fluidized bed combustion should apply only to circulating fluidized bed boilers.

11/8/2007 IERG met with the Illinois EPA to discuss the draft rule.

11/26/2007 IERG sent a memo to the Agency specifying additional concerns raised at the November 8th meeting, which included the following for a new draft NOx RACT rule:

1. That Part 75 monitoring not be required where it is not already required, due to the operational complexity such monitoring imposes and provided details of circumstances where such would be the case;

2. Suggestions regarding the testing and monitoring provisions of proposed Sections 217.168 and 217.188:

- That units > 250mmBtu/hr be subject to 40 CFR Part 60, Subpart A, and Appendices B and F, unless otherwise required to have a continuous monitoring system by another regulation or enforceable order;
- That units >100 but <250mmBtu/hr, that are already required to have a continuous monitoring system, also be subject to 40 CFR Part 60, Subpart A, and Appendices B and F; and,
- That units >100 but <250mmBtu/hr, that are *not* already required to have a continuous monitoring system, may determine compliance by a performance test.

3. That the provision for averaging plans (Proposed Section 217.158(a)(2)(A)), clearly state that if the addition of a new unit causes an older unit to be shutdown, the new unit can be used in the averaging plan, even if its size and capacity exceed that of the unit(s) it causes to be replaced;

4. That the Illinois EPA reconsider the limits in light of the proximity of the compliance date (January 1, 2009); and,

5. Questioned the need to include limits for categories of sources that do not exist in the nonattainment area (specifically wall- or tangentially-fired boilers).

12/3/2007 IERG informed Members regarding the status of the rule:

1. That the Agency was convinced to not require Part 75 monitoring for process heaters, but were still discussing it with regard to boilers;

2. That the Agency based its determination that SCR is an economically viable control on a report by Jim Staudt.

12/19/2007 The Illinois EPA provided a new draft of the NOx RACT rule to IERG for preliminary review and comment.

1/02/2008 Based on its review, IERG provided comments to the Illinois EPA that:

1. Suggested that the definition of "combustion tuning" (Section 211.1315) be expressed as "maintaining low NOx emissions consistent with efficient operation of the boiler";

2. Suggested that the definition of "industrial boiler" (Section 211.3100) not include "cogeneration units and combined cycle systems," and further, specify that it excludes duct-fired HRSGs;

3. Questioned terms in the definition of "process heater" (Section 211.5195);

4. Questioned why emissions limits from new sources were being repealed (Section 217.121);

5. Suggested that the applicability threshold (in Section 217.150(a)) be set at 21 tpy and 7 tps;

6. Suggested that Section 217.150(c) and (d) be removed to preserve the applicability to nonattainment areas;

7. Suggested that Section 217.150(e) include emergency oil or gas fired electric generators;

8. Stated that while the change of compliance date from January 1, 2009 to May 1, 2010 was an improvement, it was still an inadequate amount of time to achieve compliance;

9. Suggested that the compliance demonstration test date of April 1, 2010 be removed (Section 217.154(a));

10. Suggested that the term "modified" in Section 217.154(b) be defined or clarified to avoid misinterpretation;

11. Requested that the compliance test for new units (Section 217.154(b)) timeframe be changed from 120 days from initial start-up to 180 days, and further requested a mechanism to allow for an extension if necessary;

12. Suggested that averaging be addressed as a compliance certification option in Section 217.155, and further, that more clarification be included as to what constitutes "procedures";

13. Contained various comments regarding the recordkeeping and reporting provisions (Section 217.156) all aimed at lessening the complexity and burden imposed on industry;

14. Re-expressed reservations regarding the need for Part 75 monitoring (Section 217.157), and various other questions aimed at clarification, and recommendations regarding monitoring;

15. Among other recommendations and requests for clarification regarding the averaging provisions (Section 217.158), re-expressed the opinion that recently installed or future boilers should be allowed to participate in averaging;

16. Proposed that Section 217.160(b) state: "This subpart does not apply to a boiler whose primary or major purpose is to reduce carbon monoxide emissions from a fluidized catalytic cracking unit (FCCU) located at a refinery";

17. Re-emphasized that the limits proposed by the Agency go beyond RACT, and proposed that units smaller than 50mmBtu/hr not be included in the rule;

18. Included charts comparing the limits from the July 2007 Illinois EPA draft, from the December 2007 Illinois EPA draft, and the limits proposed by IERG;

19. Suggested the provisions for combustion tuning for industrial boilers (Section 217.166) clearly state what procedures are acceptable, and further, that the requirement be to tune once per calendar year;

20. Stated that the emissions limitations for process heaters (Section 217.184) needs to include the statement "Compliance shall be demonstrated with the applicable emissions limitation on an ozone season and annual basis";

21. Suggested that the previous exemptions for various boilers at EGUs (Section 217.342) be reinstated; and,

22. Suggested that the rule make clear that units included in an MPS or CPS are never subject to this rule.

3/07/2008 IERG met with the Illinois EPA to discuss air issues, during which meeting the following surfaced regarding the NOx RACT draft rule:

1. That the ozone season component is intended to meet federal requirements for NOx RACT in ozone nonattainment areas, and that the annual component is intended to meet the requirements for $PM_{2.5}$;

2. That IERG continues to view the proposed limits as being beyond what constitutes RACT;

3. That the Agency might be willing to further consider the limits proposed by IERG, but emphasized that additional future restrictions might be necessary.

5/09/2008 The Illinois EPA filed proposal with the Board.

10/8/2008 An update to the June 2006 NOx RACT Report is attached as Exhibit B.

6 - 11/2008 IERG continued review and analysis of the proposed rule.

As should be apparent from the above, IERG has taken the Agency's request for input in this rulemaking very seriously because Illinois' final rule has serious implications for affected industries. As a result of the exchange of information during the past three years, four primary issues remain of concern to IERG.

First, IERG is concerned regarding the limits for certain, specific emission units as presently proposed in the Illinois EPA's draft rule and what constitutes RACT. Second is the restriction, by date of commencement of operation, of units that may be included in emissions averaging plans under proposed Section 217.158. These two issues will be addressed in detail in the testimony presented by Mr. Dave Kolaz on behalf of IERG. Third involves the difficulty to implement controls by the rule's proposed compliance date. Finally is the very need for the rule as proposed. These will be

addressed generally in my testimony and more specifically in that presented by Mr. Kolaz.

III. IMPLEMENTATION BY THE PROPOSED COMPLIANCE DATE

Evident in the information presented above, the proposed compliance date for the rule has changed from January 1, 2009 to May 1, 2010. Early in the process IERG maintained, and continues to maintain, that this affords an inadequate amount of time for member companies to achieve compliance with a final adopted rule. In discussions throughout the process, in response to IERG's pre-filed questions, and at the Board's October 14, 2008 hearing, the Illinois EPA has consistently stated that it believes

> ...stakeholders have already had ample time to plan and design the control measures need to comply with this proposal since they have been aware of it for several years. Depending on the duration of the rulemaking process, there may or may not be sufficient time to obtain the necessary permits and construct the control equipment....

Illinois EPA's Answers to Pre-filed Questions by IERG, R08-19 at 7 (Ill.Pol.Control.Bd. Sept. 30, 2008) ("Illinois EPA Answers"); *see also* Hearing Transcript, R08-19 at 75-78 (Ill.Pol.Control.Bd. Oct. 14, 2008). In response to such statement, IERG believes it necessary to question which control measures were facilities to have planned for and designed. Would it be the control measures necessary under the concept envisioned in May 2005; or under the rule as envisioned in April 2006, which had statewide applicability and afforded no opportunity for averaging? Would it have been the control measures necessary to meet the emission limits stated in the rule as proposed in July 2007? Or should facilities have prepared for the rule as proposed in December 2007?

How does a facility plan and design control measures when the targets they are to meet are moving?

IERG must respectfully differ with the Agency on its assessment that the compliance date will not impose a significant cost impact to most industries, and that reasonable availability of technical options is not a factor influenced by the compliance date. Illinois EPA Answers at 7-8. It is unreasonable to expect facilities to plan and design control technologies until those facilities know precisely what emission units are to be covered by this rule and what levels of control must be met.

IV. NECESSITY OF THE PROPOSED RULE

The Illinois EPA contends that the purpose of the proposed rule is two-fold: 1) to adopt RACT rules for major NOx sources ozone nonattainment areas under Section 182 of the CAA; and 2) to adopt regulations to reduce emissions sufficiently to demonstrate attainment of the 8-hour ozone and PM2.5 NAAQS. *See* Statement of Reasons at 5 – 7. IERG acknowledges that the State of Illinois must propose and adopt "a" NOx RACT rule for purposes of compliance with Section 182(f) of the CAA. However, IERG does not believe that it is "this" proposed rule. The Illinois EPA's proposal currently before the Board is a NOx control rule, beyond RACT.

A. Imposing NOx RACT

The United States Environmental Protection Agency ("USEPA") has stated that compliance with a USEPA approved Clean Air Interstate Rule ("CAIR") SIP is presumed sufficient to satisfy NOx RACT for EGUs in the St. Louis, MO-IL and Chicago-Gary-Lake County, IL-IN nonattainment areas. *See Phase 2 of the Final Rule to Implement the*

8-Hour Ozone National Ambient Air Quality Standard-Notice of Reconsideration, 72 Fed. Reg. 31727, 31730 (June 8, 2007). In addition, USEPA has stated that, for non-EGUs, compliance with the NOx SIP Call Program satisfies the RACT requirement. *See Final Rule To Implement the 8-Hour Ozone National Ambient Air Quality Standard*, 70 Fed. Reg. 71612, 71656-57 (Nov. 29, 2005).

Illinois' CAIR rule is more stringent than the vacated federal CAIR rule. The Illinois NOx SIP Call rule for non-EGUs remains in place and is codified at 35 Ill. Admin. Code Part 217, Subpart U. Therefore, based on USEPA's statements, existing Illinois rules are sufficient to be considered NOx RACT for both a number of EGUs and non-EGUs subject to this proposed rule, although RACT rules may be necessary for sources not subject to CAIR or the NOx SIP Call. IERG would contend there is no need to adopt the additional control strategies under the proposed rule. Rather, a viable option is available to rely on existing Illinois CAIR and NOx SIP Call rules for purposes of compliance with Section 182 of the CAA.

B. Demonstrating Attainment

As set forth above, in October 2007, the Illinois EPA indicated that Illinois appeared to be able to meet the ozone standard on schedule, and that the $PM_{2.5}$ standard would be met everywhere in Illinois except Granite City. On November 14, 2008, via website posting, the Illinois EPA announced that it intends to request USEPA to re-designate the Chicago area to attainment of the 1997 8-hour ozone NAAQS. Illinois EPA noted that a key element in its strategy to show attainment was USEPA's CAIR, promulgated March 10, 2005. The Agency noted that, because the rule was vacated by

the U.S. Court of Appeals for the D.C. Circuit on July 11, 2008, emission reductions expected from this program are uncertain. However, the Illinois EPA went on to note that the modeling indicates that the State's emission reduction strategy is still sufficient to demonstrate attainment for the 8-hour ozone standard by 2009.

The Agency's request for re-designation is excellent news. IERG would further contend that the request supports the proposition that the proposed rule, currently before the Board for its consideration, is unnecessary at this time.

V. CONCLUSION

IERG appreciates the opportunity to work in partnership with the Illinois EPA to achieve effective emissions reductions. IERG would offer that the success of past efforts to benefit the quality of the Illinois environment is in great part attributable to rules proposed in such manner as to give attention to the requisite time and cost of implementation. It will very difficult, if not impossible, for many affected facilities to implement the proposed rule in the established time frame. It will be extremely difficult for many to obtain and install important control technologies at reasonable cost. IERG would ask, at a time of economic uncertainty, does it make sense to expend resources to attain that which the State of Illinois already has attained, and to impose new rules to meet federal requirements that the State of Illinois already has met? IERG thanks the Board in advance for any consideration it may give to our comments.

I appreciate the opportunity to share IERG's comments on this proposed rule. I would be happy to answer questions regarding my testimony.

* * *

IERG reserves the right to supplement this pre-filed testimony.

Respectfully submitted,

Dated: November 25, 2008

By: /s/ Katherine D. Hodge
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IERG:001/R Dockets/Fil/R08-19/Pre-Filed Testimony of DK Hirner

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	)	

PRE-FILED TESTIMONY OF DAVID J. KOLAZ
ON BEHALF OF 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 TESTIMONY OF DAVID J. KOLAZ for presentation at the December 9, 2008, hearing scheduled in the above-referenced matter.

Pre-Filed Testimony of David J. Kolaz

I. INTRODUCTION

My name is David Kolaz, and I am here today to testify on behalf of the Illinois Environmental Regulatory Group ("IERG") in the matter of the Illinois Environmental Protection Agency's ("Illinois EPA" or "Agency") nitrogen oxides rulemaking (R08-19) also referred to as the NOx RACT rulemaking.

The purpose of my testimony is to provide the Board with information that will show that the Agency's stated purpose for this rulemaking, its timing, and the form and substance of the rule combine to create a rule that is untenable. The content and requirements of the rule will be shown to be inconsistent with the reasons the Agency presents as the basis for the rule's formulation. Finally, on behalf of IERG, I will present suggestions on how the rule can be modified to achieve its stated purpose in a manner that resolves many of its current deficiencies.

I am currently an environmental consultant and a licensed Professional Engineer in the State of Illinois. My professional experience encompasses over 37 years of environmental work in various facets of air pollution control. Before leaving State government in December 2004, I served as Chief of the Bureau of Air for the Illinois EPA. In this capacity, I was responsible for the planning, development, and implementation of the statewide air pollution control program designed to meet State and federal clean air laws. During my tenure at the Illinois EPA, I was involved with all aspects of the air pollution control program including air monitoring, the permit program, emission inventory system, air quality planning, and the compliance and enforcement program. I am a consultant to IERG where I provide assistance in resolving complex technical challenges which often have social, economic, and political dimensions. I am a graduate of the University of Illinois-Champaign with a Bachelor of Science Degree in Aeronautical and Astronautical Engineering. I also have a Master of Science Degree in Engineering from Southern Illinois University-Carbondale.

II. RATIONALE FOR RULEMAKING

IERG understands the stated purpose in this proposed rule to be summarized as follows:

1. *Achieve Emission Reductions* to meet Illinois' obligations under Section 110 of the Clean Air Act ("CAA"), 42 U.S.C. § 7401, *et seq.*, requiring the preparation and submission of a State Implementation Plan ("SIP") describing actions to be taken to reduce emissions sufficiently so as to attain the National Ambient Air Quality Standards ("NAAQS") for ozone

("O_3") and fine particulate matter ("$PM_{2.5}$") in the Chicago and St. Louis nonattainment areas. Statement of Reasons, R08-19 at 1-2 (Ill.Pol.Control.Bd. May 9, 2008) ("Statement of Reasons").

2. *Meet RACT Requirements* under Sections 172 and 182 of the CAA that requires the adoption in the nonattainment areas of all reasonably available control measures ("RACM"), including reasonably available control technology ("RACT"). *Id.* at 5-7.

IERG agrees that the CAA obligations cited by the Agency must be addressed in its SIP. However, IERG maintains that the rule, as proposed, goes beyond these underlying obligations. If adopted as proposed, the rule would place unreasonable burdens on affected entities, having potentially severe economic and social consequences, and will not provide commensurate environmental benefits. IERG believes the Agency can meet its CAA obligations with modifications to the rule that will resolve several significant difficulties.

The next portion of my testimony will provide more information about the CAA requirements the Agency has cited and will show how these relate to the Agency's proposal.

A. Emission Reductions

According to the Agency, the emission reductions from the proposed NOx RACT rule serve as a necessary component of the Illinois SIP showing how Illinois will achieve the NAAQS for ozone and $PM_{2.5}$ in the Chicago and St. Louis nonattainment areas. However, the Agency has not quantitatively defined the specific emissions reductions

needed from this NOx RACT proposal to contribute to a successful attainment demonstration. Instead, Mr. Kaleel testified that the emission reductions it presented in regards to this rulemaking were for illustrative purposes only and did not represent the values that were used in the attainment demonstrations for ozone or $PM_{2.5}$. Hearing Transcript, R8-19 at 108-109, 114 (Ill.Pol.Control.Bd. Oct. 14, 2008).

The Agency does offer numeric reductions under this proposal with the Statement of Reasons (Section V, page 11) and Technical Support Document ("TSD") (Section 10-1, page 133) indicating the proposal would reduce NOx emissions by 46.3% or 20,666 tons per year from 2005 emission levels. But in light of Mr. Kaleel's testimony that this number was neither a target nor a budget the Agency was seeking to achieve, this number has little significance in terms of understanding the relevance of the emission reductions to the underlying CAA requirements pertaining to the SIP. *See* Transcript at 110. Emphasizing this point, Mr. Kaleel stated that, "If there was a different total that we achieved as a result of application of RACT, we'd have been comfortable with that different total...." *Id.* at 110. As further evidence of the fact that the specific amount of NOx emission reductions expected from this rule was not the basis for the substance of the rule, the Agency did not conduct a sensitivity analysis to determine whether emission reductions less than the amount derived from this rule would have a perceptible change in the attainment modeling results. *Id.* at 93-94. Such an analysis would have allowed the Agency to determine the impact that various levels of NOx emission reductions would have on the model results, and thereby allow the Agency to propose a rule that achieved

those reductions by either meeting or exceeding the requirements for RACT, as necessary.

For these reasons, IERG believes that it is proper to conclude that the principal motivation for the form and substance of this rule is the Agency's goal of addressing the CAA requirements pertaining to RACT. The specific amount of emission reductions derived from the proposed rule, while important and useful, are not the driving force behind the rule. Otherwise, the Agency would have determined the impact that various levels of NOx emission reductions would have on the attainment model results to ensure that any rule it would propose would achieve those reductions while meeting or exceeding RACT requirements.

B. RACT Requirements

The United States Environmental Protection Agency ("USEPA") defines RACT as "...the lowest emission limitation that a **particular** source can meet by applying a control technique that is reasonably available considering technological and economic feasibility." 44 Fed. Reg. 53762 (Sept. 17, 1979). (Emphasis added.) With regard to this rulemaking, Section 172 of the CAA establishes the requirement for $PM_{2.5}$ RACT, and Section 182 establishes the requirement for ozone RACT. 42 U.S.C. §§ 7502 and 7511a. While both of these provisions pertain to the topic of RACT, there is a distinct difference in their scope. The purpose of the following portion of my testimony is to describe the options that the USEPA gives the Agency in fulfilling this federal requirement and to show how these could be exercised in a manner that offers viable opportunities to resolve the implementation difficulties with the Agency's proposed rule.

1. RACT for Ozone

The requirements for NOx RACT for purposes of the 8-hour ozone standard are found in the USEPA's *Final Rule To Implement the 8-Hour Ozone National Ambient Air Quality Standard; Final Rule*, 70 Fed. Reg. 71612 (Nov. 29, 2005) ("Final Rule"), and in its *Phase 2 of the Final Rule to Implement the 8-Hour Ozone National Ambient Air Quality Standard-Notice of Reconsideration;* 72 Fed. Reg. 31727 (June 8, 2007) ("Phase 2 Final Rule"). IERG believes its following conclusions are relevant to the 8-hour ozone nonattainment areas in Illinois and to the proposed NOx RACT rule, and offers them for the Board's consideration.

a. The requirement for NOx RACT is not predicated on an assessment of the effectiveness of resulting emission reductions in contributing to the attainment of the NAAQS for ozone, unless a waiver from NOx RACT is sought under Section 182(f) of the CAA. Because the Agency has not requested such a waiver, NOx RACT is required for Illinois' 8-hour ozone nonattainment areas, without regard to air quality benefit.

b. The NOx RACT SIP for ozone was required to be submitted by September 15, 2006; NOx RACT is to be implemented by May 1, 2009. *See* 40 C.F.R. § 51.912. One deadline has passed. The other cannot practicably be met, as the deadline for implementing a rule that that the Board has not yet passed is but a mere five months away.

c. For EGUs in the St. Louis, MO-IL nonattainment area, compliance with a USEPA approved Clean Air Interstate Rule ("CAIR") SIP is sufficient to satisfy NOx RACT. *See* Phase 2 Final Rule at 31730.

d. For EGUs in the Chicago-Gary-Lake County, IL-IN nonattainment area, compliance with CAIR is presumed to satisfy NOx RACT. *Id.*

e. For EGUs, the USEPA considers SCR and SNCR to be beyond RACT. *Id.* at 31734.

f. For non-EGUs, compliance with the NOx SIP Call Program (codified at 35 Ill. Admin. Code Part 217, Subpart U) satisfies the RACT requirement and is considered beyond RACT. *See* Final Rule at 71656-57, paragraph (i).

g. The authority for determining whether the CAA requirement for RACT is satisfied rests with the USEPA. Therefore, IERG suggests that the USEPA's statements in this regard, summarized in items c through f above, are an important consideration in determining whether a control strategy constitutes RACT. IERG contends that the provisions of the Agency's proposal are beyond RACT, despite the Agency's testimony that the purpose of its rule is to satisfy the CAA RACT requirements, and not to go beyond. Transcript at 91.

Regarding EGUs, the USEPA indicates that compliance with CAIR is presumed sufficient to satisfy NOx RACT. For reasons more particularly described below, IERG's position is that compliance with the Illinois CAIR rule constitutes RACT for EGUs.

The Agency's proposed NOx rule includes EGUs under Subpart M, which establishes an emission limit of 0.09 lbs/mmBtu that must be met by May 1, 2010. Under the proposed rule, EGUs can be exempted from Subpart M, provided the subject boilers comply with 35 Ill. Admin. Code § 225.233 (Multi-Pollutant Standards ("MPS")) or 35 Ill. Admin. Code Part 225, Subpart F (Combined Pollutant Standards("CPS")). The MPS

and CPS NOx emission rate requirement is 0.11 lbs/mmBtu with a compliance date of January 1, 2012. These same boilers are subject to Illinois' CAIR rule, 35 Ill. Admin. Code § 225.300. Illinois' CAIR rule, with an initial 2009 compliance period, is more stringent than the vacated federal CAIR rule, especially considering Illinois' 5% New Source Set Aside and its 25% Clean Air Set Aside. Therefore, based on the USEPA's statements as previously set forth in this document, existing Illinois rules are sufficient to be considered NOx RACT for EGUs.

Further, review of the Lake Michigan Air Directors Consortium ("LADCO") Technical Support Document, referenced on the Agency's website, states that the USEPA's February 2007 Integrated Planning Model 3.0 ("IPM3.0") served as the source of the EGU emission estimates used in LADCO's SIP modeling conducted for Illinois and other LADCO states. *See Regional Air Quality Analyses for Ozone, $PM_{2.5}$, and Regional Haze: Final Technical Support Document* at 59 (April 25, 2008) ("Regional Air Quality Analysis").

For all of the foregoing reasons, it is IERG's position that compliance with Illinois' CAIR rule constitutes RACT for EGUs. Therefore, Subpart M is unnecessary for purposes of this rulemaking.

Regarding non-EGUs, the USEPA has clearly stated that it considers compliance with the NOx SIP Call to satisfy the requirement for RACT. The USEPA stated:

> The NOx SIP Call is estimated to achieve a beyond-RACT degree of control regionally, and sources were required to install any controls needed for compliance no later than May 2004. Under these circumstances, **EPA believes that the NOx SIP call constitutes RACT for those sources covered by the NOx SIP Call,** regardless of the manner of compliance of individual sources (e.g., control equipment

> installation or purchase of allowances from other sources). EPA is making this finding now for all areas in the NOx SIP call region, such that **States need not submit RACT analyses for sources subject to the NOx SIP call that are in compliance with a SIP approved as meeting the NOx SIP call**.

Final Rule at 71657. (Emphasis added.)

The NOx SIP Call requirement for non-EGUs is satisfied in Illinois through compliance with 35 Ill. Admin. Code Part 217, Subpart U, which is an approved part of Illinois' SIP. IERG maintains that the USEPA would clearly consider non-EGUs, subject to the Agency's proposed NOx RACT rule, to be meeting NOx RACT under the current Subpart U.

2. RACT for Fine Particulate Matter ($PM_{2.5}$)

The requirements for NOx RACT for purposes of the $PM_{2.5}$ annual standard are found in the USEPA's *Clean Air Fine Particle Implementation Rule; Final Rule,* 72 Fed. Reg. 20586 (April 25, 2007) ("PM Final Rule"). IERG believes its following conclusions are relevant to the $PM_{2.5}$ nonattainment areas in Illinois, and to the proposed NOx RACT rule, and offers them for the Board's consideration.

a. If the nonattainment area will achieve compliance within five years of the area's designation (i.e., by April 5, 2010), RACT is not required if it cannot be implemented in time to obtain significant emission reductions during 2008. That is, RACT must be in place in time to advance the attainment date by one year or more, otherwise it is not required. Since 2009 is the last calendar year in which to attain the standard by April 5, 2010, then the attainment date could only be advanced by one year by the application of RACT, if RACT were in place by the start of 2008. *Id.* at 20613.

b. If attainment will not be achieved by April 5, 2010, RACT is required only to the extent that it advances the attainment date by one or more years. The USEPA stated:

> Because EPA is defining RACT and RACM as only those reasonable, technically and economically feasible measures that are necessary for attainment as expeditiously as practicable, the State need not adopt all feasible, reasonable measures. The State may exclude those reasonable measures that, considered collectively, would not advance the attainment date.

Id. at 20614.

c. For EGUs, compliance with a USEPA approved Clean Air Interstate Rule ("CAIR") SIP is sufficient to satisfy the requirement for NOx RACT. *Id.* at 20628, paragraph 8(b)(2).

d. NOx RACT controls are to be implemented by the start of 2009. *Id.* at 20623.

Based on the USEPA's statements, as outlined above, IERG maintains that the USEPA would consider EGU boilers, subject to the Illinois CAIR rule, as achieving RACT. These limits for Illinois EGUs become effective January 1, 2009.

Regarding non-EGUs, for reasons described below, IERG contends that the USEPA would not require RACT be implemented for the April 5, 2010 compliance date. Such emission limits could not be implemented in time to advance the compliance date by one or more years, because in order to do so, they would have to have been in place by January 1, 2008.

The Agency has not yet submitted its $PM_{2.5}$ SIP demonstration, which was due by April 5, 2008. Nor does it appear that the Agency has made a final determination

regarding when it will submit the $PM_{2.5}$ SIP. The Agency has opined that it does not think that the Chicago or St. Louis nonattainment areas would be attaining the $PM_{2.5}$ standard by the compliance date. Transcript at 89. However, it appears that the Agency has not yet completed its $PM_{2.5}$ attainment analysis in order to determine whether attainment can be achieved by the April 5, 2010 date, or whether an extension will be required. Until the Agency completes its $PM_{2.5}$ attainment analysis, it is not possible to determine if RACT controls on non-EGUs would advance the compliance date by one or more years.

It, therefore, seems reasonable to conclude that the Illinois CAIR program is sufficient to satisfy any NOx RACT requirement for EGUs. Further, NOx RACT for non-EGUs has not been demonstrated to be needed or required for attainment of the $PM_{2.5}$ standard.

C. Summary and Conclusions Regarding the Agency's Rationale for the NOx RACT Rulemaking

The emission reductions that would result from the Agency's NOx RACT rulemaking do not represent a specific numerical target that the Agency has identified as an essential component of its ozone or $PM_{2.5}$ SIPs. In fact, the values that have been used in the modeling do not correspond with the emission reduction numbers that the Agency cites in its Statement of Reasons for this rule. *See* Transcript at 114; Illinois EPA Post Hearing Comments, R08-19 at 3 (Ill.Pol.Control.Bd. Nov. 5, 2008). Instead, the proposed rule is driven by the Agency's obligation to address RACT requirements under Sections 172 and 182 of the CAA. The USEPA is the arbiter in regards to whether or not the Agency has met its RACT requirements. Based on the USEPA's statements in this

regard, it is clear that RACT obligations are satisfied by EGUs for both ozone and $PM_{2.5}$ by their compliance with Illinois' CAIR rule, 35 Ill. Admin. Code Part 225, Subpart D. The requirement for ozone RACT for non-EGUs is met by compliance with the NOx SIP Call program, 35 Ill. Admin. Code Part 217, Subpart U. And, absent completion of a $PM_{2.5}$ attainment analysis, it is impossible to determine if RACT controls for the affected non-EGU units would advance the compliance date by one or more years. Consequently, this rule is unnecessary for these emissions units.

III. NOx RULE COMPLIANCE DATE

The Agency's proposed rule establishes a compliance date of May 1, 2010, which occurs after the required attainment dates for the ozone and $PM_{2.5}$ nonattainment areas. Therefore, IERG views the May 1, 2010 compliance date to be inconsistent with the USEPA's requirements and questions how the Agency's proposed NOx RACT limits, if adopted under this rule, would contribute to attainment of the ozone standard or "advance" the $PM_{2.5}$ attainment date. In addition, IERG questions the practicality of the proposal with regard to the physical ability to actually achieve emission reductions in time to impact the attainment status, given the scope of the changes that will be required to the physical plant of existing facilities in order to meet the proposed emission limits by May 1, 2010.

A. Inconsistency with Federal Requirements

The USEPA required that the RACT SIP for ozone be submitted by September 15, 2006, with the EGU RACT SIP deadline extended to July 9, 2007. The Agency has not submitted the required RACT SIPs although, under federal rules, RACT is to be implemented by both EGUs and non-EGUs by May 1, 2009. *See* 40 C.F.R. § 51.912. As previously stated, the USEPA views EGUs subject to CAIR, and non-EGUs subject to the NOx SIP Call, as having achieved NOx RACT. IERG suggests that NOx RACT already is being achieved for those emission units subject to both the Illinois CAIR rule and the non-EGU NOx SIP Call rule, 35 Il. Admin. Code Part 217, Subpart U, and that Illinois EPA rely on those existing programs to affirmatively demonstrate compliance with the CAA NOx RACT requirement.

Therefore, in accord with the information presented above, IERG believes the proposed rule is unnecessary for the stated purpose of demonstrating compliance with the CAA RACT requirements of Section 182 for EGUs and large non-EGUs. This rule may be necessary to address NOx RACT for non-EGUs for ozone that are not subject to the NOx SIP Call requirements of 35 Ill. Admin. Code Part 217, Subpart U. However, as will become evident later in my testimony, alternative emission limits for the Agency's proposed RACT limits can be considered RACT, can be implemented by May 1, 2010, and will achieve emission reductions that will still support the Agency's attainment demonstrations.

The $PM_{2.5}$ NOx RACT SIP was required to be submitted by April 5, 2008 and implemented by January 1, 2009. *See* 40 C.F.R. § 51.1010. The Agency has not yet

submitted its NOx RACT SIP. Similar to ozone, the USEPA considers EGUs' compliance with CAIR to satisfy RACT requirements for $PM_{2.5}$. NOx RACT for non-EGUs is required only if demonstrated that it is needed to advance the attainment date by one year or more.

The Agency's proposed rule would have to have been in effect beginning January 1, 2008, if it were needed to advance the $PM_{2.5}$ compliance date of April 5, 2010, by one year. To impact 2009 sufficiently to qualify for a one-year extension of the $PM_{2.5}$ attainment date based on a "clean" 2009 calendar year, the proposed rule would need to be in effect by January 1, 2009. Since the Agency has apparently not completed or presented its $PM_{2.5}$ SIP, the purpose of the expected reductions from the Agency's proposed rule are unclear. As will be addressed subsequently, the largest portion of the expected reductions will come from Illinois' CAIR rule, which already has been promulgated, and is recognized by the USEPA as constituting RACT.

B. Implementation Practicality

The interval between rule promulgation and a May 1, 2010 compliance date is likely to be short, and there is a great deal that must be accomplished to implement any significant capital project. The Agency's testimony implied it believed the time frame to be adequate for industrial facilities to make modifications. However, its statements demonstrated that it did not explicitly consider the time frame necessary for such major modifications and that the consideration given to this critical issue was little more than superficial. Transcript at 14-15, 21-24.

Based on industry's experience, the process of preparing a permit application and obtaining a permit requires six months, at a minimum. Contractual arrangements with vendors cannot be completed until permits are received. Competition for equipment and construction services can realistically be expected to cause additional delays. Recently, for example, some IERG Members have sought estimates for the continuous emission monitoring systems to be required under the proposed rule and have found that delivery could not be expected sooner than one year from the order date. The time required for installation is in addition to the delivery date. Regarding installation of some of the types of equipment needed to comply with the proposed rule, some IERG Member facilities require plant outages that need significant advanced planning on the order of three to five years. Finally, capital projects of the magnitude anticipated by the proposed rule require financial arrangements that, under standard industry finance practices, cannot be arranged prior to the promulgation of the rule. In better economic times, such arrangements require one to three month minimums, depending upon the amount being financed.

In summary, the compliance date is unreasonable in terms of both the USEPA's regulatory requirements and the complexity of the task of complying with the rule in the time frame specified. IERG believes, and respectfully encourages the Board to concur, that the Agency can comply with the USEPA's RACT requirements for EGUs and large non-EGUs and can satisfy SIP requirements under existing rules and regulations.

IV. PROPOSED NOx EMISSION LIMITS

The Agency has provided an analysis of NOx emission reduction strategies for a variety of source categories in its TSD. IERG agrees with these analyses to the extent they reflect technologies that are technically feasible as a general matter. However, missing from the analyses is an explanation addressing the practical aspects that describe how these technologies are "reasonably available," considering not only whether technology exists but the economic reasonableness of employing the technology. IERG believes that the Agency's TSD is deficient in the following regard:

1. Economic reasonableness is affected by the period of time allowed for compliance. The TSD failed to consider the time frame allowed under the Agency's proposed rule when assessing economic implications. The TSD neither identified nor evaluated the steps involved in, or the time required for, bringing a RACT project from concept to full implementation, to assess the economic impact of the proposed compliance period.

2. Data provided in the TSD, and relied upon for purposes of this rulemaking, were often times for installations inconsistent with the content of the rule. These included emission rates for new installations rather than retrofits, emission rates for units of a size that were smaller than those affected by the rule, and units that included emission rates for SCR control technologies the Agency witness identified as unnecessary for achieving the proposed limits. Transcript at 26-27.

3. The TSD included various emission limit ranges and other such information the Agency apparently deemed relevant to its RACT determination. From

this information, the Agency derived its proposed emissions limits, though in several cases, the TSD would seem to support the selection of less stringent limits. The TSD does not offer any analysis or rationale that describes the Agency's reasoning for selecting the particular emission limits that it chose, though its testimony shows that it did not consider the particular industrial facilities present in Illinois other than in a categorical sense. *Id.* at 15-16.

4. The TSD did not provide any mention of or reference to the USEPA's view of RACT for various source categories. For example, the TSD discusses SNCR and SCR as RACT options for EGUs, though the USEPA has clearly stated it considers these technologies beyond RACT.

5. The economic analysis in the TSD assumes that the affected units are uncontrolled. Thus, the cost effectiveness of the control technology presented in the TSD is computed as a function of a larger emission reduction than would be achieved with a unit that already has adopted NOx reduction technologies. A number of units, potentially affected by the proposed rule, are subject to existing rules that have required NOx control technology. *Id.* at 118-121.

6. The economic analysis used numerous cost projections and assumptions, without adequate justification. The past two years have seen escalating costs for materials and labor, as well significant changes in the financial sector. None of these appear to have been considered in the analysis of cost or availability. For example, the TSD provides information on the cost of continuous emission monitors, but has failed to determine current cost or availability of these systems.

Based on deficiencies as noted above, IERG believes the Agency's TSD should only be viewed as describing potential technologies for controlling NOx emissions, with hypothetical costs that may not be applicable to any particular installation. To be of use to identify RACT limits in Illinois, the costs must be updated using the economic conditions of the past year, consideration must be given to the time frame being allowed for the rule, and some assessment must be made of retrofit installations for industrial boilers and process heaters of a type potentially impacted by this rule. An example of the type of problem not included in the TSD analysis is that faced by petroleum refineries. These facilities must schedule significant projects in accordance with turnaround cycles, which require three to five year lead times. The TSD does not acknowledge this as an issue of the type pertinent to the determination of "technically feasible or economically reasonableness."

The inconsistency of the Agency's logic in regard to RACT for EGUs is illustrated by the fact that the proposed rule gives these affected units until May 1, 2010 to meet a 0.09 lbs/mmBtu limit, provides an exemption that allows them to meet a 0.11 lb/mmBtu limit by January 1, 2012, but essentially uses the emission reductions from its CAIR rule for EGUs in its modeling demonstration which is equivalent, for the ozone season, to the NOx SIP Call level for EGUs of 0.15 lbs/mmBtu. In the meantime, the Agency has determined that the ozone standard has been achieved in the Chicago area already and will be achieved in the St. Louis area by the required attainment date. The TSD also discusses both SNCR and SCR as potentially required for RACT when the USEPA has stated that it considers these technologies to be beyond RACT.

For these reasons, IERG believes that the emission limits proposed in the Agency's rule cannot be viewed as representing RACT, as a general matter. Should IERG be unsuccessful in its attempt to convince the Board that Illinois meets the federal RACT requiring under those rules currently in place for EGUs and non-EGUs, IERG is prepared to offer alternative emission limits to those proposed by the Illinois EPA under its rule.

V. IERG'S SUGGESTED RULE CHANGES

IERG believes that modifications can and should be made to the Agency's proposed rule to address the deficiencies already identified, and to resolve other problems that create difficulties with rule implementation as identified below.

A. Section 217.150 – Applicability

Cement kilns and aluminum reverberatory or crucible furnaces should not be included in proposed Section 217.150(a)(2) because no such units currently exist in the applicable areas designated by Section 217.150(a)(1)(A) or (B), as substantiated by the Agency's testimony. Transcript at 60-61. Any new facility with such a unit in the applicable areas would be subject to controls stricter than RACT.

If new nonattainment areas are identified in Illinois, this proposed rule would need to be amended to incorporate those areas if NOx reductions are deemed necessary and appropriate to address the air quality conditions. For example, if the USEPA designates Massac County or Rock Island County as nonattainment for the 24-hour $PM_{2.5}$ standard, a USEPA proposal which the Agency opposes, the Agency will need to identify appropriate strategies to meet those standards which may or may not affect cement kilns

and aluminum melting furnaces. It is important to note that the $PM_{2.5}$ standard that forms part of the basis for the Agency's proposed NOx rule is an annual standard which would require a separate and additional analysis. *Id.* at 57-59. The Agency stated in its testimony that it did not believe that sources in Massac County impacted the nonattainment area. *Id.* at 59-60. On the basis of the existing $PM_{2.5}$ RACT requirements, if implementation of RACT would not advance the attainment date, RACT is not required. Note that it would not advance the attainment date in the Massac County area if, as the Agency testified, sources in Massac County are not impacting the nonattainment measurements. For these reasons, there is no compelling reason to include units that do not exist in the applicable areas identified in the proposed NOx RACT rule.

B. Section 217.154 – Compliance Date

The compliance date is impractical for certain categories of facilities, such as petroleum refineries, and for those facilities that require significant advanced planning to implement major capital projects. The emission limits in the proposed rule are overly stringent. They will require facilities to plan in advance to implement control measures to minimize significant disruption in their operations, and call for major outages for installation purposes. IERG submits that any emission reduction that cannot be accomplished by May 1, 2009, the date USEPA requires compliance with RACT, is not reasonably available. Although the Agency proposes a compliance date in its rule one year beyond the USEPA requirement for ozone (*see* 40 C.F.R. § 51.912), IERG believes this is still an inadequate period of time in which to accomplish the task. IERG suggests three possible options that are not mutually exclusive and which could be implemented in

combination. The first option is to adjust several of the emission limits to values that would be considered "reasonably available" given the time frame that exists for implementation. The second option is to extend the compliance date to allow sufficient time to implement the rule for source categories such as petroleum refineries that have clearly identifiable issues with the schedule. The third option is to incorporate a provision in the rule that would allow a site specific RACT determination. IERG is willing to work with the Agency to develop a solution to this real and significant problem.

C. Section 157 – Testing and Monitoring

The procurement of continuous emission monitoring systems ("CEMs"), and their installation, can take two to three years in the current market environment. IERG believes that the Agency understands this difficulty and has indicated a willingness to work toward a reasonable accommodation. A provision needs to be made to allow additional time for CEMs installation. Likewise, a provision should be included to allow exceptions from the stack testing in the proposed rule, where it can be shown that such exceptions are necessary to accommodate safety, economic or technical concerns.

D. Section 217.158 – Emission Averaging Plans

The proposed rule restricts the use of units to be used in averaging plans to those that commence operation after January 1, 2002. The Agency's testimony supports this provision as being necessary to account for emission reductions beyond the base year of 2002. Transcript at 79-83. Emission reductions are impacted by the shutdown, startup, and modification of units on an ongoing basis, and must be continuously tracked and

tabulated by the Agency. It is necessary to have an accounting system that accommodates the dynamics of industrial development and economic growth and downturns. It is important for both energy and economic efficiency that new units be allowed to average with older units. IERG believes that the Agency can, and should, accommodate these circumstances. Older units can then be retired or their operations reduced in a more efficient manner, if the composite emission reductions of newer units can be credited within an averaging plan. The resolution of this issue can be as simple as removing the January 1, 2002 restriction, and expanding the definition of "replacement unit."

E. Subpart D - Industrial Boilers

The emission limits for industrial boilers are unnecessarily restrictive given the time frame allowed for compliance with the rule, the range of RACT limits that are used elsewhere, and the relatively small difference between the emission reductions achievable under the Agency's proposal and IERG's alternate proposal. Exhibit 1 to my testimony shows the Agency's proposed emission limits and those proposed by IERG. IERG used the information provided by the Agency in Tables C-2, F-1, and G-1 of its TSD to determine the relative difference between these two limits. Exhibit 2 to my testimony shows the results of applying those limits to the same units used by the Agency.

As can be seen from a comparison of Exhibit 2 and the Agency's Table C-2 from its TSD, 2005 emissions from boilers represent about 12% (5,299 tons per year) of the total emissions of 44,625 tons per year shown in the Agency's Table C-2 of its TSD. The Agency's Table C-2 shows that it would expect an emission reduction of 61% (3,231 tons

per year) from its proposal. The data presented in Exhibit 2 shows a reduction of 42% (2,245 tons per year) from IERG's proposed limits, which is 987 tons per year less than the Agency's value. This 987 tons per year difference represents just 2% of the total of 44,625 tons per year. It is extremely unlikely that this small difference would have any impact on the attainment demonstration. However, IERG's proposed limits are more practically achievable in the time frame allowed though some affected units could still have difficulty meeting the limits, hence the accommodations identified above for proposed Section 217.154.

F. Subpart E – Process Heaters

Most of the process heaters affected by this rule are located at petroleum refineries operated by CITGO, ConocoPhillips, and ExxonMobil, all members of IERG. These refineries cannot make changes to their process heaters without planning the work to occur during maintenance turnarounds. The emissions from the process heaters in this category were estimated by the Agency to equal 3,710 tons per year in 2005, which is 8% of the total 2005 NOx emissions (44,625 tons per year) shown by the Agency in Table C-2 of its TSD. The Agency's proposal shows an expected reduction of 1,060 tons per year (28.6%) in 2005 from the total of 3,710 tons per year from process heaters. This reduction represents 5% of the total emission reductions (20,666 tons per year) the Agency shows in its Table C-2.

IERG understands that the Agency is aware of the difficulties that its proposed rule poses in terms of the logistics associated with achieving compliance in a manner that does not create significant refinery disruptions. Given the relatively small amount of

emissions involved, and the fact that it appears that the Agency used the emission reductions from the USEPA refinery consent decrees for the attainment modeling conducted by LADCO, IERG suggests the Agency consider the reductions from the federally enforceable consent decrees to constitute RACT for these facilities. Section 217.182 (Exemptions) in the Agency's proposed rule could be modified to include this exemption.

G. Comments on Other Subparts

IERG has the following comments on Subparts G, H, and M of the proposed rule:

1. Subpart G – Cement and Lime Kilns

There are no cement kilns in the area covered by this rule; therefore, they should not be included in the rule.

2. Subpart H – Iron and Steel and Aluminum Manufacturing

There are no permitted or operating aluminum reverberatory or crucible furnaces in the area covered by this rule; therefore these should not be included in the rule.

3. Subpart M – Electrical Generating Units

The LADCO attainment modeling referenced by the Agency indicates that EGU emissions were incorporated into the model using CAIR SO2 and NOx estimates derived from the USEPA's Integrated Planning Model 3.0. Regional Air Quality Analyses at 59. EGUs in Illinois were listed as having a NOx emission rate for base year 2002 of 0.35 lbs/mmBtu. *Id.* at 53. The Illinois CAIR rule and the NOx SIP Call rule for EGUs use an emission rate of 0.15 lbs/mmBtu as the basis for determining the amount of allowances

for the period 2009 through 2014, which represents a 57% reduction from base year emissions.

Since, as previously described in my testimony, the USEPA has stated that CAIR constitutes RACT, the CAIR rule should be considered RACT for EGUs. Subpart M is unnecessary for purposes of achieving the Agency's stated goals of achieving RACT level reductions. Furthermore, the Agency's proposed Subpart M emission limit of 0.09 lbs/mmBtu was not used in the LADCO modeling. Since it is clear that the USEPA will accept the Illinois CAIR rule as NOx RACT, and since the attainment modeling conducted by LADCO used the CAIR reductions, there is no programmatic reason to retain Subpart M as part of the proposed rule.

VI. SUMMARY AND CONCLUSION

My testimony has shown that the Agency's stated reasons for this rule, the timing of the rule, and the emission limits proposed in the rule, have not been harmonized in a manner that has produced a rule that effectively or efficiently achieves its purpose. IERG has highlighted the inconsistencies within the rule, and identified some ways the rule can be modified to meet regulatory requirements in a more reasonable manner. IERG stands ready to work with the Agency, and others to make the changes necessary to resolve the difficulties we have identified in a timely manner. On behalf of IERG, I thank you for the opportunity to present this testimony for the Board's consideration and will be pleased to answer any questions.

* * *

IERG reserves the right to supplement this pre-filed testimony.

Respectfully submitted,

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EXHIBIT 1
PROPOSED EMISSION LIMITS FOR INDUSTRIAL BOILERS

FUEL	TYPE	EMISSION LIMIT (lbs/mmBtu)	
		IEPA	IERG
Natural Gas or Other Gaseous Fuels	>100 mmBtu/hr	.08	0.12
	≤100 mmBtu/hr	Combustion tuning	Combustion tuning
	Auxiliary boiler at EGU, oil or natural gas, ≤250 mmBtu/hr, ≤20% capacity factor	0.08 (unless ≤100 mmBtu/hr)	Exempt
Distillate Fuel Oil	>100 mmBtu/hr	0.10	0.20
	≤100 mmBtu/hr	Combustion tuning	Combustion tuning
	Auxiliary boiler at EGU, oil or natural gas, ≤250 mmBtu/hr, ≤20% capacity factor	0.10 (unless ≤100 mmBtu/hr)	Exempt
Other Liquid Fuels	>100 mmBtu/hr	0.15	0.20
	≤100 mmBtu/hr	Combustion tuning	Combustion tuning
	Auxiliary boiler at EGU, oil or natural gas, ≤250 mmBtu/hr, ≤20% capacity factor	0.15 (unless ≤100 mmBtu/hr)	Exempt
Solid Fuel	>100 mmBtu/hr (circulating fluidized bed)	0.10	0.12
	>250 mmBtu/hr	0.18	0.38
	>100 mmBtu/hr, ≤250 mmBtu/hr	0.25	0.38
	≤100 mmBtu/hr	Combustion tuning	Combustion tuning

EXHIBIT 2

EMISSION PROFILE FOR SUBPART D - INDUSTRIAL BOILERS

EMISSION CATEGORY DESCRIPTION	2005 NOx ANNUAL EMISSIONS (tpy)	ESTIMATED NOX RACT REDUCTION			
		AGENCY		IERG	
		(%)	(tpy)	(%)	(tpy)
Gaseous Fuel-fired Boilers >100 mmBtu/hr, Total	1,926.5	69.2%	1,333.8	54%	1,037.4
Gaseous fuel-fired Boilers < =100 mmBtu/hr, Total	521.5	15.0%	78.2	15%	78.2
Dist. oil Boilers >100 mmBtu/hr, Total	22.3	52.4%	11.7	5.0%	1.1
Solid Fuel Boilers >250 mmbtu/hr, Total	2,330.2	73.9%	1,722.3	44.9%	1,046.9
Solid Fuel <=250, >100 mmbtu/hr, Total	21.6	63.8%	13.8	44.9%	9.7
Solid Fuel <=250, >100 mmbtu/hr, Total	476.7	15.0%	71.5	15.0%	71.5
BOILER TOTAL>>	5,298.9	61.0%	3,231.3	42.4%	2,244.8