ILLINOIS POLLUTION CONTROL BOARD
May 7, 2009

IN THE MATTER OF:	)	
	)	
AMENDMENTS TO 35 ILL. ADM. CODE	)	R08-19
217, NITROGEN OXIDES EMISSIONS,	)	(Rulemaking - Air)
AND 35 ILL. ADM. CODE 211	)	

Proposed Rule. First Notice.

OPINION AND ORDER OF THE BOARD (by A.S. Moore):

On May 9, 2008, the Illinois Environmental Protection Agency (Agency or Illinois EPA or IEPA) filed a proposal under the general rulemaking provisions of Sections 27 and 28 of the Environmental Protection Act (Act) (415 ILCS 5/27, 28 (2006)). On both January 30, 2009, and March 23, 2009, the Agency filed motions to amend the proposal based on negotiations with interested parties. Generally, the Agency proposes to amend Parts 211 and 217 of the Board's air pollution regulations (35 Ill. Adm. Code 211, 217) to control nitrogen oxides (NO_x) emissions from major stationary sources in the nonattainment areas and from emission units including industrial boilers, process heaters, glass melting furnaces, cement kilns, lime kilns, furnaces used in steelmaking and aluminum melting, and fossil fuel-fired stationary boilers at such sources.

The first-notice amendments set forth below are intended primarily to reduce NO_x emissions from those various sources and units. Publication of these proposed amendments in the *Illinois Register* will begin a 45-day public comment period.

In this opinion, the Board first reviews the procedural history of this rulemaking before addressing a preliminary issue and providing a brief background on regulation of NO_x emissions. The Board then summarizes the post-hearing comments before addressing technical and economic considerations. The Board then discusses its proposal for first-notice publication on a section-by-section basis. The order following the opinion then sets forth the proposed amendments for first-notice publication.

PROCEDURAL HISTORY

On May 9, 2008, the Agency filed a rulemaking proposal (Prop.) under the general rulemaking provisions of Sections 27 and 28 of the Act. A Statement of Reasons (Statement) and a Technical Support Document (TSD) accompanied the proposal. A motion for waiver of copy requirements also accompanied the proposal. In an order dated June 5, 2008, the Board accepted the Agency's proposal for hearing and granted the Agency's motion for waiver of copy requirements.

In a letter dated June 6, 2008, the Board requested that the Department of Commerce and Economic Opportunity (DCEO) conduct an economic impact study of the Agency's rulemaking proposal. *See* 415 ILCS 5/27(b) (2006). DCEO has not responded to the Board's request.

In an order dated June 12, 2008, the hearing officer scheduled a first hearing to begin on October 14, 2008, in Springfield and a second hearing to begin December 9, 2008, in Chicago. The order directed participants wishing to testify at the first hearing to pre-file their testimony no later than September 2, 2008. The order also directed participants to pre-file questions based on the Agency's pre-filed testimony no later than September 16, 2008. Finally, the order directed the Agency to pre-file written answers to those pre-filed questions no later than September 30, 2008.

On August 29, 2008, the Agency pre-filed testimony by Mr. Robert Kaleel (Kaleel Pre-filed Test.), Mr. Vir Gupta (Gupta Pre-filed Test.), and James E. Staudt, Ph.D. (Staudt Pre-filed Test.).

On September 15, 2008, Midwest Generation filed questions for the Agency's witnesses (MG Questions). On September 16, 2008, ExxonMobil Oil Corporation (ExxonMobil) filed questions for the Agency's witnesses (ExxonMobil Questions). Also on September 16, 2008, the Illinois Environmental Regulatory Group (IERG) filed questions for the Agency's witnesses (IERG Questions). On September 30, 2008, the Agency filed three documents: answers to questions submitted by Midwest Generation (MG Answers); answers to questions submitted by ExxonMobil (ExxonMobil Answers); and answers to questions submitted by IERG (IERG Answers).

The first hearing took place as scheduled on October 14, 2008, in Springfield. At the first hearing, the hearing officer admitted into the record four exhibits:

> Finding of Failure to Submit State Implementation Plans Required for the 1997 8-Hour Ozone NAAQS, 73 Fed. Reg. 15416-21 (Mar. 24, 2008) (Exh. 1);
>
> [Illinois Environmental Protection] Agency Analysis of Economic and Budgetary Effects of Proposed Rulemaking (35 Ill. Adm. Code 211) (Exh. 2);
>
> [Illinois Environmental Protection] Agency Analysis of Economic and Budgetary Effects of Proposed Rulemaking (35 Ill. Adm. Code 217) (Exh. 3); and
>
> Cleaver Brooks letter dated May 19, 2006, to New Hampshire Division of Environmental Services (Exh. 4).

On October 24, 2008, the Board received the transcript of the first hearing (Tr.1).

On November 5, 2008, the Agency filed its responses to questions raised at the first hearing (PC 1).

On November 25, 2008, the Board received pre-filed testimony for the December 9, 2008, hearing from Mr. Scott Miller and Mr. Kent Wanninger on behalf of Midwest Generation, from Ms. Deirdre K. Hirner and Mr. David J. Kolaz on behalf of IERG, from Mr. Larry G. Siebenberger and Mr. Blake E. Stapper on behalf of U.S. Steel, and from Mr. David W. Dunn on

behalf of ConocoPhillips. Also on November 25, 2008, the Board received pre-filed comments submitted by ArcelorMittal (ArcelorMittal Comment). In addition, on November 25, 2008, the Board received post-hearing comments relating to the October 14, 2008 hearing from Saint-Gobain Containers, Inc. (Saint-Gobain) (PC 2).

The second hearing took place as scheduled on December 9 and 10, 2008, in Chicago. Over the two days of the second hearing, the hearing officer admitted into the record fourteen exhibits:

Pre-Filed Testimony of Deirdre K. Hirner on Behalf of the Illinois Environmental Regulatory Group (Exh. 5);

Pre-Filed Testimony of David J. Kolaz on Behalf of the Illinois Environmental Regulatory Group (Exh. 6);

from Final Rule to Implement the 8-Hour Ozone National Ambient Air Quality Standard; Final Rule, 70 Fed. Reg. 71657 (Nov. 29, 2005) (Exh. 7);

Summary of NO_x Budget Allocations and Usage 2007-2007 (Exh. 8);

Pre-Filed Testimony of David W. Dunn on Behalf of ConocoPhillips Company (Exh. 9);

Pre-Filed Testimony of Larry G. Siebenberger on Behalf of United States Steel Corporation (Exh. 10);

Pre-Filed Testimony of Blake E. Stapper on Behalf of United States Steel Corporation (Exh. 11);

Testimony of Scott Miller of Behalf of Midwest Generation (Exh. 12);

Testimony of Kent Wanninger on Behalf of Midwest Generation (Exh. 13);

IHS-CERA Power Capital Costs Index (PCCI) (Graph Included on Page 7 of Kent Wanninger's Testimony on Behalf of Midwest Generation) (Exh. 14);

Baldwin 3 graph (Exh. 15);

Joliet 71 boiler graph (Exh. 16);

Bureau of Labor Statistics Producer Price Index. Commodities Group: Metals and metal products Item: Hot rolled bars, plates, and structural shapes (December 4, 2008) (Exh. 17); and

Bureau of Labor Statistics Producer Price Index. Commodities Group: Metals and metal products Item: Carbon scrap steel (Dec. 4, 2008) (Exh. 18).

On December 30, 2008, the Board received the transcript of December 10, 2008, the second day of the second hearing (Tr.3). On January 5, 2009, the Board received the transcript of December 9, 2008, the first day of the second hearing (Tr.2).

In an order dated December 23, 2008, the hearing officer scheduled a third hearing for February 3, 2009, in Edwardsville and directed participants wishing to testify at the third hearing to pre-file testimony no later than January 20, 2009.

On January 20, 2009, the Board received post-hearing comments from IERG (PC 3), Saint-Gobain (PC 4), and ConocoPhillips (PC 5). Also on January 20, 2009, the Board received pre-filed testimony on behalf of the Agency from Mr. Robert Kaleel (Kaleel Pre-filed Test. 2), Mr. Michael Koerber (Koerber Pre-filed Test.), and James E. Staudt, Ph.D. (Staudt Pre-filed Test. 2). Also on January 20, 2009, the Agency filed a motion to correct the transcript of the second hearing.

On January 30, 2009, the Agency filed a motion to amend its rulemaking proposal (Mot. Amend 1).

On January 30, 2009, the Board received supporting materials from U.S. Steel. (PC 6). On February 2, 2009, the Board received pre-filed testimony of Mr. Blake E. Stapper on behalf of U.S. Steel. On February 3, 2009, the Board received a public comment from Mr. James L. Kavanaugh of the Missouri Department of Natural Resources (PC 7).

The third hearing took place as scheduled on February 3, 2009, in Edwardsville. During the third hearing, the hearing officer admitted into the record seven exhibits:

Western Michigan Ozone Study: Draft Report (January 21, 2009) (Exh. 19);

Calculation of Available COG after Consumption in Reheat Furnaces (Exh. 20);

Calculation of Siebenberger Exhibit A Information — COG burned in reheat furnaces per Siebenberger December testimony (Exh. 21);

Total Boiler COG Usage from Attachment C (Exh. 22);

Calculation of Siebenberger Exhibit A Information — with 2008 COG rate, 35 day scrubber maint. (Exh. 23);

Calculation of Siebenberger Exhibit A Information — with 2008 COG rate, no COG scrubber maint. (Exh. 24); and

Pre-Filed Testimony of Blake E. Stapper on Behalf of United States Steel Corporation (Exh. 25).

On February 11, 2009, the Board received the transcript of the third hearing (Tr.4).

In an order dated February 19, 2009, the Board granted the Agency's motion to amend its rulemaking proposal and also granted the Agency's motion to correct the transcript of the second hearing.

On March 19, 2009, the Agency filed a motion for expedited review. Also on March 19, 2009, the Agency forwarded to the Board's Acting Chairman, Dr. G. Tanner Girard, a letter from the United States Environmental Protection Agency (USEPA) (PC 8). On March 20, 2009, the Board received Midwest Generation's response to the Agency's motion for expedited review. On March 23, 2009, the Board received from Agency Director Douglas P. Scott a letter regarding expedited review of the Agency's amended proposal. On March 26, 2009, the Board received IERG's response to the Agency's motion for expedited review. In an order dated April 2, 2009, the Board granted the Agency's motion for expedited review.

On March 23, 2009, the Board received post-hearing comments from Midwest Generation (PC 9), ArcelorMittal (PC 10). U.S. Steel (PC 12), IERG (PC 13), and ConocoPhillips (PC 14). Also on March 23, 2009, the Board received post-hearing comments from the Agency (PC 11), accompanied by the Agency's second motion to amend its rulemaking proposal (Mot. Amend 2).

Filing Public Comments

First-notice publication of these proposed rules in the *Illinois Register* will start a period of at least 45 days during which any person may file a public comment with the Board, regardless of whether the person has already filed a public comment in this proceeding. *See* 5 ILCS 100/5-40(b) (2006) (Illinois Administrative Procedure Act).

As noted above under "Procedural History," the Board on April 2, 2009, granted the Agency's motion for expedited review of the amended proposal. The Board is therefore highly unlikely to grant any motion for an extension of the first-notice comment period. Consequently, the Board strongly encourages participants who wish to file a public comment on these proposed amendments to do so within the statutory 45-day period.

Public comments must be filed with the Clerk of the Board at the following address:

Pollution Control Board
John T. Therriault, Assistant Clerk
James R. Thompson Center
100 W. Randolph Street, Suite 11-500
Chicago, IL 60601

The docket number for this rulemaking, R08-19, should be indicated on the public comment.

As the Board has granted the Agency's motion for expedited review, the "mailbox rule" at 35 Ill. Adm. Code 101.300(b)(2) does not apply to filing these first-notice comments. The Board's Clerk must receive these comments before the close of business on the final day of the statutory 45-day comment period. Although documents may be filed electronically through the

Clerk's Office On-Line (COOL) from the Board's Web site at www.ipcb.state.il.us, all electronic or approved fax filings must be received by the Clerk's Office no later than 4:30 PM on the 45th day of the comment period. Any questions about electronic filing through COOL should be directed to the Clerk's Office at (312) 814-3629.

Please note that all filings with the Clerk of the Board must be served on the hearing officer and on those persons on the Service List for this rulemaking. Before filing any document with the Clerk, please check with the hearing officer or the Clerk's Office to verify the current version of the Service List.

PRELIMINARY ISSUE

On March 23, 2009, the Agency filed its second motion to amend its rulemaking proposal. In the motion the Agency states that, "[s]ince the last hearing, the Illinois EPA has continued to engage in negotiations with interested parties on remaining unresolved issues." Mot. Amend 2 at 1. The Agency further states that such negotiations with ConocoPhillips, U.S. Steel, and ArcelorMittal have resulted in agreement to amend various provisions of the proposal. *Id*. at 1-2. Specifically, the Agency seeks 15 amendments to its original proposal. *Id*. at 6-14.

No participant responded to the Agency's motion to amend. *See* 35 Ill. Adm. Code 101.500(d). Based on its review of the Agency's motion, and in the absence of any response to that motion, the Board grants the Agency's second motion to amend its rulemaking proposal. While the Agency's motion summarizes each of its proposed amendments, the Board addresses those amendments on a section-by-section basis below in its discussion of the first-notice proposal.

BACKGROUND ON REGULATION OF NO_x EMISSIONS

NO_x is one of the primary precursors to the formation of ozone and is also a precursor to the formation of $PM_{2.5}$.[1] Statement at 2, 3.

The Agency reports that, "[o]n July 18, 1997, USEPA revised the NAAQS [National Ambient Air Quality Standard] for ozone by replacing the 1-hour standard with an 8-hour standard." Statement at 3, citing 62 Fed. Reg. 38856 (July 18, 1997). Illinois includes two areas designated as nonattainment for the 8-hour ozone standard. Statement at 3. The Chicago nonattainment area includes Cook, DuPage, Kane, Lake, McHenry, and Will Counties, Goose Lake and Aux Sable Townships in Grundy County, and Oswego Township in Kendall County. *Id*. The Metro East nonattainment area includes Jersey, Madison, Monroe, and St. Clair Counties. *Id.* at 3, 5.

The Agency also reports that, "[o]n July 18, 1997, USEPA revised the NAAQS for particulate matter to add new standards for fine particles, using $PM_{2.5}$ as the indicator, and established primary annual and 24-hour standards for $PM_{2.5}$. Statement at 4, citing 62 Fed. Reg. 38652 (July 18, 1997). The Agency states that USEPA has recently strengthened the 24-hour

[1] "$PM_{2.5}$ refers to particulate matter that is 2.5 micrometers or smaller in size." Statement at 4.

standard. Statement at 4, citing 71 Fed. Reg. 61144 (Oct. 17, 2006). Illinois includes two areas designated nonattainment for the $PM_{2.5}$ standard. Statement at 4. The Chicago nonattainment area includes Cook, DuPage, Kane, Lake, McHenry, and Will Counties, Goose Lake and Aux Sable Townships in Grundy County, and Oswego Township in Kendall County. *Id*. at 4-5. The Metro East nonattainment area includes Madison, Monroe, and St. Clair Counties and Baldwin Township in Randolph County. *Id*. at 5, citing 40 C.F.R. § 81.314.

The Agency states that Section 110 of the Clean Air Act (CAA) and other related provisions require states to submit for USEPA approval State Implementation Plans (SIP) "that provide for the attainment and maintenance of standards established by USEPA through control programs directed to sources of the pollutants involved." Statement at 2, citing 42 U.S.C. § 7410. The Agency further states that "[t]he CAA also provides for the State to address emissions sources on an area-specific basis through such requirements as reasonably available control measures ("RACM") and reasonable available control technology ("RACT")." Statement at 2, citing 42 U.S.C §§ 7502, 7511a. Specifically, the CAA requires Illinois for each nonattainment area "to demonstrate that it has adopted 'all reasonably available control measures as expeditiously as possible (including such reductions in emissions from existing sources in the area as may be obtained through the adoption, at a minimum, of reasonable available control technology) and shall provide for attainment of the national primary ambient air quality standards.'" Statement at 2, 5, citing 42 U.S.C. § 7502(c)(1).

The Agency characterizes RACT as "[a] subset of RACM." Statement at 6, citing 44 Fed. Reg. 53762 (Sept. 17, 1979). The Agency states that "Section 182(b)(2) of the CAA requires states to adopt RACT rules for all areas designated nonattainment for ozone and classified as moderate or above." Statement at 6-7, citing 42 U.S.C. § 7511a(b)(2). The Agency further states that Section 182(f) of the CAA requires each state in which all or part of a moderate nonattainment area is located to adopt RACT for major NO_x sources. Statement at 7, citing 42 U.S.C. § 7511a(f). The Agency notes that "Section 302 of the CAA defines 'major stationary source' as any stationary facility or source of air pollutants that directly emits, or has the potential to emit, one hundred tons per year or more of any air pollutant." Statement at 7, citing 42 U.S.C. § 7602.

The Agency argues that these authorities "establish the requirements for Illinois to submit NO_x RACT regulations for all major stationary sources of NO_x in $PM_{2.5}$ nonattainment areas and ozone nonattainment areas classified as moderate and above." Statement at 7, citing 72 Fed. Reg. 20586 (Apr. 25, 2007); 70 Fed. Reg. 71612 (Nov. 29, 2005). The Agency further argues that, because Illinois includes nonattainment areas classified as moderate and above for the 8-hour ozone NAAQS, it was "required to submit by September 15, 2006, a SIP demonstrating that sources specified under the CAA were subject to RACT requirements." Statement at 7-8, citing 70 Fed. Reg. 71612 (Nov. 29, 2005). The Agency claims that "[o]n March 24, 2008, USEPA made a finding that Illinois, among other states, failed to make a RACT submittal required under Part D of Title I of the CAA for its two moderate nonattainment areas." Statement at 8, citing 73 Fed. Reg. 15416 (Mar. 24, 2008). The Agency notes that "[s]uch finding starts the 18-month emission offset sanctions clock and 24-month highway funding sanctions clock under Section 179(a) and (b) of the CAA and the 24-month clock for the promulgation by USEPA of a Federal

Implementation Plan under Section 110(c) of the CAA". Statement at 8, citing 42 U.S.C. §§ 7509(a) and (b), 7410(c).

In testimony for the third hearing, Mr. Kaleel stated that USEPA on December 22, 2008, designated areas as nonattainment for the 24-hour $PM_{2.5}$ standard. Kaleel Pre-filed Test. 2 at 3. He further stated that, in Illinois, USEPA has designated "the same areas designated previously as nonattainment for the annual $PM_{2.5}$ standard." *Id*. He added that "Illinois must develop an attainment plan and adopt control measures needed to attain the 24-hour $PM_{2.5}$ standard within three years of the effective date of U.S. EPA's decision, and Illinois must attain the standards within five years of the effective date." *Id*.

Mr. Kaleel also addressed the establishment of nonattainment areas for the 2008 8-hour ozone standard. He stated that the Agency's "initial proposal is for Illinois to recommend to USEPA to establish nonattainment boundaries for the 2008 standard that generally match the boundaries already established for the 1997 ozone standard." Kaleel Pre-filed Test. 2 at 3. He anticipated that USEPA will complete nonattainment designations in 2010, "initiating a new cycle of planning and regulatory development." *Id*. at 3-4. He expects that, because NO_x is a precursor to both ozone and $PM_{2.5}$, NO_x emission reductions will improve air quality. *Id*. at 4. He argues that "[t]he reductions provided by the subject NO_x RACT proposal will help to meet the new standards and should help to address any future requirements to implement RACT for the new standards." *Id*. Specifically, he claims that, "[u]nless USEPA issues new guidance regarding NO_x control technology, we expect that this RACT proposal will satisfy requirements to implement NO_x RACT under the revised NAAQS for the source categories and geographic areas to which this proposal applies." MG Answers at 1.

SUMMARY OF POST-HEARING COMMENTS

Midwest Generation (PC 9)

Midwest Generation states that, "[w]ith the amendments proposed to the Board by the Agency in its Motion to Amend Rulemaking Proposal filed January 30, 2009, Midwest Generation generally supports the Agency's proposal as it applies to electric generating units." PC 9 at 1. Midwest Generation refers to amendments reflecting agreements with the Agency and included in the Agency's September 30, 2008, answers to Midwest Generation's questions. *Id*. at 1-2, *see* MG Answers at 4-6 (stating amenability to amending Sections 211.3100, 217.160, 217.340, and 217.342).

Midwest Generation acknowledges that a valid Illinois Clean Air Interstate Rule (CAIR) "exempts it from the emission limitations of Subpart M." PC 9 at 3. Midwest Generation also comments that the Illinois CAIR is a valid rule because the U.S. Court of Appeals for the District of Columbia remanded without vacating it. *Id*. at 3-4, citing North Carolina v. EPA, 550 F.3d 1176 (D.C. Cir. 2008).

Midwest Generation states that "[a]ll EGUs [electric generating units] subject to Subpart M are subject to the Illinois CAIR." PC 9 at 4. Midwest Generation observes, however, that the Agency seeks in its proposed Subpart M to establish emissions limits for coal-fired EGUs. *Id*.;

see Prop. at 51-52 (proposed new Section 217.344). Midwest Generation states that it sought to determine that those proposed emission limits constitute RACT. PC 9 at 5. Midwest Generation further states that, because its units subject to this rule already emit NO_x at low rates, it "found that it could not comply with the NO_x rate proposed, 0.09 lbs/mmBtu, within the cost parameters that the Agency determined was economically reasonable for this NO_x RACT rule, $2500-3000 per ton of NO_x removed." *Id*. After discussing this position with the Agency and reviewing the Agency's first motion to amend its proposal, "Midwest Generation agrees that 0.12 lb/mmBtu is supportable as NO_x RACT for coal-fired EGUs" and encourages the Board to adopt that rate. *Id*., *see* Mot. Amend at 10; *see also* Prop. at 52 (proposing limit of 0.09 lb/mmBtu). In addition, Midwest Generation claims that, under proposed emission averaging provisions, "these emissions limits can be determined on a plant-wide basis." PC 9 at 3; *see* Prop. at 37-41, Statement at 27-29.

Midwest Generation states that all of these revisions in the Agency's answers and its motion to amend "together clarify that EGUs that are subject to Part 225, Subparts C, D, and E are exempt from the emission limitations of Subpart M." PC 9 at 3.

ArcelorMittal (PC 10)

ArcelorMittal states that its facility located in Riverdale "has a permitted roller-hearth tunnel furnace equipped with ultra-low NO_x burners (ULNBs), which processes thin cast steel slabs." PC 10 at 1. ArcelorMittal argues that its tunnel furnace "cannot be considered as a reheat, annealing, or galvanizing furnace," and, under the applicability provision at proposed Section 217.150, "is not subject to his rulemaking." *Id*.; *see* Prop. at 26-27. ArcelorMittal further argues, however, that setting and implementing additional NO_x controls is neither technologically feasible nor economically reasonable. PC 10 at 1, 2. The Board summarizes ArcelorMittal's comment in the following subsections of the opinion.

Technical Feasibility

ArcelorMittal notes that, while the Agency's TSD lists ten steel industry emission units applying NO_x controls, "none of these units are similar to tunnel furnaces." PC 10 at 2-3, citing TSD, Appendices at 21-22. ArcelorMittal proceeds to address three broad categories of NO_x controls. First, ArcelorMittal acknowledges that, while add-on controls may provide the highest level of NO_x reduction, they typically require exhaust streams with little or no variation in characteristics such as temperature and oxygen content. PC 10 at 3. ArcelorMittal argues that, "[o]utside of these ranges, the technologies are either ineffective or greatly compromised, sometimes resulting in the creation of additional emissions or new air pollutants." *Id*. ArcelorMittal concludes that, considering the reduced oxygen content of the tunnel furnace and other factors, "add-on NO_x controls are not feasible for retrofit." *Id*. at 3-4. Second, addressing process controls, ArcelorMittal claims that, "[s]ince ULNBs are already used in the tunnel furnace, the application of the other burner and FGR [flue gas recirculation] options would not result in a reduction of NO_x emissions." *Id*. at 4. Addressing pre-combustion controls, ArcelorMittal argues that, because it already relies on pipeline grade natural gas, "no other fuel sources for this type of operation are known to further reduce the formation of NO_x." *Id*.

ArcelorMittal further argues that the Bloom Engineering Series 1430 ULNBs now in use at its facility are "technology that is typically considered to represent RACT." PC 10 at 5. ArcelorMittal states that, while it explored installation of next-generation ULNBs with vendors, it has concluded that "a burner upgrade for the tunnel furnace is infeasible" based on factors including the effect on operation of the tunnel furnace and the impact on product quality. *Id.*

Economic Reasonableness

ArcelorMittal notes that the Agency provided a range for the cost effectiveness of NO_x emission reduction of $2,500 - 3,000 per ton of emissions reduced. PC 10 at 5, citing Tr.1 at 165-66, 173-74; Tr.4 at 75. ArcelorMittal responded by developing an analysis of the cost effectiveness of two burner models. PC 10 at 5; *see id.*, Exh. A (ArcelorMittal Riverdale Tunnel Furnace NO_x RACT Analysis Estimated Cost Effectiveness for Burner Change). The first indicated an actual emissions reduction of 25 tons per year and estimated a cost effectiveness of $22,895 per ton of NO_x removed. PC 10 at 6; *see id.*, Exh. A. The second indicated an actual emissions reduction of 29 tons per year and estimated a cost effectiveness of $39,472 per ton of NO_x removed. PC 10 at 6; *see id.*, Exh. A. ArcelorMittal suggests that actual costs may be much higher, as these figures include only materials and labor and do not reflect the production downtime for the conversion process. PC 10 at 6.

ArcelorMittal also expresses concern with the effect of a burner upgrade on the operation of the tunnel furnace. PC 10 at 7. Because of the nature of that operation and a lack of redundancy, ArcelorMittal states that "the tunnel furnace must operate optimally at all times." *Id.* at 8. ArcelorMittal further states that "altering the burners or heat system can have [a] significant effect on the slab quality." *Id.* at 7. ArcelorMittal suggests that such an effect would undermine its investment in developing unique products. *See id.* at 8.

Summary

ArcelorMittal notes that, based on monitoring data from 2006-2008, the Agency intends to request that USEPA redesignate Chicago as attaining the 1997 8-hour ozone NAAQS. PC 10 at 2, 9. ArcelorMittal thus argues that "NO_x RACT should not be implemented if the Chicago area achieves attainment." *Id.* at 9. ArcelorMittal requests that the Agency "not develop and the Board not adopt NO_x RACT rules that further burden manufacturers as another means of 'leapfrogging' into other SIP initiatives that have longer timelines (*e.g.*, $PM_{2.5}$ or 2008 ozone standard SIP rules) without allowing 'on the book' controls to take hold to further improve ambient air quality." *Id.*

ArcelorMittal concludes by requesting that, if the Agency considers its tunnel furnace to be subject to the proposed rule, the Agency "allow a case-by-case determination for the applicability of this rule to the tunnel furnace." PC 10 at 10. ArcelorMittal proposes that this determination might include a specific definition or a separate category with a corresponding emissions limit. *Id.* As an alternative, ArcelorMittal seeks the Agency's concurrence in seeking an adjusted standard. *Id.*, citing Tr.1 at 128.

U.S. Steel (PC 12)

U.S. Steel states that the proposed rulemaking would impact boilers, slab reheat furnaces, and galvanizing lines at its Granite City Works (GCW) facility in Granite City. PC 12 at 1-2, citing Exh. 10 at 5. U.S. Steel reports that, after a series of discussions, it has reached agreement with the Agency on determining NO_x emission limits for Boilers 11 and 12 and slab furnaces 1 through 4. PC 12 at 2. Accordingly, U.S. Steel states that it "supports the Agency's proposed amendments to the rule." *Id*. at 2.

However, U.S. Steel states that it seeks to clarify its concerns regarding its use of desulfurized coke oven gas (COG). PC 12 at 2. First, U.S. Steel addresses IEPA's proposal that calculations for determining NO_x limits during the averaging period will not include periods when the COG desulfurization unit is shut down for maintenance, so long as certain conditions are met. *Id*. at 3; *see* Prop. at 37-41 (proposed new Section 217.158). These conditions include advance notice of shutdown and a limit on the number of shutdown days. PC 12 at 3. U.S. Steel states that, while the IEPA's proposal works for planned maintenance, it does not adequately protect U.S. Steel from problems arising from unplanned outages or upsets. *Id.*

Second, U.S. Steel stresses that it has not completed construction of its COG desulfurization unit. PC 12 at 3. U.S. Steel also stresses that the proposed emissions limitations are based on desulfurized COG having an *estimated* concentration of hydrogen cyanide of 130 ppm or less. *Id*. (emphasis in original). U.S. Steel thus states that future rulemakings may be necessary to revise this figure after it completes construction of the COG desulfurization unit. *Id*. US Steel concludes its comment by stating that, while it wishes to continue discussing the proposed Section 217.158 with the Agency, it "finds the Agency's proposal acceptable for its units at GCW." PC 12 at 4.

ConocoPhillips (PC 14)

ConocoPhillips states that the Agency's proposed NO_x RACT limits apply to sources "including many of the boilers and process heaters" at its Wood River Refinery (Refinery). PC 14 at 1. ConocoPhillips refers to Mr. Dunn's testimony on its behalf that the proposal would require large costs "to install certain controls on the affected boilers and process heaters." *Id*. at 1-2, citing Exh. 9 at 6-12. ConocoPhillips also emphasizes Mr. Dunn's conclusion that "the cost per ton of NO_x removed is well beyond the costs per ton that the Agency used to determine NO_x RACT." PC 14 at 2, citing Exh. 9 at 6-12.

Conoco Phillips states that it has met several times with the Agency to discuss and "resolve several issues related to the implementation of the proposed rule at the Refinery." PC 14 at 2. ConocoPhillips further states that it has "has reached an agreement with the Agency on the majority of the issues raised by this rulemaking that impact the Refinery." *Id*. ConocoPhillips expresses its support for the Agency's proposal, with the exception of the issues summarized in the following two paragraphs. *Id*. ConocoPhillips pledges to continue working with the Agency to resolve these remaining issues. *Id*.

First, ConocoPhillips notes that the Agency's proposal "requires boilers and process heaters over 100MMbtu/hr to utilize [Continuous Emissions Monitoring Systems] CEMS to monitor and record NO_x emissions." PC 14 at 2, citing Exh. 9 at 14; *see* Prop. at 32-34 (proposed new Section 217.157(a)). ConocoPhillips states that "installation of CEMS at the Refinery for compliance with the Agency's rule will cost an estimated $12,600,000." PC 14 at 3, citing Exh. 9 at 15. ConocoPhillips claims that many of its process heaters "do not have stacks designed for easy installation" of CEMS. PC 14 at 2, citing Exh. 9 at 15. Consequently, ConocoPhillips "requests that the Agency and Board consider limiting CEMS installation requirements to only those units greater than 250 MMBtu/hr." PC 14 at 3.

Second, ConocoPhillips states that, with regard to emission controls, it requires additional flexibility "in circumstances where, during planning and implementation of control projects, ConocoPhillips determines that the cost per ton of NO_x controlled is $15,000 or more, *i.e.*, the cost significantly exceeds reasonably available control technology." PC 14 at 3. At that cost threshold, ConocoPhillips asserts that it "must have the ability to present a revised control strategy to the Agency and/or the Board." *Id*. ConocoPhillips states that it "welcomes the Agency's comments on this issue and will provide proposed regulatory language for Agency and Board consideration at a later date." *Id*.

Concluding its comment, ConocoPhillips states that it "supports the Agency's proposed amendments to the rule." PC 14 at 3. ConocoPhillips further states, however, that it "intends to continue discussions with the Agency on CEMS and control strategy flexibility." *Id*.

IERG (PC 13)

IERG notes that the Agency's Statement of Reasons filed on May 9, 2008, indicated that the initial rulemaking proposal intended to satisfy requirements under the federal Clean Air Act that Illinois submit a State Implementation Plan including NO_x RACT for major stationary sources in nonattainment areas for both ozone and $PM_{2.5}$. PC 13 at 2, citing Statement at 5-8, Kaleel Pre-filed Test. at 1-2, Tr.1 at 91. IERG also notes it own position in testimony pre-filed for the second hearing "that the proposal went beyond what is required to satisfy the RACT obligation." PC 13 at 3, citing Exh. 6 at 3, 5-15, 16-19. IERG presented alternative emission limits that it describes as consistent with its position on reasonably available control technologies. PC 13 at 3, 4-5, citing Exh. 6 at 22-23.

IERG maintains the position that its own proposed emission limits "constitute NO_x RACT for the current ozone and $PM_{2.5}$ standards." PC 13 at 3. Nonetheless, IERG acknowledges that the rationale for the Agency's proposed rules "has evolved." *Id*. Specifically, IERG notes that the Agency on January 30, 2009, filed a motion to amend its proposal. *Id*.; *see generally* Mot. Amend. IERG states that Mr. Kaleel's testimony on behalf of the Agency "described the new ozone and $PM_{2.5}$ standards, and stated that the emissions reductions from the proposal would help to meet those new standards, as well as help satisfy the NO_x RACT requirement for SIPs submitted for those standards." PC 13 at 4, citing Kaleel Pre-filed Test. 2 at 3-4, Tr.4 at 16-20. Consequently, IERG expresses the understanding that "the proposal is not intended only to satisfy the federal requirement for having NO_x RACT for ozone and $PM_{2.5}$ nonattainment areas, and avoid the imposition of sanctions, but is also intended to meet the new

federal standards for ozone and $PM_{2.5}$. Further, IERG understands it is intended to satisfy the corresponding new RACT requirements." PC 13 at 4. IERG claims that "having a NO_x RACT rule in place for future standards will enable industries operating in the nonattainment areas to better plan for the future, knowing what will be required of them." *Id*. at 2.

IERG states that it "is prepared to offer its support for the proposal, as it pertains to satisfaction of the NO_x RACT requirements for nonattainment areas for both the current and new ozone and $PM_{2.5}$ standards, and to attainment of the new standards." PC 13 at 9. IERG further states that its "initial concerns, regarding the proposal as applied to the affected units in the nonattainment areas, have by and large been addressed during the ongoing rulemaking process." *Id.* at 1. However, IERG raises three issues with which it remains concerned: the averaging provisions, the compliance date, and including types of units that are not located in the nonattainment areas. *Id*. at 1, 9. The Board summarizes IERG's comments on these three concerns below. Noting the Agency's motion for expedited review, which the Board granted on April 2, 2009, IERG asks that the Board address these concerns in proceeding to first notice. *Id*. at 1, 9.

Averaging Provisions

IERG states that it supports the concept of demonstrating compliance with the Agency's proposed rule through an emissions averaging plan. PC 13 at 5. IERG states that the proposed Section 217.258(a) allows averaging for emission units subject to Subparts D, E, F, G, H, M, and Q. *Id*.; *see* Prop. at 37, Statement at 27-29. IERG notes that Subpart Q, addressing stationary internal combustion engines and turbines, also includes an averaging provision at Section 217.390. PC 13 at 5-6; *see* 35 Ill. Adm. Code 217.390, Section 27 Proposed Rules for Nitrogen Oxide (NO_x) Emissions from Stationary Internal Combustion Engines and Turbines: Amendments to 35 Ill. Adm. Code Parts 211 and 217, R07-19 (proposing amendments to Subpart Q). IERG argues that "the averaging provisions of Sections 217.158 and 217.390 should be substantively the same, and for clarity should be contained in Section 217.158 (Emission Averaging Plan) of Subpart C (NO_x General Requirements)." PC 13 at 6.

Based on its position in both R07-19 and in this proceeding, IERG requests that the Board adopt specific emissions averaging language in Section 217.158(a)(1)(C): "[t]he new unit or units must be used for the same purpose having substantially equivalent or less process capacity, or the new unit or units must be permitted for less NO_x emissions on an annual basis than the actual NO_x emissions of the unit or units that are replaced." PC 13 at 6. Noting that the Agency's proposal allows new units to participate in averaging when they are "used for the same purpose," IERG suggests that its proposed language is clearer and will allow facilities the flexibility to meet their operational needs, increase energy efficiency, and minimize emissions." *Id*. IERG also argues that new units may be subject to programs such as New Source Performance Standards and New Source Review, which would provide significant environmental protection. *Id*., at 6-7.

IERG also argues "that a more appropriate baseline for limiting new units for use in an averaging plan is January 1, 2010." PC 13 at 7. IERG notes that the Agency's proposed baseline of commencing commercial operation on or before "January 1, 2002 was selected because it was

the base year for the inventory." *Id*.; *see* Prop. at 37 (proposed Section 217.158(a)(1)(A)). IERG expresses the understanding that the base year does not affect the strategy necessary to satisfy the NO_x RACT requirement. PC 13 at 7. IERG thus argues that "the date chosen as the cutoff for emission averaging should allow the use of all the units that were constructed prior to the existence of this proposed rule," but could reasonably restrict the use of units constructed after adoption of the rule. *Id*.

Compliance Date

Although noting that the Agency's amended proposal includes a compliance date of January 1, 2012, IERG continues to prefer a compliance date of January 1, 2014, "as it would provide additional time for affected entities to plan and secure financing for any projects necessitated by these amendments." PC 13 at 7, *see* Tr.2 at 50, Mot. Amend at 3.

Types of Units Not in Nonattainment Areas

IERG states that it has questioned why the Agency's proposal includes types of units that are not now located in the nonattainment areas. PC 13 at 8, citing IERG Questions at 4, Tr.1 at 57-64. IERG notes Mr. Kaleel's statement "that the units were included because the engineering work and cost analysis for those units had been performed." *Id*., citing Tr.1 at 62. IERG also notes Mr. Kaleel's statement that the proposed rule would provide guidance to those units if nonattainment areas expanded to include them. PC 13 at 8, citing Tr.1 at 62. IERG stresses Mr. Kaleel's acknowledgement that such an expansion would require a future rulemaking. PC 13 at 8, *see* Tr.1 at 61.

IERG argues that these units should be removed from the present rulemaking proposal and addressed in a future proposal in the event that additional regulation becomes necessary. PC 13 at 8. IERG further argues that "new units of these types, should they at some future point be operated in the nonattainment area, would be subject to much more stringent new source standards." *Id*. Stressing that Part 217 would apply to such units only through a new rulemaking, IERG argues that a future rulemaking is the proper mechanism to subject them to those requirements. *Id.*

Agency (PC 11)

The Agency states that, in the course of this rulemaking, it has negotiated a number of issues with interested participants. PC 11 at 1. The Agency further states that those negotiations culminated in the Agency's January 30, 2009, motion to amend its proposal. The Agency notes that, during the third hearing on February 3, 2009, representatives of both Midwest Generation and Saint-Gobain expressed support for that motion. *Id.*; Tr.4 at 14-15, 130. The Board notes that, in an order dated February 19, 2009, it granted the Agency's motion to amend. In the Matter of: Nitrogen Oxides Emissions from Various Source Categories: Amendments to 35 Ill. Adm. Code Parts 211 and 217, R08-19, slip op. at 2 (Feb. 19, 2009).

The Agency reports that, since the third hearing, it "has continued to engage in negotiations with interested parties on remaining unsolved issues." PC 11 at 2. The Agency

further reports that "[s]uch negotiations have led to the further revision of certain provisions" and the filing of a second Agency motion to amend its rulemaking proposal. *Id*. The Agency argues that "the proposed amendments have addressed all substantive comments submitted during this rulemaking" and requests that the Board proceed to first notice as expeditiously as possible. *Id*., citing 5 ILCS 100/1 *et seq*. (2006) (Illinois Administrative Procedure Act).

The Board summarizes the Agency's post-hearing comments in the following subsections.

Finding of Illinois' Failure to Make Required State Implementation Plan Submissions

The Agency states that USEPA has found that Illinois failed to make a RACT submission required by the CAA for its two moderate nonattainment areas. PC 11 at 2-3, citing 74 Fed. Reg. 15416 (Mar. 24, 2008). The Agency further states that Illinois may face federal sanctions as early as September 2009 if it does not submit all of the required elements of Illinois' SIP as required under Section 179(a) of the CAA and 40 CFR 52.31. *Id*. at 3-4. The Agency notes that, to avoid imposition of these federal sanctions, it filed with the Board on March 19, 2009, a motion for expedited review. *Id*. at 4-5. The Board notes that, in an order dated April 2, 2009, it granted that motion. In the Matter of: Nitrogen Oxides Emissions from Various Source Categories: Amendments to 35 Ill. Adm. Code Parts 211 and 217, R08-19, slip op. at 4 (Apr. 2, 2009).

Clean Air Act Requirements

The Agency states that, under Section 172(c)(1) of the CAA, "states with nonattainment areas are required to submit, in part, SIPs that provide for the adoption of RACM for stationary sources in all nonattainment areas as expeditiously as practicable." PC 11 at 6, citing 42 U.S.C. § 7502(c)(1). The Agency characterizes RACT as a "subset" of RACM. PC 11 at 6. The Agency states that RACT is defined 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." *Id*., citing 44 Fed. Reg. 53762 (Sept. 17, 1979). The Agency claims that, under Section 182(b)(2) of the CAA, states must adopt RACT rules for all areas designated nonattainment for ozone and classified as moderate or above. PC 11 at 6, citing 42 U.S.C. § 7511a(b)(2). The Agency further claims that, "under Section 182(f) of the CAA, an overlapping requirement in each state in which all or part of a 'moderate' area is located is the adoption of RACT for major NO_x sources." PC 11 at 7-8, citing 42 U.S.C. § 7511a(f). The Agency concludes that, taken together, these provisions "establish the requirements for Illinois to submit NO_x RACT regulations for all major stationary sources of NO_x in $PM_{2.5}$ nonattainment areas and ozone nonattainment areas classified as moderate and above." PC 11 at 8, citing 72 Fed. Reg. 20586 (Apr. 25, 2007) (Clean Air Fine Particle Implementation Rule; Final Rule); 70 Fed. Reg. 71612 (Nov. 29, 2005) (Final Rule to Implement the 8-Hour Ozone National Ambient Air Quality Standard; Final Rule).

Recent Developments Related to This Rulemaking

The Agency states that on March 9, 2009, it submitted to USEPA as required a recommendation "that portions of the Chicago and Metro East metropolitan areas be designated as nonattainment for the revised 8-hour ozone NAAQS." PC 11 at 8. The Agency further states that "CAA requirements regarding implementation of RACT in ozone nonattainment areas will again be triggered for the areas so designated for the 2008 ozone standard." *Id*.

The Agency notes that, on February 24, 2009, the United States Court of Appeals for the District of Columbia remanded the annual air quality standard for fine particulate matter to USEPA and ordered USEPA to reconsider both its primary and secondary standard for fine particulate matter. PC 11 at 9, citing Am. Farm Bureau Fed'n. v. EPA, 2009 WL 437050 (D.C. Cir. 2009). The Agency argues that current administration is likely to strengthen these standards. PC 11 at 9. The Agency notes developments relating to review of CAIR and the consequences for Illinois rulemaking that may ensue. *See id*. at 9-10. In addition, the Agency notes USEPA's 2008 designation of nonattainment areas for the 24-hour $PM_{2.5}$ air quality standard established in 2006. *Id*. at 10. The Agency emphasizes that it has requested that USEPA amend those designations based on 2008 monitoring data. *Id*. at 10-11.

The Agency "acknowledges that recent developments regarding the ozone and $PM_{2.5}$ NAAQS provide a complicated landscape for addressing regulatory requirements." PC 11 at 11. The Agency notes that these standards have become tighter and expects that "they will be tightened further." *Id*. The Agency argues that "Illinois must therefore continue to seek reasonable emission reduction measures to address the NAAQS, which in the Illinois EPA's opinion, argues strongly for the adoption of this proposal." *Id*.

Discussions with Interested Participants

IERG. The Agency notes IERG's position that the Agency's proposal "is too stringent to be considered RACT, is not reasonable or cost effective, and that the rule may not be necessary." PC 11 at 11-12. The Agency also notes IERG's suggestions that Illinois rely instead on existing CAIR and NO_x SIP Call rules for EGUs and non-EGUs to satisfy the RACT requirement. *Id*. at 12. The Agency expresses strong disagreement with IERG's position. *Id*.

Regarding the stringency and reasonableness of its proposal, the Agency argues that it has provided extensive support for the technical and economic feasibility of its proposed emissions limits. PC 11 at 12-14; *see generally* TSD. The Agency further argues that it has addressed the concerns of regulated entities by proposing to extend compliance deadlines. PC 11 at 12; *see* Mot. Amend 1 at 2.

Regarding the necessity of its proposal, the Agency does not agree that Illinois can rely on a federal trading program to meet local nonattainment area requirements. PC 11 at 15. The Agency argues that "[t]he United States Court of Appeals, in its decision on the CAIR rule clearly indicated that a regional trading program should not be relied upon to address local nonattainment problems, and nonattainment problems due to transport between adjoining states. *Id*, citing North Carolina v. EPA, 531 F.3d 896 (D.C. Cir. 2008). The Agency further argues that "[t]he court determined that CAIR is not adequate and remanded CAIR to USEPA." PC 11 at

15. The Agency surmises that, in revising CAIR, USEPA is not likely to address local nonattainment problems through a trading program. *Id*.

The Agency also asserts that the NO_x SIP Call rules are an insufficient substitute for the NO_x RACT requirements. PC 11 at 16-17. The Agency points to a pending case in which the Natural Resources Defense Council challenges USEPA's waiver of RACT requirements for all sources covered by the NOx SIP Call. PC # 11 at 15-16, citing NRDC v. EPA, No. 06-1045, 2007 WL 836786 (D.C. Cir.). Next, the Agency argues that "[t]he NO_x SIP call, as adopted in Subpart U of Part 217, does not adequately address major NO_x emission sources in Illinois' nonattainment areas." PC 11 at 16. Specifically, the Agency claims that the NOx SIP call only addresses industrial boilers with a capacity greater than 250 mmBtu/hr. PC 11 at 16.

The Agency also emphasizes that the implementation of NO_x RACT is crucial to air quality, as NO_x is a precursor to the formation of both ozone and $PM_{2.5}$. PC 11 at 17. The Agency also argues that the implementation of NO_x RACT in Illinois is crucial to improving ozone conditions in downwind states, particularly in western Michigan. *Id*. at 17-18. Further, the Agency argues that, once USEPA finalizes designations under the more stringent 2008 ozone standards, the Chicago and Metro-East areas in Illinois will likely be designated as nonattainment. *Id*. at 18. The Agency also expects that the Metro-East area will be designated as non-attainment under the 2006 standards for $PM_{2.5}$. *Id*. at 18-19. Also, the Agency claims that Illinois will likely face more stringent $PM_{2.5}$ standards in the future. PC 11 at 19, citing Am. Farm Bureau Fed'n. v. EPA, 2009 WL 437050 (D.C. Cir. 2009) (remanding USEPA decision to maintain annual $PM_{2.5}$ standard). The Agency argues that a more stringent emission standard means that Illinois will require control measures to reduce emissions of precursors such as NO_x. PC 11 at 19.

Finally, the Agency does not concur in IERG's request to omit emission standards for cement kilns and aluminum melting furnaces, neither of which currently operates in nonattainment areas. PC 11 at 19. Although the Agency concedes that new source standards are generally more stringent than RACT, it also states that new source applicants frequently seek alternatives to those requirements. *Id*. at 20. The Agency also argues that units may seek to relocate in the nonattainment areas, and that the proposed standards "will provide a floor for future emission sources that may seek to locate in these areas." *Id*.

ArcelorMittal. The Agency states that it proposes to amend the NO_x emission limit for recuperative reheat furnaces to respond to comments from ArcelorMittal and U.S. Steel, although it notes that ArcelorMittal has not agreed to the proposed amendment. PC 11 at 20. The Agency disagrees with ArcelorMittal's position that the proposal should not apply to ArcelorMittal's Riverdale facility because the facility is not a reheat furnace. *Id*. The Agency also argues that a specific definition of "reheat furnace" in the rules is not necessary, because ArcelorMittal's description of the furnace is consistent with the description provided in the TSD. *Id*. at 20-21, citing TSD at 93.

The Agency also claims that, despite the "tunnel" design of ArcelorMittal's reheat furnace, ULNBs can be used at the Riverdale facility. PC 11 at 21. The Agency also concludes that ArcelorMittal's current technology is not an "advanced NOx control technology." *Id*.

Nonetheless, based on "a survey of NO_x emission limits for similar furnaces constructed in other states in recent years," the Agency states that it proposes to amend the emission limit for recuperative reheat furnaces burning natural gas from 0.05 lb/mmBtu to 0.09 lb/mmBtu. *Id*.

ConocoPhillips. First, on the issue of replacement units in averaging plans, the Agency agrees with ConocoPhillips that a single heater, BEU-HM3, should be considered a "replacement heater" for its BEU-HM1 and BUE-HM2 heaters, which are scheduled to be shut down in 2009. PC 11 at 21-22. The Agency agrees that "the replacement heater is used for the same purpose and has a substantially equivalent process capacity of the units that are being replaced." *Id*. at 22. Second, the Agency expresses agreement that the proposed definition of the term "process heater" does not include ConocoPhillips' Steam Methane Reformer (SMR) located at its Wood River Refinery. *Id*. The Agency agrees that the SMR does not "indirectly transfer heat to a process fluid or a heat transfer medium other than water." *Id*. Third, responding to ConocoPhillips' arguments regarding the cost of installing CEMS on all affected units would be more costly than necessary, the Agency proposed to allow predictive emission monitoring system as an alternative to CEMS. *Id*.

United States Steel Corporation. The Agency states that "[a]n ancillary benefit of U.S. Steel's coke oven gas desulfurization unit is that in addition to removing sulfur compounds from the coke oven gas, it also removes hydrogen cyanide, which reduces fuel NO_x in coke oven gas." PC 11 at 23. The Agency states that U.S. Steel has provided 130 parts per million as "its best estimate as to the level of hydrogen cyanide that remains in the coke oven gas after the coke oven gas passes through the desulfurization unit." *Id*. The Agency states that it derived specified emissions limits from this estimate and that its second motion to amend the proposal includes language addressing U.S. Steel. *Id*. US Steel and the IEPA recognize the possibility that future rulemaking may be necessary to adjust emissions limits. *Id*.

DISCUSSION OF UNRESOLVED ISSUES

In both the first and second motions to amend its rulemaking proposal, the Agency indicates that it has negotiated with interested participants and agreed to revise certain provisions in order to memorialize agreements with them. *See generally* Mot. Amend 1 at 1-2, Mot. Amend 2 at 1-5. These amendments address most of the issues raised by the participants during the hearing process. However, post-hearing comments demonstrate that the Agency has not reached agreements on all issues raised in the course of this proceeding. The Board will briefly discuss the unresolved issues in the following sections. The Board then provides a detailed section-by-section discussion of the proposed rules following the Board's findings on economic reasonableness and technical feasibility.

Unit Types Not in Nonattainment Areas

IERG questions why the Agency's proposal includes types of units that are not now located in the nonattainment areas. PC 13 at 8, citing IERG Questions at 4, Tr.1 at 57-64. IERG argues that these units should instead be addressed in a future rulemaking proposal in the event that additional regulation becomes necessary. PC 13 at 8; *see also* Exh. 6 at 19-24 (Kolaz testimony).

The Agency has not concurred with IERG's request to omit these emission standards. PC 11 at 19. The Agency argues that the proposed rule would guide those units if nonattainment areas expand to include them. PC 13 at 8, citing Tr.1 at 62. The Agency also argues that, although new source standards are generally more stringent than RACT, new source applicants frequently seek alternatives to those standards. *Id*. at 19-20. The Agency claims that emission units may seek to relocate in the nonattainment areas and that the proposed standards "will provide a floor for future emission sources that may seek to locate in these areas." *Id*.

The Board agrees with the Agency that the proposed emission standards provide an alternative to the new source standards and serve as benchmark for future emission sources that may be located in the nonattainment areas. The Board will proceed to first notice below with the Agency's proposal, as amended by the Agency's two motions to amend, including provisions relating to cement kilns and aluminum furnaces.

CEMS Threshold

ConocoPhillips notes that the Agency's proposal requires boilers and process heaters over 100 MMBtu/hr to use CEMS to monitor and record NO_x emissions. PC 14 at 2, PC 5 at 5; *see* Prop. at 32-33. ConocoPhillips estimates that installation of CEMS at its Wood River refinery would cost approximately $12.6 million. Exh. 9 at 14-15 (Dunn testimony), PC 14 at 3. While ConocoPhillips agrees with the Agency's proposal to extend the deadline for installation of CEMS, it argues that "CEMS should be limited to those units greater than 250 MMBtu/hr." Exh. 9 at 15; *see* Motion Amend 1 at 5, Mot. Amend 2 at 7-8.

The Board notes that the Agency has not sought to amend the proposed Section 217.157 to raise the threshold for installing CEMS. *See* Mot. Amend 1, Mot. Amend 2. However, the Agency proposed to amend Section 217.157 to allow the use of predictive emission monitoring system (PEMS) as an alternative to CEMS for owners or operators of certain emission units who are not otherwise required by any other statute, regulation or enforceable order to install CEMS on an emission unit. The Board believes that the proposed alternative monitoring requirements address ConocoPhillips' concerns. The Board will proceed to first notice below with the Agency's proposal, as amended by the two motions to amend.

Replacement Units

In its post-hearing comments, IERG expresses support for the concept of an emissions averaging plan but offers alternative language regarding the inclusion of replacement units in such plans. Exh. 13 at 5-6; *see* Prop. at 37 (proposed subsection 217.158(a)(1)(C)). IERG also proposes that "a more appropriate baseline for limiting new units for use in an averaging plan is January 1, 2010." *Id*. at 7; *see* ExxonMobil Answers at 5-6.

The Board notes that the second motion to amend the Agency's proposal seeks to add to the proposed Section 217.158(a)(1)(C) language similar to that offered by IERG in its post-hearing comment. *See* Mot. Amend 2 at 8-9. The Board believes that the Agency's proposed

amendment reflects changes proposed by IERG. Therefore, the Board will proceed to first notice below with the Agency's proposal, as amended by the two motions to amend.

Case-by-Case RACT Determination

ConocoPhillips argues that it requires flexibility when, in planning and implementing controls, it discovers that the cost of NO_x removal "significantly exceeds reasonably available control technology." PC 14 at 3. ConocoPhillips claims that, in making such a discovery regarding costs, "it must have the ability to present a revised control strategy to the Agency and/or the Board." *Id*. Conoco Phillips states that it will provide proposed language for consideration and welcomes the Agency's comments. *Id*.; *see also* PC 10 at 10 (ArcelorMittal post-hearing comment regarding case-by-case determination of applicability). However, particularly in the absence of that proposal and any Agency comment on it, the Board will proceed to first notice below with the Agency's proposal, as amended by the two motions to amend.

Emission Limits

In its post-hearing comment, IERG restates its position that "the originally proposed emission limits are more stringent than is necessary to satisfy the requirement to have NO_x RACT in place in nonattainment areas for the current ozone and $PM_{2.5}$ standards." PC 13 at 4. IERG reproduces alternative emission limits that it had originally proposed in testimony on the part of Mr. Kolaz. *Id.* at 5, citing Exh. 6 (Exh.1); *see also* PC 11 at 11-15 (Agency support for limitations). The Board notes that the Agency provides a detailed explanation as to why the Agency's proposal is RACT for NO_x and why it is not appropriate to rely upon existing CAIR and NO_x SIP Call rules for EGUs and non-EGUs, as argued by IERG, to meet the RACT requirement. PC 11 at 11-20. Further, the proposed amendments address IERG's concerns regarding the proposed compliance time requirements by delaying the compliance deadlines for most emission units until January 1, 2012.

In addition, as noted by IERG, the Agency states that the proposed NO_x RACT rule may be likely satisfy the NO_x RACT requirement for the new ozone and $PM_{2.5}$ standards and help in attainment of the those standards. As noted below, the Board finds that the proposed emission limits are technically feasible and economically reasonable. Therefore, the Board agrees with the Agency that the proposed emission limits are RACT for NO_x. The Board will proceed to first notice below with the Agency's proposal, as amended by the two motions to amend.

ECONOMIC REASONABLENESS AND TECHNICAL FEASIBILTY

The Board notes that the Agency has negotiated with interested participants and agreed to revise certain provisions in order to memorialize agreements with them. *See generally* Mot. Amend 1 at 1-2, Mot. Amend 2 at 1-5. These amendments have addressed issues including, but not limited to, compliance deadlines, deadlines for installing CEMS, and emission limitations. *Id*. Having granted the Agency's two motions to amend the proposal, and having reviewed the record in this proceeding, the Board finds that the Agency's proposal, as amended, is technologically feasible and economically reasonable.

The Board proceeds below with its section-by-section discussion of its first-notice proposal.

SUMMARY OF BOARD'S FIRST-NOTICE PROPOSAL

Part 211: Definitions and General Provisions

The Agency proposes to add twelve new definitions to the existing Part 211. Statement at 13; *see* Prop. at 13-15; *see generally* 35 Ill. Adm. Code 211. The Board summarizes each of the proposed new definitions below.

Section 211.665: Auxiliary Boiler

In its proposal, the Agency seeks to add a definition of the term "auxiliary boiler," which is necessitated by the proposed Subparts C and D. Statement at 14. In its entirety, the proposed definition states that "'[a]uxiliary boiler' means, for the purpose of Part 217, a boiler that is operated only when the main boiler or boilers at a source are not in service and is used either to maintain building heat or to assist in the startup of the main boiler or boilers. This term does not include emergency or standby units and load shaving units." Prop. at 13 (proposed new Section 211.665).

Section 211.995: Circulating Fluidized Bed Combustor

In its proposal, the Agency seeks to add a definition of the term "circulating fluidized bed combustor," which is necessitated by the proposed Subpart D. Statement at 14. In its entirety, the proposed definition states that "'[c]irculating fluidized bed combustor' means, for purposes of Part 217, a fluidized bed combustor in which the majority of the fluidized bed material is carried out of the primary combustion zone and is transported back to the primary zone through a recirculation loop." Prop. at 14 (proposed new Section 211.995).

Section 211.1315: Combustion Tuning

In its proposal, the Agency seeks to add a definition of the term "combustion tuning," which is necessitated by Subparts D and E. Statement at 14. In its entirety, the proposed definition states that "'[c]ombustion tuning' means, for purposes of Subpart 217, review and adjustment of a combustion process to maintain combustion efficiency of an emission unit, as performed in accordance with procedures provided by the manufacturer or by a trained technician." Prop. at 14 (proposed new Section 211.1315).

Section 211.1435: Container Glass

In its proposal the Agency seeks to add a definition of the term "container glass," which is necessitated by Subpart F. Statement at 14. In its entirety, the proposed definition states that "'[c]ontainer glass' means, for purposes of Part 217, glass made of soda-lime recipe, clear or

colored, which is pressed or blown, or both, into bottles, jars, ampoules, and other products listed in Standard Industrial Classification 3221." Prop. at 14 (proposed new Section 211.1435).

Section 211.2355: Flare

In its proposal, the Agency seeks to add a definition of the term "flare." Prop. at 14. The Agency states that the proposed definition is necessary "because flares are not subject to the NO_x general requirements under Subpart C." *Id*. In its entirety, the proposed definition states that "'[f]lare' means an open combustor without enclosure or shroud." Prop. at 14 (proposed new Section 211.2355).

Section 211.2357: Flat Glass

In its proposal, the Agency seeks to add a definition of the term "flat glass," which is necessitated by Subpart F. Statement at 14. In its entirety, the proposed definition states that "'[f]lat glass' means, for purposes of Part 217, glass made of soda-lime recipe and produced into continuous flat sheets and other products listed in Standard Industrial Classification 3211." Prop. at 14 (proposed new Section 211.2357).

Section 211.2625: Glass Melting Furnace

In its proposal, the Agency seeks to add a definition of the term "glass melting furnace," which is necessary for applicability under Subpart F. Statement at 14. In its entirety, the proposed definition states that "'[g]lass melting furnace' means, for purposes of Part 217, a unit comprising a refractory vessel in which raw materials are charged, melted at high temperature, refined and conditioned to produce molten glass." Prop. at 14-15 (proposed new Section 211.2625).

In its pre-hearing comment filed January 20, 2009, Saint-Gobain suggested amending this proposed definition to state that "'[g]lass melting furnace' means, for purposes of Part 217, a unit comprising a refractory vessel in which raw materials are charged and melted at high temperature to produce molten glass." PC 4 at 1. The Agency incorporated this recommendation in its first motion to amend its proposal. Mot. Amend 1 at 2.

Section 211.3100: Industrial Boiler

In its proposal, the Agency seeks to add a definition of the term "industrial boiler," which is necessary for applicability under Subpart D. Statement at 15. In its entirety, the proposed definition provides that

> '[i]ndustrial boiler' means, for purposes of Part 217, an enclosed vessel in which water is heated and circulated either as hot water or as steam for heating or for power, or both. The term does not include boilers serving a generator that has a nameplate capacity greater than 25 MWe and produces electricity for sale, and cogeneration units, as that term is defined in Section 225.130 of Part 225, if such

> boilers or cogeneration units are subject to the CAIR NO_x Trading Programs under Subpart D or E of Part 225. Prop. at 15 (proposed new Section 211.3100).

In a question filed for the first hearing on October 14, 2008, Midwest Generation asked whether, in terms of definitions or use, the Agency intended in its proposed rule to distinguish between industrial boilers, fossil fuel-fired boilers, and EGUs. MG Questions at 1. In response, the Agency provided the following distinction: "EGU boilers are used primarily to generate electricity to sell on the electricity grid. Industrial boilers are used primarily to generate power (steam or electricity) for use at the source. Both types of boilers may use fossil fuels, coal, oil, or gas." MG Answers at 1.

In a question filed for the first hearing on October 14, 2008, IERG inquired whether the Agency intended to include in the definition of "industrial boiler" either "cogeneration units and/or heat recovery steam generators that capture waste heat from turbines or engines." IERG Questions at 4; *see* Prop. at 41-44 (proposed Subpart D). The Agency responded simply "[y]es." IERG Answers at 6. The Agency stated, however, that it had not "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." *Id.; see* Tr.1 at 66.

In another question filed for the first hearing on October 14, 2008, IERG inquired whether the Agency intended to include in the definition of "industrial boiler" or "process heater" those "gas-fired chillers that provide cooling for either processes or occupied spaces." IERG Questions at 4; *see* Prop. at 41-47 (proposed Subparts D and E). The Agency responded by stating that, "[i]f refrigerant is heated [in]directly by gas heating, it is a process heater." IERG Answers at 6; *see infra* at 27 (addressing proposed definition of "process heater"); *see also* Tr.1 at 68-69 (clarifying Agency response). The Agency further stated that, although it had not "performed any analysis to determine the technical feasibility and cost for such gas-fired chillers to comply with its proposed rule," it "believes that the technical feasibility and cost for gas-fired chillers should be similar to process heaters and industrial boilers." IERG Answers at 6-7, *see* Tr.1 at 67-68.

In a question filed for the first hearing on October 14, 2008, Midwest Generation first stated that

> [a]pplicability of Subpart M and the nonapplicability of Subpart D are premised upon the applicability of the Part 225, Subparts C, D, and E ("the Illinois CAIR") to electric generating units ("EGUs"). However, the federal rule underlying the Illinois CAIR has been overturned (assuming the D.C. Circuit Court issues the mandate for its decision in appeal of the rule), thus invalidating the Illinois CAIR. Therefore, it appears that EGUs, which the Agency apparently intended to cover in Subpart M of this rulemaking, are covered by Subpart D. MG Questions at 2.

Midwest Generation then asked whether the Agency proposed to amend its language in Subpart M. MG Answers at 2; *see* Prop. at 51-52 (proposed Subpart M). Although the Agency stated that it disagreed "with the underlying premise of this question," it indicated that it was

"amenable to amending" this definition of "industrial boiler" as described in response to a subsequent question. MG Answers at 2; *see* Tr.1 at 190-92 (addressing status of federal rule).

In that subsequent question, Midwest Generation first stated that, "[b]ased upon the proposed applicability language in Subpart M, Section 217.340, [and] assuming the D.C. Circuit Court issues the mandate implementing its decision in the appeal of the CAIR, EGUs would be subject to the provisions of Subpart D." MG Questions at 3. Midwest Generation consequently asked whether the Agency would consider amending its proposal to include the following definition:

> '[i]ndustrial boiler' means, for purposes of Part 217, an enclosed vessel in which water is heated and circulated either as hot water or as steam for heating or for power, or both. The term does not include boilers serving a generator that has a nameplate capacity greater than 25 MWe and produces electricity for sale, and cogeneration units, as that term is defined in Section 225.130 of Part 225~~, if such boilers or cogeneration units are subject to the CAIR NO_x Trading Programs under Subpart D or E of Part 225~~. *Id*.

Responding to Midwest Generation, the Agency stated that it was "amenable" to amending its proposed definition in the following fashion:

> '[i]ndustrial boiler' means, for purposes of Part 217, an enclosed vessel in which water is heated and circulated either as hot water or as steam for heating or for power, or both. The term does not include boilers serving a generator that has a nameplate capacity greater than 25 MWe and produces electricity for sale, ~~and cogeneration units, as that term is defined in Section 225.130 of Part 225,~~ if such boilers ~~or cogeneration units are subject to~~ meet the applicability criteria under Subpart M of Part 217~~the CAIR NO_x Trading Programs under Subpart D or E of Part 225~~. MG Answers at 4-6.

During the first hearing on October 14, 2008, IERG posed the following question to the Agency:

> [i]f a heat recovery steam generator recovering heat from the exhaust of, A, process, B, turbine, or C, engine, is considered a boiler for proposed – for this proposed rule, then does the Agency intend to define the boiler's rated heat input capacity as a direct heat input to the heat recovery steam generator from combustion of fuel in the heat recovery steam generator – for example, from a duct burner – or does it intend to also include the heat input from the upstream process in the rated capacity? Tr.1 at 65.

Responding in writing to this question, the Agency first stated that it had reviewed USEPA regulations regarding turbines from which exhaust is captured in a heat recovery steam generator. PC 1 at 1, citing 40 C.F.R. 60, Subparts GG, KKKK. The Agency stated that it had decided "to treat a combustion turbine and heat recovery steam generator as a single unit." PC 1

at 1. The Agency claims that this simplifies testing and monitoring NO_x emissions. *Id*. The Agency elaborated that

> [t]he supplemental heat input of the duct burner/heat recovery steam generator will be added to the heat input of the turbine. The combined heat input will be subject to the applicable NO_x emission limit for turbines under Subpart Q of Part 217. Therefore, the NO_x emissions will be tested/monitored after the exhaust from the heat recovery steam generator and shall comply with the NO_x emission limit for a turbine. However, the heat input of the duct burner/heat recovery steam generator shall not be added to the heat input of the turbine to increase the rated capacity of the turbine. *Id.* at 1-2.

The Agency accordingly proposed to amend the definition of "industrial boiler" by, among other change, excluding "a heat recovery steam generator that captures waste heat from a combustion turbine. . . . " *Id*. at 2.

In its first motion to amend its rulemaking proposal, the Agency recommended that the Board "[a]mend Section 217.3100 by to reflect the provisions as previously agreed to between the Illinois EPA and Midwest Generation as reflected in the Illinois EPA's Answers to Midwest Generation's Questions for Agency Witnesses, filed September 30, 2008, and the October 14, 2008, hearing." Mot. Amend 1 at 2; *see* MG Questions at 3, MG Answers at 4-6. In those answers, the Agency had proposed to amend this definition to provide that

> '[i]ndustrial boiler' means, for purposes of Part 217, an enclosed vessel in which water is heated and circulated either as hot water or as steam for heating or for power, or both. This term does not include boilers serving a generator that has a nameplate capacity greater than 25MWe and produces electricity for sale, ~~and cogeneration units, as that term is defined in Section 225.120 of Part 225,~~ if such boilers ~~or cogeneration units are subject to~~ meet the applicability criteria under Subpart M of Part 217 ~~the CAIR NO_x Trading Programs under Subpart D or E of Part 225.~~ MG Answers at 6; *but see* PC 1 at 2 (proposing to exclude from definition heat recovery steam generators capturing waste heat from combustion turbines).

In its post-hearing comments, Midwest Generation states that,

> [w]ith the amendments proposed to the Board by the Agency in its Motion to Amend Rulemaking Proposal ("Agency's Motion") filed January 30, 2009, Midwest Generation generally supports the Agency's proposal as it applies to electric generating units ("EGUs"). The proposed amendments incorporate by reference provisions agreed to between the Agency and Midwest Generation as part of the Agency's Answers to Midwest Generation's Questions for Agency Witnesses ("Agency's Answers"), which were filed before this Board on September 30, 2008. PC 9 at 1-2 (noting Agency's amended proposed definition of "industrial boiler"); *see* Mot. Amend 1 at 2; *see also* Tr.1 at 199-200.

In its second motion to amend its rulemaking proposal, the Agency recommended that the Board accept the following amendment to this definition:

> '[i]ndustrial boiler' means, for purposes of Part 217, an enclosed vessel in which water is heated and circulated either as hot water or as steam for heating or for power, or both. The term does not include a heat recovery steam generator that captures waste heat from a combustion turbine and boilers serving a generator that has a nameplate capacity greater than 25 MWe and produces electricity for sale, if such boilers meet the applicability criteria under Subpart M of Part 217. Mot. Amend 2 at 6.

The Agency states that this proposed amendment excludes from the definition "a heat recovery steam generator that captures waste heat from a combustion turbine." Mot. Amend 2 at 5. The Agency further states that it proposed this amendment in post-hearing comments filed on November 5, 2008, but inadvertently excluded it from the first motion to amend. *Id*. at 5, 6; *see* PC 1 at 1-2, citing Tr.1 at 65.

Section 211.3355: Lime Kiln

In its proposal, the Agency seeks to add a definition of the term "lime kiln," which is necessitated by Subpart G. Statement at 15. In its entirety, the proposed definition states that "'[l]ime kiln' means, for purposes of Part 217, an enclosed combustion device used to calcine lime mud, which consists primarily of calcium carbonate, into calcium oxide." Prop. at 15 (proposed new Section 211.3355).

Section 211.3475: Load Shaving Unit

In its proposal, the Agency seeks to add a definition of the term "load shaving unit," which is included in the proposed definition of the term "auxiliary boiler." Statement at 15. In its entirety, the proposed definition states that "'[l]oad shaving unit' means, for purposes of Part 217, a device used to generate electricity for sale or use during high electric demand days, including but not limited to stationary reciprocating internal combustion engines or turbines." Prop. at 15 (proposed new Section 211.3475).

In a question filed for the first hearing on October 14, 2008, Midwest Generation asked the Agency whether the definition of "load shaving unit" includes a peaker power plant. MG Questions at 2. The Agency responded simply "[y]es." MG Answers at 2.

Section 211.4280: Other Glass

In its proposal, the Agency seeks to add a definition of the term "other glass," which is necessitated by Subpart F. Statement at 15. In its entirety, the proposed definition states that "'[o]ther glass' means, for purposes of Part 217, glass that is neither container glass, as that term is defined in Section 211.1435, nor flat glass, as that term is defined in Section 211.2357." Prop. at 15 (proposed new Section 211.4280).

Section 211.5195: Process Heater

In its proposal, the Agency seeks to add a definition of the term "process heater," which is necessitated by Subpart E. Statement at 15. In its entirety, the proposed definition states that "'[p]rocess heater' means, for purposes of Part 217, an enclosed combustion device that burns gaseous or liquid fuels only and that indirectly transfers heat to a process fluid or a heat transfer medium other than water. This term does not include pipeline heaters and storage tank heaters that are primarily meant to maintain fluids at a certain temperature or viscosity." Prop. at 15-16 (proposed new Section 211.5195).

In a question filed for the first hearing on October 14, 2008, IERG inquired whether the Agency intended to include in the definition of "industrial boiler" or "process heater" those "gas-fired chillers that provide cooling for either processes or occupied spaces." IERG Questions at 4; *see* Prop. at 41-47 (proposed Subparts D and E). The Agency responded by stating that, "[i]f refrigerant is heated [in]directly by gas heating, it is a process heater." IERG Answers at 6; *see* Tr.1 at 68-69 (clarifying Agency response). The Agency further stated that, although it had not "performed any analysis to determine the technical feasibility and cost for such gas-fired chillers to comply with its proposed rule," it "believes that the technical feasibility and cost for gas-fired chillers should be similar to process heaters and industrial boilers." IERG Answers at 6-7, *see* Tr.1 at 67-68.

Part 217: Nitrogen Oxides Emissions

Subpart A: General Provisions

Section 217.100: Scope and Organization. Existing Section 217.100 sets forth the scope and organization of Part 217. 35 Ill. Adm. Code 217.100. In its proposal, the Agency seeks only to "amend subsection (b) of this Section to state that permits for sources subject to Part 217 may be required under Section 39.5 of the Act, in addition to 35 Ill. Adm. Code Part 201." Statement at 15; *see* Prop. at 22; *see also* 415 ILCS 5/39.5 (2006) (Clean Air Act Permit Program).

Section 217.104: Incorporations by Reference. Existing Section 217.104 incorporates by reference various specified materials. 35 Ill. Adm. Code 217.104. In its proposal, the Agency seeks "to add test methods under 40 C.F.R. Part 60 and [USEPA] Alternative Control Techniques Documents." Statement at 16; *see* Prop. at 22-23.

Subpart B: New Fuel Combustion Emission Sources

Section 217.121: New Emission Sources. Existing Section 217.121 addresses NO_x emissions from new sources. 35 Ill. Adm. Code 217.121. In its proposal, the Agency seeks "to repeal this Section." Statement at 16; *see* Prop. at 23-24; *see also* Tr.1 at 187.

Subpart B: Existing Fuel Combustion Emission Units

Section 217.141: Existing Emission Units in Major Metropolitan Areas. Section 217.141 now regulates existing emission sources in major metropolitan areas. 35 Ill. Adm. Code 217.141. The Agency's proposal first seeks "to amend this Section by changing the term 'source' to 'unit.'" Statement at 16; *see* Prop. at 25-26. The Agency also seeks to add language in a new subsection (d)(2) providing "that the Section does not apply to emission units that are subject to the emissions limitations of Subpart D, E, F, G, H, M, or Q of Part 217." Statement at 16; *see* Prop. at 26.

During the first hearing on October 14, 2008, counsel for Midwest Generation questioned whether Section 217.141 would be necessary if the Board adopts this proposed rule. Tr.1 at 189. The Agency responded that the Board originally promulgated this language in 1972 as Rule 207 and applied it to both new and existing sources. PC 1 at 4, citing In the Matter of: Emissions Standards, R71-23. The Agency states that

> [t]he NO_x limitations under Section 217.141 apply to any existing fuel combustion emission source with an actual heat input equal to or greater than 73.2 MW (250 mmbtu/hr), located in the Chicago or St. Louis (Illinois) major metropolitan areas. Currently, sources meeting the heat input criteria and located in these areas are subject to these NO_x limitations. Accordingly, these limitations appear in sources' permits. PC 1 at 4.

Subpart C: NO_x General Requirements

Section 217.150: Applicability. In its original proposal, the Agency sought to add a new Section 217.150 addressing the applicability of the proposed Subparts C, D, E, F, G, H, and M of Part 217. Statement at 16; *see* Prop. at 26-27.

The proposed subsection (a)(1) provides that Subparts D, E, F, G, H, and M apply to all sources that are located in the two areas designated as nonattainment for the 8-hour ozone and $PM_{2.5}$ standards and that emit or have the potential to emit NO_x in an amount equal to or greater than 100 tons per year. Statement at 10-11, 16; *see* Prop. at 26. The proposed subsection (a)(2) provides that Subparts D, E, F, G, H, and M also "apply to any industrial boiler, process heater, glass melting furnace, cement kiln, lime kiln, iron and steel reheat, annealing, or galvanizing furnace, aluminum reverberatory or crucible furnace, or fossil fuel-fired stationary boiler at such sources [described in subsection (a)(1)] that emits NO_x in an amount equal to or greater than 15 tons per year and equal to or greater than five tons per ozone season." Statement at 10-11, 16-17; *see* Prop. at 26, Gupta Pre-filed Test. at 2.

Noting that the proposed regulations would apply to both existing and new units, the Agency states that the existing units that would become subject to the regulations include the following: "80 industrial boilers, 84 process heaters, four glass melting furnaces, two lime kilns, six furnaces used in iron and steel making, and 20 fossil fuel-fired stationary boilers." Statement at 10; *see* TSD at 130-31 (describing affected sources). These 196 sources emitted 44,625 tons of NO_x in 2005, and the Agency projects that its proposal would reduce those emissions by 20,666 tons or 46.3%. TSD at 133 (Table 10-1), Gupta Pre-filed Test. at 3.

In a question filed for the first hearing on October 14, 2008, Midwest Generation noted that the proposed subsection (a)(2) employs the term "emits" in determining applicability. MG Questions at 1. Midwest Generation asked how the Agency would determine "whether a unit emits, as opposed to having the potential to emit, at the threshold levels." *Id*. The Agency responded that, "[i]n general, the Illinois EPA intends to rely on Annual Emission Reports submitted by owners/operators of emission sources." MG Answers at 2; *see* Tr.1 at 184-86.

In the second motion to amend its rulemaking proposal, the Agency sought to add a new subsection (a)(3) providing in its entirety that "[f]or purposes of this Section, 'potential to emit' means the quantity of NO_x that potentially could be emitted by a stationary source before add-on controls based on the design capacity or maximum production capacity of the source and 8,760 hours per year or the quantity of NO_x that potentially could be emitted by a stationary source as established in a federally enforceable permit." Mot. Amend 2 at 6. The Agency states that it added this definition in response to comments by USEPA. *Id*. at 2.

In another question filed for the first hearing, Midwest Generation noted that Section 217.150(a) provides that "[t]he provisions of this Subpart and Subparts D, E, F, G, H, and M apply to . . . [a]ll sources. . . ." MG Questions at 2; *see* Prop. at 26. Midwest Generation asks whether the Agency intends "that all of these subparts actually apply to all sources in the specified geographic areas." MG Questions at 2-3. Specifically, Midwest Generation asks whether the Agency instead intends "that only one subpart will apply to a unit or units at threshold sources, as determined by the characteristics of the unit." *Id*. at 3. The Agency responds by stating that its "intent that each respective Subpart apply to sources that meet the applicability criteria and individual emission units at such sources that meet the applicability criteria, *i.e.*, the provisions of a respective Subpart apply to the extent a source includes emission units of the type covered under the Subpart." MG Answers at 3.

In another question filed for the first hearing, Midwest Generation claims that "[t]he 'all industrial boilers' language in Section 217.160(a) and similar language in the other subparts could be construed to expand the scope of Section 217.150(a)(2), which refers to 'any industrial boiler [and other types of emission units] that emits NO_x in an amount equal to or greater than 15 tons per year and equal to or greater than five tons per ozone season." MG Questions at 2; *see* Prop. at 41-42 (proposed Section 217.160(a)). Midwest Generation questions whether the Agency intends "to expand the applicability of the rule in this way." MG Questions at 2. The Agency responds by expressing the intent "that each Subpart apply to all of the affected emission units at an affected source, *e.g.*, 'any' emission unit that meets the applicability criteria." MG Answers at 3.

The Agency also proposes a new subsection (b) providing that, if a source ceases to fulfill the emissions criteria of subsection (a) of this Section, the requirements of Subparts D, E, F, G, H, or M of Part 217 continue to apply to any emission unit that was ever subject to the provisions of Subpart D, E, F, G, H, or M of Part 217. Statement at 17; *see* Prop. at 26. The proposed subsection (c) provides that "the provisions of Subpart C do not apply to afterburners, flares, and incinerators." Statement at 17; *see* Prop. at 27.

In addition, the Agency's proposed subsection (d) provides that,

> where a construction permit, for which the application was submitted to the Agency prior to the adoption of Subpart C, is issued that relies on decreases in emissions of NO_x from existing emission units for purposes of netting or emission offsets, such NO_x decreases remain creditable notwithstanding any requirements that may apply to the existing emission units pursuant to Subpart C and Subpart D, E, F, G, H, or M of Part 217. Statement at 17; *see* Prop. at 27.

In the first motion to amend its rulemaking proposal, the Agency sought to add a subsection (e) providing in its entirety that "[t]he owner or operator of an emission unit that is subject to the Subpart or Subpart D, E, F, G, H, or M of this Part must operate such unit in a manner consistent with good air pollution control practice to minimize NO_x emissions." Mot. Amend 1 at 3. The Agency had originally included this language in the proposed subsection 217.152(b) regarding the compliance date. Prop. at 27; *see* Tr.1 at 196-98 (suggesting relocation under applicability provisions).

Section 217.152: Compliance Date. The Agency seeks to add a new section regarding the compliance date for its proposed rule. Statement at 17; *see* Prop. at 27. The proposed subsection (a) originally provided "that compliance with the requirements of Subparts D, E, F, G, H, and M by an owner or operator of an emission unit that it subject to any one of those subparts is required beginning May 1, 2010." Statement at 17; *see* Prop. at 27.

Proposed subsection (b) originally provided "that the first annual compliance period is May 1, 2010, through April 30, 2011, and then on a calendar years basis thereafter." Statement at 17; *see* Prop. at 27. Subsection (b) also originally provided that "the owner or operator of an emission unit that is subject to Subpart D, E, F, G, H, or M must operate such unit in a manner consistent with good air pollution control practice to minimize NO_x emissions." Statement at 17; *see* Prop. at 27.

In a question filed for the first hearing on October 14, 2008, Midwest Generation asked how the second sentence of subsection (b), regarding air pollution control practices, relates to the proposed compliance date. MG Questions at 3. Responding, the Agency simply stated that "[t]here is no relation." MG Answers at 3; *see* Tr.1 at 196-98 (suggesting relocation under applicability provisions). In post-hearing comments, the Agency agreed "that it may be more appropriate to place this sentence in another section. . . . PC 1 at 4.

In comments filed for the second hearing beginning December 9, 2008, Saint-Gobain argued that "a narrow exception should be made to the May 1, 2010 compliance date for entities that enter into an enforceable agreement with IEPA to install control technology that can achieve NO_x emission rates significantly below the 5.0 lbs/ton limit pursuant to an enforceable schedule extending beyond 2010." PC 4 at 1. Saint-Gobain states that it "is currently in the process of negotiating such an agreement with IEPA. *Id.* Saint-Gobain specifically proposed that Section 217.152 include a new subsection providing in its entirety that,

> [n]otwithstanding subsections (a), (b), and (c) of this Section, compliance with the requirements of Subpart F of this Part by an owner or operator of an emission unit

> subject to Subpart F of this Part shall be extended until December 31, 2014, if such units are required to meet emissions limitations for NO_x, as measured using a continuous emissions monitoring system, and included within a legally enforceable order on or before December 31, 2009, whereby such emissions limitations are less than 30 percent of the emissions limitations set forth under Section 217.204 of Subpart F of this Part. *Id*. at 2.

Saint-Gobain supports its proposal by stating that it

> cannot afford to install the technology required to meet an interim limit of 5.0 lbs/ton for the period between the compliance date under Section 217.204 and the anticipated schedule for installation of the alternative technology at the end of 2014, and thus the opportunity for substantially greater long-term emission reductions may be lost if a limited exemption from the May 1, 2010 compliance date is not adopted. *Id*. at 1.

Saint-Gobain also argues that early installation of CEMS would require significantly greater expense than later installation with the alternative technology and "would serve no compliance purpose." *Id*. at 2.

Participants doubted that sources could achieve compliance by the Agency's proposed compliance deadline and proposed alternative compliance schedules. *E.g.*, Exh. 5 at 15-16 (IERG). Exh. 6 at 12-15 (IERG), Exh. 9 at 3-6 (ConocoPhillips), Exh. 10 at 7-8 (U.S. Steel). In the first motion to amend its rulemaking proposal, the Agency proposed to amend subsection (a) to provide in its entirety that "[c]ompliance with the requirements of Subparts D, E, F, G, H, and M by an owner or operator of an emission unit that is subject to Subpart D, E, F, G, H, or M is required beginning January 1, 2012." Mot. Amend 1 at 2, 3.

The first motion to amend also sought to amend subsection (b) to provide in its entirety that

> [n]otwithstanding subsections (a) of this Section, compliance with the requirements of Subpart F of this Part by an owner or operator of an emission unit subject to Subpart F of this Part shall be extended until December 31, 2014, if such units are required to meet emissions limitations for NO_x, as measured using a continuous emissions monitoring system, and included within a legally enforceable order on or before December 31, 2009, whereby such emissions limitations are less than 30 percent of the emissions limitations set forth under Section 217.204 of Subpart F of this Part. Mot. Amend 2 at 2, 3.

In the second motion to amend its proposal, the Agency sought to add a subsection (c) providing in its entirety that,

> [n]otwithstanding subsection (a) of this Section, the owner or operator of emission units subject to Subpart D or E of this Part and located at a petroleum refinery must comply with the requirements of this Subpart and Subpart D or E of this

> Part, as applicable, for those emission units beginning January 1, 2012, except that the owner or operator of emission units listed in Appendix H must comply with the requirements of this Subpart, including the option of demonstrating compliance with the applicable Subpart through an emissions averaging plan under Section 217.158 of this Subpart, and Subpart D or E of this Part, as applicable, for the listed emission units beginning on the dates set forth in Appendix H. With Agency approval, the owner or operator of emission units listed in Appendix H may elect to comply with the requirements of this Subpart and Subpart D or E of this Part, as applicable, by reducing the emissions of emission units other than those listed in Appendix H, provided that the emissions limitations of such other emission units are equal to or more stringent than the applicable emissions limitations set forth in Subpart D or E of this Part, as applicable, by the dates set forth in Appendix H. Mot. Amend 2 at 2, 6-7; *see* Mot. Amend 2 at 13-14 (proposed Appendix H).

Section 217.154: Performance Testing. The Agency seeks to add a new section regarding performance testing requirements for units subject to Subparts D, E, F, G, or H. Statement at 18-19; *see* Prop. at 27-28. The proposed subsection (a) provides "that such testing for emission units constructed on or before December 1, 2009, and subject to one of those subparts must be conducted in accordance with Section 217.157." Statement at 18; *see* Prop. at 27. Subsection (a) also provides an exception from this requirement for owners and operators demonstrating compliance through CEMS. Statement at 18; *see* Prop. at 27.

Proposed subsection (b) provides that "performance testing of NO_x emissions for emission units constructed or modified after December 1, 2009, and subject to one of those subparts must be conducted within 60 days of achieving maximum operating rate but no later than 180 days after initial startup of the new or modified emission units, in accordance with Section 217.157." Statement at 18; *see* Prop. at 27. Subsection (b) also provides an exception for owners and operators demonstrating compliance through CEMS. Statement at 18; *see* Prop. at 28.

In a question filed for the first hearing on October 14, 2008, IERG noted that subsection (a) and (b) "refer to the date of emission unit construction or modification" and asked the Agency to clarify the meaning of the terms "constructed on or before" and "construction or modification occurs after." IERG Questions at 16-17. Specifically, IERG asked whether the Agency refers to "the beginning of construction, the completion of construction, [or] the date of issuance of a construction permit?" *Id.*

In its response, the Agency first noted that definition in Parts 201 and 211 apply to Part 217. IERG Answers at 9; *see* 35 Ill. Adm. Code 201, 211, 217.103. The Agency further noted that Section 201.102 defines "construction" as "commencement of on-site fabrication, erection or installation of an emission source or of air pollution control equipment." IERG Answers at 9, citing 35 Ill. Adm. Code 201.102. The Agency also notes that it defines "modification" as

> any physical change in, or change in the method of operations, of an emission source or of air pollution control equipment which increases the amount of any

> specified air contaminant emitted by such source or equipment or which results in the emission of any specified air contaminant not previously emitted. It shall be presumed that an increase in the use of raw materials, the time of operation or the rate of production will change the amount of any specified air contaminant emitted. Notwithstanding any other provisions of this definition, for purposes of permits issued pursuant to Subpart D, the Illinois Environmental Agency (Agency) may specify conditions under which an emission source or air pollution control equipment may be operated without causing a modification as herein defined, and normal cyclical variations, before the date operating permits are required, shall not be considered modifications. IERG Answers at 9, citing 35 Ill. Adm. Code 201.102.

The Agency suggests that these definitions determine what constitutes the beginning or the completion of construction. IERG Answers at 9.

In the first motion to amend its proposal, the Agency sought to replace subsection (a) with the following language:

> [p]erformance testing of NO_x emissions for emission units constructed on or before July 1, 2011, and subject to Subpart D, E, F, G, or H of this Part must be conducted in accordance with Section 217.157 of this Subpart. This subsection does not apply to owners and operators of emission units demonstrating compliance through a continuous emissions monitoring system. Mot. Amend 1 at 3.

Also in the first motion to amend, the Agency sought to replace subsection (b) with the following language:

> [p]erformance testing of NO_x emissions for emission units for which construction or modification occurs after July1, 2011, and that are subject to Subpart D, E, F, G, or H of this Part must be conducted within 60 days of achieving maximum operating rate but no later than 180 days after initial startup of the new or modified emission unit, in accordance with Section 217.157 of this Subpart. This subsection does not apply to owners and operators of emission units demonstrating compliance through a continuous emissions monitoring system. Mot. Amend 1 at 3.

Proposed subsection (c) provides that notification of initial startup of a unit subject to subsection (b) "must be provided to the Agency no later than 30 days after initial startup." Statement at 18; *see* Prop. at 28. Proposed subsection (d) provides that the owner or operator of a unit subject to subsection (a) or (b) "must notify the Agency of the scheduled date for the performance testing at least 30 days in writing before such date and five days before such date." Statement at 18; *see* Prop. at 28.

Proposed subsection (e) provides that, "if demonstrating compliance through a emissions averaging plan, at least 30 days before changing the method of compliance, the owner or

operator of an emission unit must submit a written notification to the Agency describing the new method of compliance, the reason for the change in the method of compliance, and the scheduled date for the compliance demonstration testing, if required." Statement at 18-19; *see* Prop. at 28. Subsection (e) also provides that an owner or operator changing the method of compliance "must submit to the Agency a revised compliance certification that meets the requirements of Section 217.155." Statement at 19; *see* Prop. at 28.

Section 217.155: Initial Compliance Certification. The Agency seeks to add a new section regarding initial compliance certification for units subject to Subpart D, E, F, G, H, or M. Statement at 19-20: *see* Prop. at 28-29. As originally proposed, subsection (a) provides that, by May 1, 2010, the owner or operator of a unit subject to Subpart D, E, F, G, H, or M who does not demonstrate compliance with CEMS "must certify to the Agency that the emission unit will be in compliance with the applicable emissions limitation of Subpart D, E, F, G, or H of Part 217 beginning May 1, 2010." Statement at 19; *see* Prop. at 28. The subsection also provides that "certification must include the results of the performance testing performed in accordance with Sections 217.154(a) and (b) of Subpart C and the calculations necessary to demonstrate that the subject emission unit will be in initial compliance." Statement at 19; *see* Prop. at 28.

In the first motion to amend its rulemaking proposal, the Agency sought to replace subsection (a) with the following language:

> [b]y the applicable compliance date set forth under Section 217.152 of this Subpart, an owner or operator of an emission unit subject to Subpart D, E, F, G, or H of this Part who is not demonstrating compliance through the use of a continuous emissions monitoring system must certify to the Agency that the emission unit will be in compliance with the applicable emissions limitation of Subpart D, E, F, G, or H of this Part beginning on such applicable compliance date. The performance testing certification must include the results of the performance testing performed in accordance with Sections 217.154(a) and (b) of this Subpart and the calculations necessary to demonstrate that the subject emission unit will be in initial compliance. Mot. Amend 1 at 4.

As originally proposed, subsection (b) provides that, by May 1, 2010, the owner or operator of a unit subject to Subpart D, E, F, G, H, or M who is demonstrating compliance with CEMS "must certify to the Agency that the affected emission units will be in compliance with the applicable emissions limitation of Subpart D, E, F, G, or H of Part 217 beginning May 1, 2010." Statement at 19; *see* Prop. at 28. The subsection also provides that "[s]uch compliance certification must include a certification of the installation and operation of a continuous emissions monitoring system required under Sections 217.157 of Subpart C and the monitoring data necessary to demonstrate that the subject emission unit will be in initial compliance." Statement at 19-20; *see* Prop. at 28-29.

In the first motion to amend its rulemaking proposal, the Agency sought to replace subsection (b) with the following language:

> By the applicable compliance date set forth under Section 217.152 of this Subpart, an owner or operator of an emission unit subject to Subpart D, E, F, G, H, or M of this Part who is demonstrating compliance through the use of a continuous emissions monitoring system must certify to the Agency that the affected emission units will be in compliance with the applicable emissions limitation of Subpart D, E, F, G, H, or M of this Part beginning on such applicable compliance date. The compliance certification must include a certification of the installation and operation of a continuous emissions monitoring system required under Section 217.157 of this Subpart and the monitoring data necessary to demonstrate that the subject emission unit will be in initial compliance. Mot. Amend 1 at 4; *see also* PC 2 at 1 (proposing extension of compliance deadline for CEMS).

Section 217.156: Recordkeeping and Reporting. The Agency seeks to add a new section regarding recordkeeping and reporting by owners or operators of sources subject to Subpart D, E, F, G, H, or M. Statement at 20-23: *see* Prop. at 29-32. The proposed subsection (a) provides that such owners or operators "must keep and maintain all records used to demonstrate initial compliance and ongoing compliance with the requirements of these Subparts." Statement at 20; *see* Prop. at 29. The subsection also provides that, "except as otherwise provided under those Subparts, copies of such records must be submitted by the owner or operator of the source to the Agency within 30 days after receipt of a written request by the Agency, and such records must be kept at the source and maintained for at least five years and must be available for inspection and copying by the Agency." Statement at 20; *see* Prop. at 29 (proposed subsections (a)(1) and (a)(2)).

Proposed subsection (b) provides that the owner or operator of a unit subject to Subpart D, E, F, G, H, or M must maintain records, including eleven specific items, demonstrating compliance with the applicable subpart. Statement at 20-21; *see* Prop. at 29-30. Specifically, subsection (b)(8) requires that records include "[a] log of all maintenance and inspections related to the unit's air pollution control equipment for NO_x that it performed on the unit." Prop. at 30; *see* Statement at 20-21. Also, subsection (b)(9) requires that records include "[a] log for the NO_x monitoring device, if present, including periods when not in service and maintenance and inspection activities that are performed on the device." Prop. at 30; *see* Statement at 21.

In a question filed for the first hearing on October 14, 2008, Midwest Generation asked whether "the recordkeeping systems that sources already have in place comprise the 'logs' required at Sections 217.156(b)(8) and (9), assuming all of the information required by the rule is included?" MG Questions at 2. The Agency responded that they do comprise the required logs, "as long as all of the required information under the rule is included." MG Answers at 3.

Proposed subsection (c) provides in its entirety that "[t]he owner or operator of an industrial boiler subject to Subpart D of this Part must maintain records in order to demonstrate compliance with the combustion tuning requirements under Section 217.166 of this Part." Prop. at 30; *see* Statement at 21. Proposed subsection (d) provides in its entirety that "[t]he owner or operator of a process heater subject to Subpart E of this Part must maintain records in order to demonstrate compliance with the combustion tuning requirements under Section 217.186 of this Part." Prop. at 30; *see* Statement at 21. Proposed subsection (e) provides in its entirety that

"[t]he owner or operator of an emission unit subject to Subpart D, E, F, G, H, or M of this Part must maintain records in order to demonstrate compliance with the testing and monitoring requirements under Section 217.157 of this Subpart." Prop. at 30; *see* Statement at 21.

Proposed subsection (f) provides that an owner or operator of a unit subject to Subparts D, E, F, G, or H must provide four specific submissions with respect to performance testing under Section 217.157(a)(4) and (b)(2). Prop. at 30-31; *see* Statement at 21-22. In the second motion to amend its rulemaking proposal, the Agency sought to amend subsection (f) to provide that recordkeeping and reporting, as they pertain to performance testing, applies "to all performance testing conducted under Section 217.157 and not just certain testing as under the original proposal." Mot. Amend 2 at 2; *see* Prop. at 30-31.

Proposed subsection (g) provides that "the owner or operator of an emission unit subject to Subpart D, E, F, G, H, or M must notify the Agency of any exceedances of an applicable emissions limitation of Subpart D, E, F, G, H, or M by sending the applicable report with an explanation of the causes of such exceedances to the Agency within 30 days following the end of the applicable compliance period in which the emissions limitation was not met." Statement at 22; *see* Prop. at 31. In a question filed for the first hearing on October 14, 2008, Midwest Generation asked what constitutes the "applicable compliance period." MG Questions at 2. The Agency responded that that period is "[t]he annual or ozone season compliance period." MG Answers at 3.

Proposed subsection (h) provides that, "within 30 days of a written request by the Agency, the owner or operator of an emission unit that is exempt from the requirements of Subpart D, E, F, G, H, or M must submit records that document that the emission unit is exempt from those requirements to the Agency." Statement at 22; *see* Prop. at 31. Proposed subsection (i) provides that an owner or operator complying through an emissions averaging plan must submit by March 1 following the applicable calendar year a report demonstrating four specific items. Prop. at 31; *see* Statement at 22. Proposed subsection (j) provides that an owner or operator complying through the use of CEMS must submit to the Agency within 30 days after the end of each calendar quarter a report including two specified items of information. Prop. at 32; *see* Statement at 23.

Proposed subsection (k) provides that "the owner or operator of an emission unit subject to Subpart M must comply with the compliance certification and recordkeeping and reporting requirements in accordance with 40 C.F.R. 96, or an alternate procedure approved by the Agency and USEPA." Statement at 23; *see* Prop. at 32. In a question filed for the first hearing on October 14, 2008, Midwest Generation asked whether subsection (k) "supersede[s] the other recordkeeping and reporting requirements of Section 217.156?" MG Questions at 2. Responding, the Agency stated that its "intent is that electric generating units subject to Subpart M comply with the compliance certifications, recordkeeping, and reporting requirements pursuant to 40 C.F.R. 96, in conjunction with the other recordkeeping and reporting requirements under Section 217.156, to the extent the requirements are not duplicative." MG Answers at 4.

Section 217.157: Testing and Monitoring. The Agency seeks to add a new section regarding testing and monitoring by owners or operators of sources subject to Subpart D, E, F, G,

H, or M. Statement at 20-27: *see* Prop. at 32-37. The proposed subsection (a) "includes the provisions applicable to owners and operators of industrial boilers subject to Subpart D and process heaters subject to Subpart E." Statement at 23; *see* Prop. at 32-34.

Proposed subsection (a)(1) provides that "the owner or operator of an industrial boiler subject to Subpart D with a rated heat input capacity greater than 250 mmBtu/hr must install, calibrate, maintain, and operate a continuous emissions monitoring system on the emission unit for the measurement of NO_x emissions discharged into the atmosphere in accordance with 40 C.F.R. Part 75." Statement at 23; *see* Prop. at 32.

Proposed subsection (a)(2) provides that

> the owner or operator of an industrial boiler subject to Subpart D with a rated heat input capacity greater than 100 mmBtu/hr but less than or equal to 250 mmBtu/hr must install, calibrate, maintain, and operate a continuous emissions monitoring system on the emission unit for the measurement of NO_x emissions discharged into the atmosphere in accordance with 40 C.F.R. Part 60, Subpart A, and Appendix B, Performance Specifications 2 and 3, and Appendix F, Quality Assurance Procedures. Statement at 24; *see* Prop. at 32-33.

Proposed subsection (a)(3) provides that

> the owner or operator of a process heater subject to Subpart E with a rated heat input capacity greater than 100 mmBtu/hr must install, calibrate, maintain, and operate a continuous emissions monitoring system on the emission unit for the measurement of NO_x emissions discharged into the atmosphere in accordance with 40 C.F.R. Part 60, Subpart A, and Appendix B, Performance Specifications 2 and 3, and Appendix F, Quality Assurance Procedures. Statement at 24; *see* Prop. at 33.

In testimony filed on behalf of ConocoPhillips for the second hearing on December 9, 2008, Mr. Dunn noted that the Agency's proposal requiring installation of CEMS on any industrial boiler or process heater over 100 mmBtu/hr would result in total estimated costs of $12 million. Exh. 9 a t 14-15. Mr. Dunn recommended that the Agency limit CEMS requirements to units greater than 250 mmBtu/hr. *Id*. at 15. He also expressed the view that "annual performance testing is sufficient for process heaters that are included in an averaging plan." *Id*. In post-hearing comments, ConocoPhillips noted that these issues remain outstanding concerns with the Agency. PC 14 at 2-3.

Proposed subsection (a)(4) provides that, "if demonstrating compliance through an emissions averaging plan, the owner or operator of an industrial boiler subject to Subpart D, or a process heater subject to Subpart E, with a rated heat input capacity less than or equal to 100 mmBtu/hr and not demonstrating compliance through a continuous emission monitoring system must have an initial performance test." Statement at 24; *see* Prop. at 33. Proposed subsection (a)(4)(A) establishes the timing for the required subsequent performance tests. Statement at 24; *see* Prop. at 33. Proposed subsection (a)(4)(B) originally established other requirements for

these tests. Statement at 24; *see* Prop. at 33-34. In the first motion to amend its rulemaking proposal, the Agency proposed to replace that language with the following:

> [t]he owner or operator of an industrial boiler or process heater must have a performance test conducted using 40 CFR Part 60, Subpart A, and Appendix A, Method 1, 2, 3, 4, 7E, or 19, as incorporated by reference in Section 217.104 of this Part, or other alternative USEPA methods approved by the Agency. Each performance test must consist of three separate runs, each lasting a minimum of 60 minutes. NO_x emissions must be measured while the industrial boiler is operating at maximum operating capacity or while the process heater is operating at normal maximum load. If the industrial boiler or process heater has combusted more than one type of fuel in the prior year, a separate performance test is required for each fuel. If a combination of fuels is typically used, a performance test may be conducted with Agency approval on such combination of fuels typically used. Except as provided under subsection (e) of this Section, this subsection (a)(4)(B) of this Section does not apply if such owner or operator is demonstrating compliance with an emissions limitation through a continuous emissions monitoring system under subsection (a)(1), (a)(2), (a)(3), or (a)(5)) of this Section. Mot. Amend 1 at 4-5.

Proposed subsection (a)(5) provides that, instead of complying with subsection (a)(4), (a)(4)(A), and (a)(4)(B), "an owner or operator of an industrial boiler subject to Subpart D of this Part, or a process heater subject to Subpart E of this Part, with a rated heat input capacity less than or equal to 100 mmBtu/hr may install and operate a continuous emissions monitoring system that meets the applicable requirements of 40 C.F.R. Part 60, Subpart A, and Appendix B, Performance Specifications 2 and 3, and Appendix F, Quality Assurance Procedures." Statement at 25; *see* Prop. at 34. The proposed subsection further provides that the CEMS "must be used to demonstrate compliance with the applicable emissions limitation or emissions averaging plan on an ozone season and annual basis." Statement at 25; *see* Prop. at 34.

Proposed subsection (a)(6) provides that, notwithstanding subsection (a)(2), the owner or operator of an auxiliary boiler subject to Subpart D "with a rated heat input capacity less than or equal to 250 mmBtu/hr and a capacity factor of less than or equal to 20% is not required to install, calibrate, maintain, and operate a continuous emissions monitoring system on such boiler for the measurement of NO_x emissions discharged into the atmosphere, but must comply with the performance test requirements under subsections (a)(4), (a)(4)(A), and (a)(4)(B) of this Section." Statement at 25; *see* Prop; at 34.

The proposed subsection (b) includes provisions applicable to owners and operators of glass melting furnaces subject to Subpart F, cement and lime kilns subject to Subpart G, iron and steel reheat, annealing, or galvanizing furnaces subject to Subpart H, and aluminum reverberatory and crucible furnaces subject to Subpart H. Statement at 25; *see* Prop. at 34. Proposed subsection (b)(1) provides that

> an owner or operator of such an emission unit that has the potential to emit NO_x in an amount equal to or greater than one ton per day must install, calibrate,

> maintain, and operate a continuous emissions monitoring system on each such emission unit for the measurement of NO_x emissions discharged into the atmosphere in accordance with 40 C.F.R. Part 60, Subpart A, and Appendix B, Performance Specifications 2 and 3, and Appendix F, Quality Assurance Procedures. Statement at 25-26; *see* Prop. at 34-35.

Proposed subsection (b)(2) provides that "an owner or operator of a glass melting furnace, cement kiln or lime kiln, iron and steel reheat, annealing, or galvanizing furnace, or aluminum reverberatory and crucible furnace that has the potential to emit NO_x in an amount less than one ton per day must have an initial performance test conducted" pursuant to subsection (b)(4) and Section 217.154. Statement at 26; *see* Prop. at 35. Proposed subsection (b)(3) establishes the timing for the required subsequent performance tests. Statement at 26; *see* Prop. at 35.

Proposed subsection (b)(4) originally established methods and requirements for those performance tests. Statement at 26; *see* Prop. at 36. In comments filed on January 20, 2009, Saint-Gobain proposed to amend that language by adding a sentence providing that, if a unit demonstrates compliance with NO_x limitations by CEMS under subsection (b)(1), then this subsection (b)(4) does not apply. PC 4 at 1. In the first motion to amend its rulemaking proposal, the Agency proposed to replace that language with the following:

> The owner or operator of a glass melting furnace, cement kiln, or lime kiln must have a performance test conducted using 40 CFR Part 60, Subpart A, and Appendix A, Methods 1. 2, 3, 4, and 7E, as incorporated by reference in Section 217.104 of this Part, or other alternative USEPA methods approved by the Agency. The owner or operator of an iron and steel reheat, annealing, or galvanizing furnace, or aluminum reverberatory or crucible furnace must have a performance test conducted using 40 CFR Part 60, Subpart A, and Appendix A, Method 1, 2, 3, 4, 7E, or 19, as incorporated by reference in Section 217.104 of this Part, or other alternative USEPA methods approved by the Agency. Each performance test must consist of three separate runs, each lasting a minimum of 60 minutes. NO_x emissions must be measured while the glass melting furnace, cement kiln, lime kiln, iron and steel reheat, annealing, or galvanizing furnace, or aluminum reverberatory or crucible furnace is operating at maximum operating capacity. If the glass melting furnace, cement kiln, lime kiln, iron and steel reheat, annealing, or galvanizing furnace, or aluminum reverberatory or crucible furnace has combusted more than one type of fuel in the prior year, a separate performance test is required for each fuel. Except as provided under subsection (e) of this Section, this subsection (b)(4) of this Section does not apply if such owner or operator is demonstrating compliance with an emissions limitation through a continuous emissions monitoring system under subsection (b)(1) or (b)(5) of this Section. Mot. Amend 1 at 5; *see infra* at 41 (noting proposed addition of subsection (e)); *see also* PC 4 at 1 (Saint-Gobain pre-hearing proposal).

Proposed subsection (b)(5) provides that, instead of complying with subsections (b)(2), (b)(3), and (b)(4),

> an owner or operator of a glass melting furnace, cement kiln or lime kiln, iron and steel reheat, annealing, or galvanizing furnace, or aluminum reverberatory and crucible furnace that has the potential to emit NO_x in an amount less than one ton per day may install and operate a continuous emissions operating system on such emission unit that meets the applicable requirements of 40 C.F.R. Part 60, Subpart A, and Appendix B, Performance Specifications 2 and 3, and Appendix F, Quality Assurance Procedures. Statement at 26; *see* Prop. at 36.

The proposed subsection also provides that the CEMS "must be used to demonstrate compliance with the applicable emissions limitation or emissions averaging plan on an ozone season and annual basis." Statement at 26; *see* Prop. at 36.

Proposed subsection (c) provides in its entirety that "[t]he owner or operator of a fossil fuel-fired stationary boiler subject to Subpart M of this Part must install, calibrate, maintain, and operate a continuous emissions monitoring system on such emission unit for the measurement of NO_x emissions discharged into the atmosphere in accordance with 40 C.F.R. Part 96, Subpart H." Prop. at 36; *see* Statement at 27.

Proposed subsection (d) provides in its entirety that,

> [i]f two or more emission units subject to Subpart D, E, F, G, H, M, or Q of this Part are served by a common stack and the owner or operator of such emission units is operating a continuous emissions monitoring system, the owner or operator may, with written approval from the Agency, utilize a single continuous emissions monitoring system for the combination of emission units subject to Subpart D, E, F, G, H, M, or Q of this Part that share the common stack, provided such emission units are subject to an emissions averaging plan under this Part. Prop. at 37; *see* Statement at 27.

In the first motion to amend its rulemaking proposal, the Agency proposed to add a subsection (e) to extend the deadline for the installation of CEMS. Mot. Amend 1 at 5; *see* Exh. 6 at 21 (urging additional time for installation), Exh. 9 (supporting three-year extension for installation). In the second motion to amend, the Agency proposed to amend subsection (e) to allow additional time for installation of CEMS. Mot. Amend 2 at 2, 7-8. The Agency also proposed to add a subsection (f) allowing "for a predictive emission monitoring system, in accordance with 40 C.F.R. Part 60, Subpart A, and Appendix B, Performance Specification 16, as an alternative to the CEMS requirements for the owners or operators of certain emission units who are not otherwise required by any other statute, regulation, or enforceable order to install a CEMS on an emission unit." Mot. Amend 2 at 2-3, 7-8.

Section 217.158: Emissions Averaging Plans. The Agency seeks to add a new section regarding emissions averaging plans. Statement at 27-29: *see* Prop. at 37-41. Generally, "[s]ources may aggregate and then average the NO_x emissions from units at the same location in

Illinois to comply with the emissions limitations. . . ." Kaleel Pre-filed Test. at 3. Specifically, proposed subsection (a) provides that, "[n]otwithstanding any other emissions averaging plan provisions under this Part, an owner or operator of a source with certain emission units subject to Subpart D, E, F, G, H, or M of this Part, or subject to Subpart Q of this Part that are located in either one of the areas set forth under Section 217.150(a)(1)(A) or (B) of this Subpart, may demonstrate compliance with the applicable Subpart through an emissions averaging plan." Prop. at 37; *see* Statement at 27.

The proposed subsection also provides that "[a]n emissions averaging plan can only address emission units that are located at one source and each unit may only be covered by one emissions averaging plan." Prop. at 37; *see* Statement at 27, Tr.1 at 180. In a question filed for the first hearing on October 14, 2008, Midwest Generation asked whether the Agency intended to preclude "a unit that is in an averaging plan under this rule from participating in averaging plans under other rules and *vice versa*." MG Questions at 1. The Agency responded that it intends "that an emission unit be included in only one seasonal and one annual averaging plan. Units affected by Subpart Q (Engine Rule) can be included in an averaging plan with units affected by this proposal." MG Answers at 2; *see* Tr.1 at 181. Finally, the proposed subsection also provides that "[s]uch emission units at the source are affected units and are subject to the requirements of this Section." Prop. at 37; *see* Statement at 27.

Proposed subsection (a)(1) describes units that may be included in an emissions averaging plan. Statement at 27; *see* Prop. at 37. First, under subsection (a)(1)(A), a plan may include "[u]nits that commenced operation on or before January 1, 2002." Prop. at 37; *see* Statement at 27. In a question filed for the first hearing on October 14, 2008, ExxonMobil asked how the Agency set that date as a cutoff. ExxonMobil Questions at 4-5; *see* IERG Questions at 4. The Agency responded that "USEPA has established 2002 as the base year for planning purposes for implementation of the ozone and $PM_{2.5}$ NAAQS established in 1997. States are required to demonstrate continued progress towards attainment beginning in that year. The Illinois EPA is seeking emission reductions from emission units that were in existence in 2002." ExxonMobil Answers at 5. The Agency acknowledged that new units may, under various requirements, "have installed NO_x control measures that are equal to or more stringent than the proposed emission limitations here." *Id*. at 6. The Agency states, however, that "[i]f such units were included in an averaging plan with units that existed in 2002, then the existing units may not need to reduce emissions. This is counter to the objective of achieving Reasonable Further Progress between 2002 and the attainment year, 2010. *Id*.; *see* IERG Answers at 8.

Under proposed subsection (a)(1)(B), a plan may include "[u]nits that the owner or operator may claim as exempt under Subpart D, E, F, G, H, or M, as applicable, but does not claim as exempt." Statement at 27-28; *see* Prop. at 37. The proposed subsection also provides that, "[f]or as long as such a unit is included in an emissions averaging plan, it will be treated as an affected unit and subject to the applicable emissions limitations, and testing, monitoring, recordkeeping, and reporting requirements." Prop. at 37.

Under proposed subsection (a)(1)(C), a plan may include "[u]nits that commence operation after January 1, 2002, if the unit replaces a unit that commenced operation on or before January 1, 2002, or it replaces a unit that replaced a unit that commenced operation on or before

January 1, 2002. The new unit must be used for the same purpose as the replacement unit." Prop. at 37; *see* Statement at 28. In response to a question by IERG filed for the first hearing, the Agency stated that, "[f]or the purpose of emissions averaging under this proposal, a replacement unit must be *essentially* the same as the unit it replaces." IERG Answers at 8 (emphasis added); *see* Tr.1 at 80-83. In the second motion to amend its rulemaking proposal, the Agency proposed to replace its original language with a new subsection (a)(1)(C) clarifying the replacement units that may be included in an averaging plan. The Agency explained that

> [t]he new unit must be used for the same purpose and have substantially equivalent or less process capacity or be permitted for less NO_x emissions on an annual basis than the actual NO_x emissions of the unit or units that are replaced. In addition, within 90 days after permanently shutting down a unit that is replaced, the owner or operator of such unit must submit a written request to withdraw or amend the applicable permit to reflect that the unit is no longer in service before the replacement unit may be included in the emissions averaging plan" Mot. Amend 2 at 3, 8-9.

Proposed subsection (a)(2) describes units that may not be included in an emissions averaging plan. Statement at 27; *see* Prop. at 37. First, under proposed subsection (a)(2)(A), a plan may not include "[u]nits that commence operation after January 1, 2002, except as provided by subsection (a)(1)(C) of this Section." Prop. at 38; *see* Statement at 28, *supra* (discussing subsection (a)(1)(C)). Under proposed subsection (a)(2)(B), a plan may not include "[u]nits that the owner or operator is claiming are exempt pursuant to Section 217.162, 217.182, 217.202, 217.222, 217.242, or 217.432 of this Part, as applicable." Prop. at 38; *see* Statement at 28. Also, under proposed subsection (a)(2)(C), the Agency originally proposed that plans may not include "[u]nits that are required to meet emission limits for NO_x as provided for in an enforceable order, unless such order specifically provides for operation pursuant to an emissions averaging plan." Prop. at 28; *see* Statement at 28. In the second motion to amend its rulemaking proposal, the Agency proposed to amend this subsection to provide that plans may not include

> Units that are required to meet emission limits or control requirements for NO_x as provided for in an enforceable order, unless such order allows for emissions averaging. Nothing in this subparagraph (C) is intended to prohibit a petroleum refinery from including industrial boilers or process heaters, or both, in an emissions averaging plan where an enforceable order does not prohibit the reductions made under such order from also being used for compliance with any rules or regulations designed to address regional haze or the non-attainment status of any area. Mot. Amend 2 at 3, 9.

Proposed subsection (b) provides that

> an owner or operator must submit an emissions averaging plan to the Agency by May 1, 2010, and such plan must include, but is not limited to, the list of affected units included in the plan by unit identification number and a sample calculation demonstrating compliance using the methodology provided in subsection (f) of

> this Section for the ozone season (May 1 through September 30) and calendar year (January 1 through December 31). Statement at 28; *see* Prop. at 38.

In the first motion to amend its rulemaking proposal, the Agency sought to extend the deadline to submit an averaging plan to the Agency to January 1, 2012. Mot. Amend 1 at 6. In a question filed for the first hearing on October 14, 2008, Midwest Generation asked whether a source may decide after the deadline for submitting a plan that it wishes to perform averaging. MG Questions at 3. The Agency responded that "[a]veraging plans can be amended once per year at the discretion of the owner/operator." MG Answers at 4. The Agency elaborated that a unit that had not submitted an averaging plan before the initial deadline can be included in averaging at a later date. *Id*.

Subsection (c), as originally proposed by the Agency, provided in its entirety that "[a]n owner or operator may amend an emission plan only once per calendar year. Such an amended plan must be submitted to the Agency by May 1 of the applicable calendar year. If an amended plan is not received by the Agency by May 1 of the applicable calendar year, the previous year's plan will be the applicable emissions averaging plan." Prop. at 38; *see* Statement at 28. In the first motion to amend its rulemaking proposal, the Agency proposed to amend this subsection by changing the May 1 submission deadlines to January 1. Mot. Amend 1 at 6.

Proposed subsection (d) provides that, notwithstanding subsection (c),

> if a unit that is listed in an emissions averaging plan is taken out of service, the owner or operator must submit to the Agency, within 30 days of such occurrence, an updated emissions averaging plan; or if a unit that is exempt from the requirements of Subpart D, E, F, G, H, or M, as applicable, no longer qualifies for an exemption, the owner or operator may amend its existing averaging plan to include such unit within 30 days of the unit no longer qualifying for the exemption. Statement at 28-29; *see* Prop. at 38-39.

Proposed subsection (e) provides that the owner or operator must demonstrate compliance for both the ozone season and the calendar year by using the methodology and the units included in the most recent averaging plan submitted to the Agency, "the higher of the monitoring data or test data determined pursuant to Section 217.157," and "the actual hours of operation for the applicable averaging plan period." Statement at 29; *see* Prop. at 39. The subsection also provides that the owner or operator must "submit to the Agency by March 1 following each calendar year, a compliance report containing the information required by Section 217.156(i)." Statement at 29; *see* Prop. at 39.

Proposed subsection (f) "provides that the total mass of actual NO_x emissions from the units listed in the emissions averaging plan must be equal to or less than the total mass of allowable NO_x emissions for those units for both the ozone season and calendar year." Statement at 29; *see* Prop. at 39. The proposed subsection also includes the equation with which to determine compliance. Prop. at 39-41.

Proposed subsection (g) provides that

> the owner or operator of an emission unit subject to Subpart Q of this Part that is located in either one of the areas set forth under Section 217.150(a)(1)(A) or (B) of this Subpart that is complying through an emissions averaging plan under this Section must comply with the applicable provisions for determining actual and allowable emissions under Section 217.290 of Subpart Q, the testing and monitoring requirements under Section 217.394 of Subpart Q, and the recordkeeping and reporting requirements under Section 217.396 of Subpart Q. Statement at 29; *see* Prop. at 41.

In the second motion to amend its rulemaking proposal, the Agency sought to add a subsection (h). Mot. Amend 2 at 3-4, 9. That proposed new subsection provides in its entirety that

> [t]he owner or operator of an emission unit located at a petroleum refinery who is demonstrating compliance with an applicable Subpart through an emissions averaging plan under this Section may exclude from the calculation demonstrating compliance those time periods when an emission unit included in the emissions averaging plan is shut down for a maintenance turnaround, provided that such owner or operator notify the Agency in writing at least 30 days in advance of the shutdown of the emission unit for the maintenance turnaround and the shutdown of the emission unit does not exceed 45 days per ozone season or calendar year and NO_x pollution control equipment, if any, continues to operate on all other emission units operating during the maintenance turnaround. Mot. Amend 2 at 9.

Also in the second motion to amend its rulemaking proposal, the Agency sought to add a subsection (i). Mot. Amend 2 at 4, 9. That proposed new subsection provides in its entirety that

> [t]he owner or operator of an emission unit that combusts a combination of coke oven gas and other gaseous fuels and located at a source that manufactures iron and steel who is demonstrating compliance with an applicable Subpart through an emissions averaging plan under this Section may exclude from the calculation demonstrating compliance those time periods when the coke oven gas desulfurization unit included in the emissions averaging plan is shut down for maintenance, provided that such owner or operator notify the Agency in writing at least 30 days in advance of the shutdown of the coke oven gas desulfurization unit for maintenance and such shutdown does not exceed 35 days per ozone season or calendar year and NO_x pollution control equipment, if any, continues to operate on all other emission units operating during the maintenance period. Mot. Amend 2 at 9.

Subpart D: Industrial Boilers

Section 217.160: Applicability. The Agency seeks to add a new section addressing applicability of its proposal to industrial boilers. Prop. at 41-42. Proposed subsection (a) provides that "the provisions of Subparts C and D apply to all industrial boilers located at

sources subject to Subpart D pursuant to Section 217.150." Statement at 30; *see* Prop. at 42; *see also supra* at 28-30 (addressing applicability of general requirements). The Agency states that there are 12 industrial boilers subject to the NO_x SIP Call affected by this proposal and an additional 68 industrial boilers less than 250 mmBtu that are not subject to the NO_x SIP Call. TSD at 130, Statement at 10; *see* MG Answers at 8.

In a question filed for the first hearing on October 14, 2008, Midwest Generation claims that "[t]he 'all industrial boilers' language in Section 217.160(a) and similar language in the other subparts could be construed to expand the scope of Section 217.150(a)(2), which refers to 'any industrial boiler [and other types of emission units] that emits NO_x in an amount equal to or greater than 15 tons per year and equal to or greater than five tons per ozone season." MG Questions at 2; *see* Prop. at 41-42. Midwest Generation questions whether the Agency intends "to expand the applicability of the rule in this way." MG Questions at 2. The Agency responds by expressing the intent "that each Subpart apply to all of the affected emission units at an affected source, *e.g.*, 'any' emission unit that meets the applicability criteria." MG Answers at 3.

Proposed subsection (b) provides that "the provisions of Subpart D do not apply to boilers serving a generator that has a nameplate capacity of 25 MWe or less and produces electricity for sale, and cogeneration units, as that term is defined in Section 225.130 of Part 225, if such boilers or cogeneration units are subject to the CAIR NO_x Trading Programs under Subpart D or E of Part 225." Statement at 30; *see* Prop. at 42.

In a question filed for the first hearing on October 14, 2008, Midwest Generation stated that, "[b]ased upon the proposed applicability language in Subpart M, Section 217.340, [and] assuming the D.C. Circuit Court issues the mandate implementing its decision in the appeal of the CAIR, EGUs would be subject to the provisions of Subpart D." MG Questions at 3-4. Midwest Generation consequently asked whether the Agency would consider amending subsection (b) as follows: "[t]he provisions of this Subpart do not apply to boilers serving a generator that has a nameplate capacity greater than 25 MWe and produces electricity for sale, and cogeneration units, as that term is defined in Section 225.230 of Part 225~~, if such boilers or cogeneration units are subject to the CAIR NO_x Trading Programs under Subpart D or E of Part 225~~." *Id.* at 4.

Responding to Midwest Generation, the Agency stated that it was "amenable" to amending its proposed definition in the following fashion: "[t]he provisions of this Subpart do not apply to boilers serving a generator that has a nameplate capacity greater than 25 MWe and produces electricity for sale, ~~and cogeneration units, as that term is defined in Section 225.130 of Part 225,~~ if such boilers ~~or cogeneration units are subject to~~ meet the applicability criteria under Subpart M of Part 217 ~~the CAIR NO_x Trading Programs under Subpart D or E of Part 225~~. MG Answers at 4-6.

In its first motion to amend its rulemaking proposal, the Agency recommended that the Board "[a]mend Section 217.160 by amending subsection (b) to reflect the provisions as previously agreed to between the Illinois EPA and Midwest Generation as reflected in the Illinois EPA's Answers to Midwest Generation's Questions for Agency Witnesses, filed September 30,

2008, and the October 14, 2008, hearing." Mot. Amend 1 at 6; *see* MG Question at 3-4, MG Answers at 4-6.

In its post-hearing comments, Midwest Generation states that,

> [w]ith the amendments proposed to the Board by the Agency in its Motion to Amend Rulemaking Proposal ("Agency's Motion") filed January 30, 2009, Midwest Generation generally supports the Agency's proposal as it applies to electric generating units ("EGUs"). The proposed amendments incorporate by reference provisions agreed to between the Agency and Midwest Generation as part of the Agency's Answers to Midwest Generation's Questions for Agency Witnesses ("Agency's Answers"), which were filed before this Board on September 30, 2008. PC 9 at 1-2 (noting Agency's proposed amendment of Section 217.160); *see* Mot. Amend 1 at 6, Tr.1 at 199-200.

Proposed subsection (c) provides that "the provisions of Subpart D do not apply to fluidized catalytic cracking units, their regenerator and associated CO boiler or boilers and CO furnace or furnaces where present, that commenced operation prior to January 1, 2008, if such units are located at a petroleum refinery and such units are required to meet emission limits for NO_x as provided for in an enforceable order." Statement at 30-31; *see* Prop. at 42.

In the first motion to amend its rulemaking proposal, the Agency sought to amend subsection (c) to provide that

> [t]he provisions of this Subpart do not apply to fluidized catalytic cracking units, their regenerator and associated CO boiler or boilers and CO furnace or furnaces where present, that commenced operation prior to January 1, 2008, if such units are located at a petroleum refinery and such units are required to meet emission limits or control requirements for NO_x as provided for in an enforceable order. Mot. Amend 1 at 6

In the second motion to amend, the Agency proposed to remove the January 1, 2008, date for commencement of operation "in the non-applicability provisions pertaining to certain fluidized bed catalytic cracking units located at a petroleum refinery." Mot. Amend 2 at 5, 9-10.

Section 217.162: Exemptions. The Agency proposes to add a new section addressing exemptions, which provides in its entirety that, "[n]otwithstanding Section 217.160 of this Subpart, the provisions of this Subpart do not apply to an industrial boiler operating under a federally enforceable limit of NO_x emissions from such boiler to less than 15 tons per year and less than five tons per ozone season." Prop. at 42; *see* Statement at 31, Kaleel Pre-filed Test. at 3.

Section 217.164: Emissions Limitations. The Agency proposes to add a new section addressing emission limitations from industrial boilers. Statement at 31; Prop. at 42-43; *see generally* TSD at 5-44 (Industrial Boilers and Electric Generating Unit Boilers). Originally, the Agency proposed that, "[o]n and after May 1, 2010, no person shall cause or allow emissions of

NO_x into the atmosphere from any industrial boiler to exceed the limitations set forth under this Section." Statement at 31; *see* Prop. at 42-43. The Agency proposed specific limitations or requirements based first on the unit's fuel and then on its rated heat input capacity. Prop. at 42-43 (proposed subsections (a) through (d)). The Agency also proposed that "[c]ompliance must be demonstrated with the applicable emissions limitations on an ozone season and annual basis." Prop. at 42; *see* Statement at 31.

In a question filed for the first hearing on October 14, 2008, Midwest Generation asked the Agency to state the "basis for establishing a rate of 0.008 lb/mmBtu rate for gas-fired industrial boilers greater than 100 mmBtu." MG Questions at 3. The Agency responded that its TSD establishes this basis. MG Answers at 4, citing TSD at 43 (Table 2-17a: Cost Effectiveness Data for Natural Gas-Fired ICI Boilers).

In testimony on behalf of U.S. Steel for the second hearing, Mr. Siebenberger stated that the Agency's proposed emission limit of 0.08 lbs/MMBtu for industrial boilers greater than 100 MMBtu/hr relying on natural gas or other gaseous fuels does not take into account the "unique characteristics" of specific U.S. Steel boilers. Exh. 10 at 6. Those unique characteristics "include the combustion of a varying fuel mix of desulfurized or non-desulfurized coke oven gas in combination with blast furnace gas and natural gas." *Id*. U.S Steel proposed alternate emissions limits both for its Boilers 11 and 12 and for its reheat furnaces. *Id*. at 6, 7; *see* Tr.1 at 102-03 (addressing Agency consideration of coke oven gas fuel).

In testimony filed on behalf of IERG for the second hearing, Mr. Kolaz argues that the difference in emissions between the Agency's original proposal and IERG's alternate proposal is "relatively small." Exh. 6 at 22. Mr. Kolaz further argues that IERG's proposed emission limit of 0.12 lbs/mmBtu for industrial boilers greater than 100 MMBtu/hr relying on natural gas or other gaseous fuels is "more practically achievable." *Id*. at 23; *see id*. at Exhs. 1, 2. Mr. Kolaz also questions the Agency's proposed compliance date on grounds including the practical ability of sources to implement these requirements. *Id.* at 12-15.

In testimony filed on behalf of ConocoPhillips for the second hearing, Mr. Dunn stated that the Agency's proposed emission limit of 0.08 lb/MMBtu for industrial boilers greater than 100 MMBtu/hr relying on natural gas or other gaseous fuels is "overly stringent." Exh. 9 at 6. ConocoPhillips recommends an emission limit of 0.12 lb/MMBtu, as recommended by IERG. *Id*. at 9. ConocoPhillips further argues that the Agency's compliance deadline is "not achievable." *Id*.

In post-hearing comments filed January 20, 2009, ConocoPhillips again addressed the emission limitation of 0.08 lb/mmBtu for gas-fired boilers greater than 100 mmBtu/hr. PC 5 at 3-4. ConocoPhillips argues that the proposed limit "is overly stringent for typical industrial boilers when burning refinery fuel gas" and "does not adequately consider the economic consequences" of installing the controls that comply with it. *Id*. at 3-4.

In the first motion to amend its rulemaking proposal, the Agency proposed to amend the first sentence of Section 217.164 by extending the compliance deadline to January 1, 2012. Mot. Amend 1 at 6. In the second motion to amend, the Agency proposed to change the emissions

limitation for an industrial boiler, circulating fluidized bed combustor, with a rated heat input capacity greater than 100 mmBtu/hr from 0.10 lb/mmBtu to 0.12 lb/mmBtu. Mot. Amend 2 at 4. The Agency states that, "[d]uring discussions with affected parties, emissions information from an existing source with such a unit was provided to Illinois EPA, and such information necessitated a modification of the emissions limitation." *Id*. at 4, 10. Also in the second motion to amend, the Agency proposed to add in a new subsection (e) a formula establishing "an emissions limitation to be calculated for an industrial boiler combusting a combination of natural gas, coke oven gas, and blast furnace gas under Subpart D." *Id*. at 4, 11.

Section 217.165: Combination of Fuels. The Agency proposes to add a new section addressing combination of fuels, which provides in its entirety that "[t]he owner or operator of an industrial boiler subject to this Subpart and operated with any combination of fuels must comply with a heat input weighted average emissions limitation to demonstrate compliance with Section 217.164 of this Subpart." Prop. at 43; *see* Statement at 31; *see also supra* at 47-48 (discussing proposed Section 217.164).

Section 217.166: Methods and Procedures for Combustion Tuning. The Agency proposes to add a new section addressing combustion tuning. Prop. at 44. The proposed section first provides that "the owner or operator of an industrial boiler subject to the combustion tuning requirements of Section 217.164 must have combustion tuning performed at least annually." Statement at 31; *see* Prop. at 44. It also provides that "the combustion tuning must be performed by an employee of the owner or operator or a contractor who has successfully completed a training course on the combustion tuning of boilers firing the fuel or fuels that are fired in the boiler." Statement at 31; *see* Prop. at 44. Finally, the proposed section also seeks to require that the owner or operator maintain combustion tuning records containing five specific items and make those records available to the Agency upon request. Statement at 31-32; *see* Prop. at 44 (proposed subsections (1) through (5)).

Subpart E: Process Heaters

Section 217.180: Applicability. The Agency proposes to add a section addressing applicability and providing in its entirety that "[t]he provisions of Subpart C of this Part and this Subpart apply to all process heaters located at sources subject to this Subpart pursuant to Section 217.150 of this Part." Prop. at 44; *see* Statement at 32, *supra* at 28-30 (discussing Section 217.150); *see generally* TSD at 46-65 (Process Heaters).

In a question filed for the first hearing on October 14, 2008, Midwest Generation suggests that the "all process heaters" language in Section 217.160(a) could be construed to expand the scope of Section 217.150(a)(2), which refers to "any . . . process heater . . . that emits NO_x in an amount equal to or greater than 15 tons per year and equal to or greater than five tons per ozone season." MG Questions at 2; *see* Prop. at 26 (proposed Section 217.150(a)(2)). Midwest Generation questions whether the Agency intends "to expand the applicability of the rule in this way." MG Questions at 2. The Agency responds by expressing the intent "that each Subpart apply to all of the affected emission units at an affected source, *e.g.*, 'any' emission unit that meets the applicability criteria." MG Answers at 3.

Section 217.182: Exemptions. The Agency proposes to add a section addressing exemptions and providing in its entirety that, "[n]otwithstanding Section 217.180 of this Section, the provisions of this Subpart do not apply to a process heater operating under a federally enforceable limit of NO_x emissions from such heater to less than 15 tons per year and less than five tons per ozone season." Prop. at 45; *see* Statement at 33, Kaleel Pre-filed Test. at 3.

In testimony filed on behalf of IERG for the second hearing, Mr. Kolaz states that "most of the process heaters affected by this rule are located at petroleum refineries," which "cannot make changes to their process heaters without planning the work to occur during maintenance turnarounds." Exh. 6. at 23. He further states that "it appears that the Agency used the emission reductions from the USEPA refinery consent decrees for the attainment modeling conducted by LADCO." *Id*. at 24. He proposes that "the Agency consider the reductions from the federally enforceable consent decrees to constitute RACT for these facilities." *Id*. He identifies this section as language that might be modified to effect this proposed amendment. *Id*.

Section 217.184: Emissions Limitations. The Agency proposes to add a new section addressing emission limitations from process heaters. Statement at 33; Prop. at 45-46; *see generally* TSD at 46-65 (Process Heaters). Originally, the Agency proposed that, "[o]n and after May 1, 2010, no person shall cause or allow emissions of NO_x into the atmosphere from any process heater" to exceed specified limitations. Prop. at 45; *see* Statement at 33. The Agency proposed specific limitations or requirements based first on the unit's fuel and then on its rated heat input capacity in mmBtu/hr. Prop. at 45-46 (proposed subsections (a), (b), and (c)). The Agency also proposed that "[c]ompliance must be demonstrated with the applicable emissions limitations on an ozone season and annual basis." Prop. at 45; *see* Statement at 33.

In testimony filed on behalf of ConocoPhillips for the second hearing, Mr. Dunn stated that the Agency's proposed emission limit of 0.07 lb/MMBtu for process heaters greater than 100 MMBtu/hr relying on gaseous fuels is "too stringent for typical process heaters" and requires "control technology that is well beyond RACT." Exh. 9 at 9. He further states that ConocoPhillips "agrees with IERG's suggestions that the NO_x emission limit of process heaters be set at 0.12 lb NO_x/MMBtu." *Id*. at 12. ConocoPhillips further argues that the Agency's compliance deadline is "not achievable." *Id*.

In the first motion to amend its rulemaking proposal, the Agency proposed to amend the first sentence of Section 217.184 by extending the compliance deadline to January 1, 2012. Mot. Amend 1 at 7. In the second motion to amend, the Agency proposed to amend "the emissions limitation for a process heater with a rated heat input capacity greater than 100 mmBtu/hr combusting natural gas or other gaseous fuels" from 0.07 lb/mmBtu to 0.08 lb/mmBtu. Mot. Amend 2 at 5, 11-12.

Section 217.185: Combination of Fuels. The Agency proposes to add a new section addressing combination of fuels, which provides in its entirety that "[t]he owner or operator of a process heater subject to this Subpart and operated with any combination of fuels must comply with a heat input weighted average emissions limitation to demonstrate compliance with Section 217.184 of this Subpart." Prop. at 46; *see* Statement at 33; *see also supra* at 49-50 (discussing proposed Section 217.184).

Section 217.186: Methods and Procedures for Combustion Tuning. The Agency proposes to add a new section addressing combustion tuning of process heaters. Prop. at 46-47. The proposed section first provides that "the owner or operator of a process heater subject to the combustion tuning requirements of Section 217.184 must have combustion tuning performed on the heater at least annually." Statement at 313*see* Prop. at 44. The proposed section also provides that "[t]he combustion tuning must be performed by an employee of the owner or operator or a contractor who has successfully completed a training course on the combustion tuning of heaters firing the fuel or fuels that are fired in the heater." Statement at 33; *see* Prop. at 46. Finally, the proposed section also seeks to require that the owner or operator maintain combustion tuning records containing five specific items and make those records available to the Agency upon request. Statement at 33-34; *see* Prop. at 46 (proposed subsections (1) through (5)).

Subpart F: Glass Melting Furnaces

Section 217.200: Applicability. The Agency proposes to add a section addressing applicability and providing in its entirety that "[t]he provisions of Subpart C of this Part and this Subpart apply to all glass melting furnaces located at sources subject to this Subpart pursuant to Section 217.150 of this Part. Prop. at 47; *see* Statement at 34, *supra* at 28-30 (discussing Section 217.150); *see generally* TSD at 102-17 (Glass Melting Furnaces).

In a question filed for the first hearing on October 14, 2008, Midwest Generation suggests that the "all glass melting furnaces" language in Section 217.200 could be construed to expand the scope of Section 217.150(a)(2), which refers to "any . . . glass melting furnace . . . that emits NO_x in an amount equal to or greater than 15 tons per year and equal to or greater than five tons per ozone season." MG Questions at 2; *see* Prop. at 26 (proposed Section 217.150(a)(2)). Midwest Generation questions whether the Agency intends "to expand the applicability of the rule in this way." MG Questions at 2. The Agency responds by expressing the intent "that each Subpart apply to all of the affected emission units at an affected source, *e.g.*, 'any' emission unit that meets the applicability criteria." MG Answers at 3.

Section 217.202: Exemptions. The Agency proposes to add a section addressing exemptions and providing in its entirety that, "[n]otwithstanding Section 217.200 of this Section, the provisions of this Subpart do not apply to a glass melting furnace operating under a federally enforceable limit of NO_x emissions from such furnace to less than 15 tons per year and less than five tons per ozone season." Prop. at 47; *see* Statement at 35, Kaleel Pre-filed Test. at 3.

In a post-hearing comment filed November 25, 2008, Saint-Gobain expressed the belief that "a narrow exception should be made to the May 1, 2010 compliance date for entities that enter into an enforceable agreement with IEPA to install control technology that can achieve NO_x emission rates significantly below the 5.0 lbs/ton limit pursuant to an enforceable schedule extending beyond 2010. PC 2 at 1. As Saint-Gobain is negotiating such an agreement, it proposes the following addition to this exemptions section:

> [n]otwithstanding the compliance date set forth in Section 217.155(b) and 217.204, a compliance date of December 31 2014, shall apply when the owner or operator of a container glass melting furnace subject to Subpart F has executed a binding and enforceable agreement by December 31, 2009 with the State of Illinois that requires compliance with a NO_x limit that is less than 30 percent of the emission limit in Section 217.204. *Id*.; *but see* Mot. Amend. 1 at 3 (incorporating substance of proposed language into Section 217.152(b)).

Section 217.204: Emissions Limitations. The Agency proposes to add a new section addressing emission limitations from glass melting furnaces. Statement at 35; Prop. at 47; *see generally* TSD at 102-17 (Glass Melting Furnaces). Originally, the Agency proposed that, "[o]n and after May 1, 2010, no person shall cause or allow emissions of NO_x into the atmosphere from any glass melting furnace" to exceed specified limitations. Prop. at 47; *see* Statement at 35. The Agency proposed specific limitations based on the unit's product type as container glass, flat glass, or other glass. Prop. at 47 (proposed subsections (a), (b), and (c)). The Agency also proposed that "[c]ompliance must be demonstrated with the emissions limitations on an ozone season and annual basis." Prop. at 47; *see* Statement at 35.

In a post-hearing comment filed November 25, 2008, Saint-Gobain expressed the belief that "a narrow exception should be made to the May 1, 2010 compliance date for entities that enter into an enforceable agreement with IEPA to install control technology that can achieve NO_x emission rates significantly below the 5.0 lbs/ton limit pursuant to an enforceable schedule extending beyond 2010. PC 2 at 1. Noting that it is negotiating such an agreement, Saint-Gobain argues that it "cannot afford to install the technology required to meet an interim limit of 5.0 lb/ton for the period between the compliance date under Section 217.204 and the anticipated schedule for installation of alternative technology at the end of 2014." *Id*.; *see* Tr.2 at 13-16 (addressing negotiation of consent decree). Saint-Gobain also refers to the cost of installing CEMS devices. *See* PC 2 at 1-2.

In a pre-hearing comment filed January 20, 2009, Saint-Gobain proposed to add to Section 217.202 language providing that "Section 217.204 shall not apply during glass furnace startup (not to exceed 70 days) or idling (operation at less than 35% of furnace capacity)." PC 4 at 2. Saint-Gobain also proposed a formula with which to determine a NO_x emission limit applicable to those startup and idling periods. *See id*.

In the first motion to amend its rulemaking proposal, the Agency proposed to amend the first sentence of Section 217.204 by extending the compliance deadline to January 1, 2012. Mot. Amend 1 at 7. The Agency also proposed to add a subsection providing in part that "[t]he emissions limitations under this Section do not apply during glass melting furnace startup (not to exceed 70 days) or idling (operation at less than 35% of furnace capacity)." *Id*. The Agency's proposed new subsection also included a formula for determining NO_x emissions limitations during startup and idle periods. *Id*.

Subpart G: Cement and Lime Kilns

Section 217.220: Applicability. The Agency proposes to add a section addressing applicability to cement and lime kilns. Prop. at 48; *see* Statement at 35-36. Proposed subsection (a) provides in its entirety that, "[n]otwithstanding Subpart T of this Part, the provisions of Subpart C of this Part and this Subpart apply to all cement kilns located at sources subject to this Subpart pursuant to Section 217.150 of this Part." Prop. at 48; *see* Statement at 35-36; *supra* at 28-30 (discussing Section 217.150); *see generally* TSD at 66-85 (Cement Kilns). Proposed subsection (b) provides in its entirety that "[t]he provisions of Subpart C of this Part and this Subpart apply to all lime kilns located at sources subject to this Subpart pursuant to Section 217.150 of this Part. Prop. at 48; *see* Statement at 35-36; *see supra* at 28-30 (discussing Section 217.150); *see generally* TSD at 86-91 (Lime Kilns).

In a question filed for the first hearing on October 14, 2008, Midwest Generation suggests that the "all cement kilns" and "all lime kilns" language in Section 217.220 could be construed to expand the scope of Section 217.150(a)(2), which refers to "any . . . cement kiln [or] lime kiln . . . that emits NO_x in an amount equal to or greater than 15 tons per year and equal to or greater than five tons per ozone season." MG Questions at 2; *see* Prop. at 26 (proposed Section 217.150(a)(2)). Midwest Generation questions whether the Agency intends "to expand the applicability of the rule in this way." MG Questions at 2. The Agency responds by expressing the intent "that each Subpart apply to all of the affected emission units at an affected source, *e.g.*, 'any' emission unit that meets the applicability criteria." MG Answers at 3.

In another question filed for the first hearing on October 14, 2008, Midwest Generation asked why, if there are no cement kilns in the nonattainment areas, cement kilns are included in the rulemaking. MG Questions at 1; *see also* IERG Questions at 4. The Agency responded by stating that "[t]here are no cement kilns in the current NAAs, although there is a cement kiln in Massac County, which USEPA intends to designate as nonattainment for the 24-hour $PM_{2.5}$ NAAQS." MG Answers at 2, citing *id*., Attachment 1 (USEPA review of air quality designations); *see also* IERG Answers at 6, citing TSD at 66 (noting that none of eight Illinois cement kilns are situated in nonattainment areas), Tr.1 at 57-62.

In his testimony on behalf of the Agency at the first hearing on October 14, 2008, Mr. Kaleel noted that the Agency had initially drafted these proposed regulations to have statewide applicability and that there are cement kilns situated in the state's attainment areas. Tr. 1 at 61. He also noted that, under the revised ozone and $PM_{2.5}$ standards, "there may be some adjustments necessary to the non-attainment areas." *Id*. Mr. Kaleel also argued that the Agency has already performed the engineering and cost analysis in support of these proposed rules. *Id*. at 62. Although he acknowledged that a change in the boundaries of the nonattainment areas would require changing the regulation, including cement kilns "would send a clear message to units that potentially become non-attainment in the future that they would know what their target is, what it is they have to meet." *Id*.

In testimony filed on behalf of IERG for the second hearing on December 9, 2008, Mr. Kolaz argued that, because no cement kilns exist in the nonattainment areas, cement kilns should not be included in the Agency's proposed regulations. Exh. 6 at 19, 24. He further argues that "[a]ny new facility with such a unit in the applicable areas would be subject to controls stricter than RACT." *Id*. at 19. He also argues that, in the event that, "[i]f new nonattainment areas are

identified in Illinois, this proposed rule would need to be amended to incorporate those areas if NO_x reductions are deemed necessary and appropriate to address the air quality conditions." *Id.*; *see* Tr.1 at 57-60.

Section 217.222: Exemptions. The Agency proposes to add a section addressing exemptions and providing in its entirety that, "[n]otwithstanding Section 217.220 of this Subpart, the provisions of this Subpart do not apply to a cement kiln or lime kiln operating under a federally enforceable limit of NO_x emissions from such kiln to less than 15 tons per year and less than five tons per ozone season." Prop. at 48; *see* Statement at 36, Kaleel Pre-filed Test. at 3.

Section 217.224: Emissions Limitations. The Agency proposes to add a new section addressing emission limitations from cement kilns and lime kilns. Statement at 36; Prop. at 48-49. Originally, the Agency proposed in subsection (a) that, "[o]n and after May 1, 2010, no person shall cause or allow emissions of NO_x into the atmosphere from any cement kiln" to exceed specified limitations. Prop. at 48; *see* Statement at 36. The Agency proposed specific limitations based on the unit's type. Prop. at 48 (proposed subsections (a)(1) through (a)(4)). The Agency also proposed in subsection (b) that, "[o]n and after May 1, 2010, no person shall cause or allow emissions of NO_x into the atmosphere from any lime kiln" to exceed specified limitations. Prop. at 49; *see* Statement at 36. The Agency also proposed that "[c]ompliance must be demonstrated with the emissions limitations on an ozone season and annual basis." Prop. at 48; *see* Statement at 36.

In the first motion to amend its rulemaking proposal, the Agency proposed to amend the first sentence of subsections (a) and (b) by extending the compliance deadline to January 1, 2012. Mot. Amend 1 at 8.

Subpart H: Iron and Steel and Aluminum Manufacturing

Section 217.240: Applicability. The Agency proposes to add a section addressing applicability to cement and lime kilns. Prop. at 49; *see* Statement at 36-37. Proposed subsection (a) provides in its entirety that, "[t]he provisions of Subpart C of this Part and this Subpart apply to all reheat furnaces, annealing furnaces, and galvanizing furnaces used in iron and steel making located at sources subject to this Subpart pursuant to Section 217.150 of this Part." Prop. at 49; *see* Statement at 36-37; *supra* at 28-30 (discussing Section 217.150); *see generally* TSD at 92-101 (Reheat, Annealing, and Galvanizing Furnaces at Iron/Steel plants). Proposed subsection (b) provides in its entirety that "[t]he provisions of Subpart C of this Part and this Subpart apply to all reverberatory furnaces and crucible furnaces used in aluminum melting located at sources subject to this Subpart pursuant to Section 217.150 of this Part. Prop. at 49; *see* Statement at 36-37; *see supra* at 28-30 (discussing Section 217.150); *see generally* TSD at 118-25 (Aluminum Melting Furnaces).

In a question filed for the first hearing on October 14, 2008, Midwest Generation suggests that the "all reheat furnaces, annealing furnaces, and galvanizing furnaces used in iron and steel making" and "all aluminum reverberatory furnaces and crucible furnaces used in aluminum melting" language in Section 217.240 could be construed to expand the scope of Section 217.150(a)(2), which refers to "any . . . iron and steel reheat, annealing, or galvanizing

furnace, [or] aluminum reverberatory or crucible furnace . . . that emits NO_x in an amount equal to or greater than 15 tons per year and equal to or greater than five tons per ozone season." MG Questions at 2; *see* Prop. at 26 (proposed Section 217.150(a)(2)). Midwest Generation questions whether the Agency intends "to expand the applicability of the rule in this way." MG Questions at 2. The Agency responds by expressing the intent "that each Subpart apply to all of the affected emission units at an affected source, *e.g.*, 'any' emission unit that meets the applicability criteria." MG Answers at 3.

In another question filed for the first hearing on October 14, 2008, Midwest Generation asked why, if there are no aluminum melting furnaces affected by the proposal, the rule includes that sector. MG Questions at 1; *see also* IERG Questions at 4. The Agency responded by stating that "[t]here is an aluminum melting furnace in the Chicago non-attainment area (NAA), although it has not operated for several years. To the best of our knowledge, the emission unit has not been torn down, so it is possible that the company, or a future owner, will seek to operate the furnace in the future." MG Answers at 1-2; *see* Tr.1 at 60-61; *see also* IERG Answers at 6.

In testimony filed on behalf of IERG for the second hearing on December 9, 2008, Mr. Kolaz argued that, because no aluminum reverberatory or crucible furnaces exist in the nonattainment areas, they should not be included in the Agency's proposed regulations. Exh. 6 at 19, 24, citing Tr.1 at 60-61. He further argues that "[a]ny new facility with such a unit in the applicable areas would be subject to controls stricter than RACT." Exh. 6 at 19. He also argues that, in the event that, "[i]f new nonattainment areas are identified in Illinois, this proposed rule would need to be amended to incorporate those areas if NO_x reductions are deemed necessary and appropriate to address the air quality conditions." *Id*.; *see* Tr.1 at 57-60.

Section 217.242: Exemptions. The Agency proposes to add a section addressing exemptions and providing in its entirety that, "[n]otwithstanding Section 217.240 of this Subpart, the provisions of this Subpart do not apply to an iron and steel reheat furnace, annealing furnace, or galvanizing furnace, or aluminum reverberatory furnace or crucible furnace operating under a federally enforceable limit of NO_x emissions from such furnace to less than 15 tons per year and less than five tons per ozone season." Prop. at 49; *see* Statement at 36, Kaleel Pre-filed Test. at 3.

Section 217.244: Emissions Limitations. The Agency proposes to add a new section addressing emission limitations for iron and steel and aluminum manufacturing. Statement at 36-37; Prop. at 50-51. Originally, the Agency proposed in subsection (a) that, "[o]n and after May 1, 2010, no person shall cause or allow emissions of NO_x into the atmosphere from any reheat furnace, annealing furnace, or galvanizing furnace use in iron and steel making" to exceed specified limitations. Prop. at 50; *see* Statement at 37. The Agency proposed specific emissions limitations based on the unit's type. Prop. at 50 (proposed subsections (a)(1) through (a)(9)). The Agency also proposed in subsection (b) that, "[o]n and after May 1, 2010, no person shall cause or allow emissions of NO_x into the atmosphere from any reverberatory furnace or crucible furnace used in aluminum melting" to exceed specified limitations. Prop. at 50; *see* Statement at 37. The Agency also proposed with regard to both subsections that "[c]ompliance must be demonstrated with the emissions limitations on an ozone season and annual basis." Prop. at 50; *see* Statement at 37.

In the first motion to amend its rulemaking proposal, the Agency proposed to amend the first sentence of subsections (a) and (b) by extending the compliance deadline to January 1, 2012. Mot. Amend 1 at 8-9. In the second motion to amend the proposal, the Agency proposed to change the emissions limitation for a recuperative reheat furnace combusting natural gas from 0.05 lb/mmBtu to 0.09 lb/mmBtu. Mot. Amend 2 at 5, 12. The Agency also proposed to add an emissions limitation of 0.142 lb/mmBtu for a recuperative reheat furnace combusting a combination of natural gas and coke oven gas. *Id*.

Subpart M: Electrical Generating Units

Section 217.340: Applicability. The Agency proposes to add a section addressing applicability to EGUs, which provides in its entirety that, "[n]otwithstanding Subpart V or W of this Part, the provisions of Subpart C of this Part and this Subpart apply to all fossil fuel-fired stationary boilers subject to the CAIR NO_x Trading Programs under Subpart D or E of Part 225 located at sources subject to this Subpart pursuant to Section 217.150 of this Part." Prop. at 51; *see* Statement at 37-38; *supra* at 28-30 (discussing Section 217.150); *see generally* TSD at 5-45 (Industrial Boilers and Electrical Generating Unit Boilers).

In a question filed for the first hearing on October 14, 2008, Midwest Generation suggests that the "all fossil fuel-fired stationary boilers" language in Section 217.340 could be construed to expand the scope of Section 217.150(a)(2), which refers to "any . . . fossil fuel-fired stationary boiler . . . that emits NO_x in an amount equal to or greater than 15 tons per year and equal to or greater than five tons per ozone season." MG Questions at 2; *see* Prop. at 26 (proposed Section 217.150(a)(2)). Midwest Generation questions whether the Agency intends "to expand the applicability of the rule in this way." MG Questions at 2. The Agency responds by expressing the intent "that each Subpart apply to all of the affected emission units at an affected source, *e.g.*, 'any' emission unit that meets the applicability criteria." MG Answers at 3.

In another question filed for the first hearing, Midwest Generation noted that "[t]he TSD claims there are a total of 18 EGUs subject to the rule, while the Statement of Reasons says there are 20 'fossil fuel-fired stationary boilers' subject to the rule." MG Questions at 4. Midwest Generation asks whether there are "fossil fuel-fired stationary boilers that are not EGUs that are subject to the rule?" *Id*. The Agency responds that "there are 20 EGU boilers," clarifying that "there are two instances in which one unit is comprised of two boilers." MG Answers at 8, citing TSD at Appendices – 27 (Table E-1).

In another question filed for the first hearing, Midwest Generation stated that, "[b]ased upon the proposed applicability language in Subpart M, Section 217.340, [and] assuming the D.C. Circuit Court issues the mandate implementing its decision in the appeal of the CAIR, EGUs would be subject to the provisions of Subpart D." MG Questions at 3. Midwest Generation consequently asked whether the Agency would consider amending this provision as follows:

> [n]otwithstanding Subpart V or W of this Part, the provisions of Subpart C of this Part and this Subpart apply to ~~al fossil fuel-fired stationary boilers subject to~~

~~the CAIR NO_x Trading Programs under Subpart D or E of Part 225~~ any fossil fuel-fired stationary boiler serving a generator that has a nameplate capacity greater than 25 MWe and produces electricity for sale, excluding any units listed in Appendix D of this Part, located at sources subject to this Subpart pursuant to Section 217.150 of this Part. *Id*.

Responding to Midwest Generation, the Agency stated that it was "amenable" to amending its proposed definition in the following fashion:

> [n]otwithstanding Subpart V or W of this Part, the provisions of Subpart C of this Part and this Subpart apply to ~~all fossil fuel-fired stationary boilers subject to the CAIR NO_x Trading Programs under Subpart D or E of Part 225~~ any fossil fuel-fired stationary boiler serving at any time a generator that has a nameplate capacity greater than 25 MWe and produces electricity for sale, excluding any units listed in Appendix D of this Part, located at sources subject to this Subpart pursuant to Section 217.150 of this Part. MG Answers at 4-5; *see* Exh. 12 at 2-3 (Encouraging adoption of amended language).

In its first motion to amend its rulemaking proposal, the Agency recommended that the Board "[a]mend Section 217.340 to reflect the provisions as previously agreed to between the Illinois EPA and Midwest Generation as reflected in the Illinois EPA's Answers to Midwest Generation's Questions for Agency Witnesses, filed September 30, 2008, and the October 14, 2008, hearing." Mot. Amend 1 at 9; *see* MG Question at 3, MG Answers at 4-5.

In its post-hearing comments, Midwest Generation states that,

> [w]ith the amendments proposed to the Board by the Agency in its Motion to Amend Rulemaking Proposal ("Agency's Motion") filed January 30, 2009, Midwest Generation generally supports the Agency's proposal as it applies to electric generating units ("EGUs"). The proposed amendments incorporate by reference provisions agreed to between the Agency and Midwest Generation as part of the Agency's Answers to Midwest Generation's Questions for Agency Witnesses ("Agency's Answers"), which were filed before this Board on September 30, 2008. PC 9 at 1-2 (noting Agency's proposed amendment of Section 217.340); *see* Mot. Amend 1 at 9, Tr.1 at 199-200.

In testimony filed for the second hearing on December 9, 2008, Mr. Kolaz argues that "the CAIR rule should be considered RACT for EGUs" and that "Subpart M is unnecessary for purposes of achieving the Agency's stated goals of achieving RACT level reductions." Exh. 6 at 25; *see* Tr.2 at 80-81. Midwest Generation concurred that Subpart M "is not necessary and should be deleted from the rule." Tr.3 at 58 (Miller testimony).

Section 217.342: Exemptions. The Agency proposes to add a section addressing exemptions. The proposed subsection (a) provides in its entirety that, "[n]otwithstanding Section 217.340 of this Subpart, the provisions of this Subpart do not apply to a fossil fuel-fired

stationary boiler operating under a federally enforceable limit of NO_x emissions from such boiler to less than 15 tons per year and less than five tons per ozone season." Prop. at 51; *see* Statement at 38, Kaleel Pre-filed Test. at 3. Proposed subsection (b) provides in its entirety that, "[n]owithstanding Section 217.340 of this Subpart, the provisions of this Subpart do not apply to a coal-fired stationary boiler that commenced operation before January 1, 2008, that is complying with the multi-pollutant standard under Section 225.233 of Part 225 or the combined pollutant standards under Subpart F of Part 225." Prop. at 51; *see* Statement at 38.

In a question filed for the first hearing on October 14, 2008, Midwest Generation stated that, "[b]ased upon the proposed applicability language in Subpart M, Section 217.340, [and] assuming the D.C. Circuit Court issues the mandate implementing its decision in the appeal of the CAIR, EGUs would be subject to the provisions of Subpart D." MG Questions at 3. Midwest Generation consequently asked whether the Agency would consider amending subsection (b) of this provision as follows: "[n]otwithstanding section 217.340 of this Subpart, the provisions of this Subpart do not apply to a coal-fired stationary boiler that commenced operation before January 1, 2008, that is complying with Part 225.Subpart B through the multi-pollutant standard under Section 225.233 of Part 225 or the combined pollutant standards under Subpart F of Part 225." *Id.* Responding to Midwest Generation, the Agency stated that it was "amenable" to amending subsection (b) in that fashion. MG Answers at 4-6.

In its post-hearing comments, Midwest Generation states that,

> [w]ith the amendments proposed to the Board by the Agency in its Motion to Amend Rulemaking Proposal ("Agency's Motion") filed January 30, 2009, Midwest Generation generally supports the Agency's proposal as it applies to electric generating units ("EGUs"). The proposed amendments incorporate by reference provisions agreed to between the Agency and Midwest Generation as part of the Agency's Answers to Midwest Generation's Questions for Agency Witnesses ("Agency's Answers"), which were filed before this Board on September 30, 2008. PC 9 at 1-2 (noting Agency's proposed amendment of Section 217.340); *see* Mot. Amend 1 at 10, Tr.1 at 199-200.

Section 217.344: Emissions Limitations. The Agency proposes to add a new section addressing emission limitations for EGUs. Statement at 38-39; Prop. at 51-52. Originally, the Agency proposed that, "[o]n and after May 1, 2010, no person shall cause or allow emissions of NO_x into the atmosphere from any fossil fuel-fired stationary boiler" to exceed specified limitations. Prop. at 50; *see* Statement at 37. The Agency proposed specific emissions limitations based on the unit's type. Prop. at 52 (proposed subsections (a), (b), and (c)). The Agency also proposed that "[c]ompliance must be demonstrated with the emissions limitations on an ozone season and annual basis." Prop. at 51; *see* Statement at 39.

In the first motion to amend its rulemaking proposal, the Agency proposed to amend the first sentence of Section 217.344 by extending the compliance deadline to January 1, 2012. Mot. Amend 1 at 10. The Agency proposed to change the emissions limitation for a boiler combusting solid fuel from 0.09 lb/mmBtu to 0.012 lb/mmBtu. *Id.*; *see* MG Answers at 6-8 (providing basis for determining 0.09 lb/mmBtu constitutes RACT)

Section 217.345: Combination of Fuels. The Agency proposes to add a new section addressing combination of fuels, which provides in its entirety that "[t]he owner or operator of a fossil fuel-fired stationary boiler subject to this Subpart and operated with any combination of fuels must comply with a heat input weighted average emissions limitation to demonstrate compliance with Section 217.344 of this Subpart." Prop. at 52; *see* Statement at 39.

Appendix H

In the second motion to amend its rulemaking proposal, the Agency proposes to add an Appendix H "to set forth the compliance dates for certain emission units at petroleum refineries." Mot. Amend 2 at 5, 13-14.

ORDER

The Board directs the Clerk to cause first-notice publication of the following proposed amendments to Parts 211 and 217 of the Board's air pollution regulations in the *Illinois Register*. Proposed additions to Parts 211 and 217 are underlined; proposed deletions appear stricken.

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE B: AIR POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER c: EMISSION STANDARDS AND LIMITATIONS FOR STATIONARY SOURCES

PART 211
DEFINITIONS AND GENERAL PROVISIONS

SUBPART A: GENERAL PROVISIONS

Section
211.101 Incorporations by Reference
211.102 Abbreviations and Conversion Factors

SUBPART B: DEFINITIONS

Section
211.121 Other Definitions
211.122 Definitions (Repealed)
211.130 Accelacota
211.150 Accumulator
211.170 Acid Gases
211.210 Actual Heat Input
211.230 Adhesive
211.240 Adhesion Promoter
211.250 Aeration

211.270 Aerosol Can Filling Line
211.290 Afterburner
211.310 Air Contaminant
211.330 Air Dried Coatings
211.350 Air Oxidation Process
211.370 Air Pollutant
211.390 Air Pollution
211.410 Air Pollution Control Equipment
211.430 Air Suspension Coater/Dryer
211.450 Airless Spray
211.470 Air Assisted Airless Spray
211.474 Alcohol
211.479 Allowance
211.484 Animal
211.485 Animal Pathological Waste
211.490 Annual Grain Through-Put
211.495 Anti-Glare/Safety Coating
211.510 Application Area
211.530 Architectural Coating
211.550 As Applied
211.560 As-Applied Fountain Solution
211.570 Asphalt
211.590 Asphalt Prime Coat
211.610 Automobile
211.630 Automobile or Light-Duty Truck Assembly Source or Automobile or Light-Duty Truck Manufacturing Plant
211.650 Automobile or Light-Duty Truck Refinishing
211.660 Automotive/Transportation Plastic Parts
211.665 Auxiliary Boiler
211.670 Baked Coatings
211.680 Bakery Oven
211.685 Basecoat/Clearcoat System
211.690 Batch Loading
211.695 Batch Operation
211.696 Batch Process Train
211.710 Bead-Dipping
211.730 Binders
211.740 Brakehorsepower (rated-bhp)
211.750 British Thermal Unit
211.770 Brush or Wipe Coating
211.790 Bulk Gasoline Plant
211.810 Bulk Gasoline Terminal
211.820 Business Machine Plastic Parts
211.830 Can
211.850 Can Coating
211.870 Can Coating Line

211.890 Capture
211.910 Capture Device
211.930 Capture Efficiency
211.950 Capture System
211.953 Carbon Adsorber
211.955 Cement
211.960 Cement Kiln
211.970 Certified Investigation
211.980 Chemical Manufacturing Process Unit
211.990 Choke Loading
211.995 Circulating Fluidized Bed Combustor
211.1010 Clean Air Act
211.1050 Cleaning and Separating Operation
211.1070 Cleaning Materials
211.1090 Clear Coating
211.1110 Clear Topcoat
211.1120 Clinker
211.1130 Closed Purge System
211.1150 Closed Vent System
211.1170 Coal Refuse
211.1190 Coating
211.1210 Coating Applicator
211.1230 Coating Line
211.1250 Coating Plant
211.1270 Coil Coating
211.1290 Coil Coating Line
211.1310 Cold Cleaning
211.1312 Combined Cycle System
211.1315 Combustion Tuning
211.1316 Combustion Turbine
211.1320 Commence Commercial Operation
211.1324 Commence Operation
211.1328 Common Stack
211.1330 Complete Combustion
211.1350 Component
211.1370 Concrete Curing Compounds
211.1390 Concentrated Nitric Acid Manufacturing Process
211.1410 Condensate
211.1430 Condensible PM-10
211.1435 Container Glass
211.1465 Continuous Automatic Stoking
211.1467 Continuous Coater
211.1470 Continuous Process
211.1490 Control Device
211.1510 Control Device Efficiency
211.1515 Control Period

211.2250 Fabric Coating Line
211.2270 Federally Enforceable Limitations and Conditions
211.2285 Feed Mill
211.2290 Fermentation Time
211.2300 Fill
211.2310 Final Repair Coat
211.2330 Firebox
211.2350 Fixed-Roof Tank
211.2355 Flare
211.2357 Flat Glass
211.2360 Flexible Coating
211.2365 Flexible Operation Unit
211.2370 Flexographic Printing
211.2390 Flexographic Printing Line
211.2410 Floating Roof
211.2420 Fossil Fuel
211.2425 Fossil Fuel-Fired
211.2430 Fountain Solution
211.2450 Freeboard Height
211.2470 Fuel Combustion Emission Unit or Fuel Combustion Emission Source
211.2490 Fugitive Particulate Matter
211.2510 Full Operating Flowrate
211.2530 Gas Service
211.2550 Gas/Gas Method
211.2570 Gasoline
211.2590 Gasoline Dispensing Operation or Gasoline Dispensing Facility
211.2610 Gel Coat
211.2620 Generator
211.2625 Glass Melting Furnace
211.2630 Gloss Reducers
211.2650 Grain
211.2670 Grain-Drying Operation
211.2690 Grain-Handling and Conditioning Operation
211.2710 Grain-Handling Operation
211.2730 Green-Tire Spraying
211.2750 Green Tires
211.2770 Gross Heating Value
211.2790 Gross Vehicle Weight Rating
211.2810 Heated Airless Spray
211.2815 Heat Input
211.2820 Heat Input Rate
211.2830 Heatset
211.2850 Heatset Web Offset Lithographic Printing Line
211.2870 Heavy Liquid
211.2890 Heavy Metals
211.2910 Heavy Off-Highway Vehicle Products

211.2930 Heavy Off-Highway Vehicle Products Coating
211.2950 Heavy Off-Highway Vehicle Products Coating Line
211.2970 High Temperature Aluminum Coating
211.2990 High Volume Low Pressure (HVLP) Spray
211.3010 Hood
211.3030 Hot Well
211.3050 Housekeeping Practices
211.3070 Incinerator
211.3090 Indirect Heat Transfer
211.3100 Industrial Boiler
211.3110 Ink
211.3130 In-Process Tank
211.3150 In-Situ Sampling Systems
211.3170 Interior Body Spray Coat
211.3190 Internal-Floating Roof
211.3210 Internal Transferring Area
211.3230 Lacquers
211.3250 Large Appliance
211.3270 Large Appliance Coating
211.3290 Large Appliance Coating Line
211.3300 Lean-Burn Engine
211.3310 Light Liquid
211.3330 Light-Duty Truck
211.3350 Light Oil
211.3355 Lime Kiln
211.3370 Liquid/Gas Method
211.3390 Liquid-Mounted Seal
211.3410 Liquid Service
211.3430 Liquids Dripping
211.3450 Lithographic Printing Line
211.3470 Load-Out Area
211.3475 Load Shaving Unit
211.3480 Loading Event
211.3483 Long Dry Kiln
211.3485 Long Wet Kiln
211.3487 Low-NO_X Burner
211.3490 Low Solvent Coating
211.3500 Lubricating Oil
211.3510 Magnet Wire
211.3530 Magnet Wire Coating
211.3550 Magnet Wire Coating Line
211.3570 Major Dump Pit
211.3590 Major Metropolitan Area (MMA)
211.3610 Major Population Area (MPA)
211.3620 Manually Operated Equipment
211.3630 Manufacturing Process

211.3650 Marine Terminal
211.3660 Marine Vessel
211.3670 Material Recovery Section
211.3690 Maximum Theoretical Emissions
211.3695 Maximum True Vapor Pressure
211.3710 Metal Furniture
211.3730 Metal Furniture Coating
211.3750 Metal Furniture Coating Line
211.3770 Metallic Shoe-Type Seal
211.3780 Mid-Kiln Firing
211.3790 Miscellaneous Fabricated Product Manufacturing Process
211.3810 Miscellaneous Formulation Manufacturing Process
211.3830 Miscellaneous Metal Parts and Products
211.3850 Miscellaneous Metal Parts and Products Coating
211.3870 Miscellaneous Metal Parts or Products Coating Line
211.3890 Miscellaneous Organic Chemical Manufacturing Process
211.3910 Mixing Operation
211.3915 Mobile Equipment
211.3930 Monitor
211.3950 Monomer
211.3960 Motor Vehicles
211.3965 Motor Vehicle Refinishing
211.3970 Multiple Package Coating
211.3980 Nameplate Capacity
211.3990 New Grain-Drying Operation (Repealed)
211.4010 New Grain-Handling Operation (Repealed)
211.4030 No Detectable Volatile Organic Material Emissions
211.4050 Non-Contact Process Water Cooling Tower
211.4055 Non-Flexible Coating
211.4065 Non-Heatset
211.4067 NO_X Trading Program
211.4070 Offset
211.4090 One Hundred Percent Acid
211.4110 One-Turn Storage Space
211.4130 Opacity
211.4150 Opaque Stains
211.4170 Open Top Vapor Degreasing
211.4190 Open-Ended Valve
211.4210 Operator of a Gasoline Dispensing Operation or Operator of a Gasoline Dispensing Facility
211.4230 Organic Compound
211.4250 Organic Material and Organic Materials
211.4260 Organic Solvent
211.4270 Organic Vapor
211.4280 Other Glass
211.4290 Oven

211.4310 Overall Control
211.4330 Overvarnish
211.4350 Owner of a Gasoline Dispensing Operation or Owner of a Gasoline Dispensing Facility
211.4370 Owner or Operator
211.4390 Packaging Rotogravure Printing
211.4410 Packaging Rotogravure Printing Line
211.4430 Pail
211.4450 Paint Manufacturing Source or Paint Manufacturing Plant
211.4470 Paper Coating
211.4490 Paper Coating Line
211.4510 Particulate Matter
211.4530 Parts Per Million (Volume) or PPM (Vol)
211.4550 Person
211.4590 Petroleum
211.4610 Petroleum Liquid
211.4630 Petroleum Refinery
211.4650 Pharmaceutical
211.4670 Pharmaceutical Coating Operation
211.4690 Photochemically Reactive Material
211.4710 Pigmented Coatings
211.4730 Plant
211.4740 Plastic Part
211.4750 Plasticizers
211.4770 PM-10
211.4790 Pneumatic Rubber Tire Manufacture
211.4810 Polybasic Organic Acid Partial Oxidation Manufacturing Process
211.4830 Polyester Resin Material(s)
211.4850 Polyester Resin Products Manufacturing Process
211.4870 Polystyrene Plant
211.4890 Polystyrene Resin
211.4910 Portable Grain-Handling Equipment
211.4930 Portland Cement Manufacturing Process Emission Source
211.4950.1 Portland Cement Process or Portland Cement Manufacturing Plant
211.4960 Potential Electrical Output Capacity
211.4970 Potential to Emit
211.4990 Power Driven Fastener Coating
211.5010 Precoat
211.5015 Preheater Kiln
211.5020 Preheater/Precalciner Kiln
211.5030 Pressure Release
211.5050 Pressure Tank
211.5060 Pressure/Vacuum Relief Valve
211.5061 Pretreatment Wash Primer
211.5065 Primary Product
211.5070 Prime Coat

211.5080 Primer Sealer
211.5090 Primer Surfacer Coat
211.5110 Primer Surfacer Operation
211.5130 Primers
211.5150 Printing
211.5170 Printing Line
211.5185 Process Emission Source
211.5190 Process Emission Unit
211.5195 Process Heater
211.5210 Process Unit
211.5230 Process Unit Shutdown
211.5245 Process Vent
211.5250 Process Weight Rate
211.5270 Production Equipment Exhaust System
211.5310 Publication Rotogravure Printing Line
211.5330 Purged Process Fluid
211.5340 Rated Heat Input Capacity
211.5350 Reactor
211.5370 Reasonably Available Control Technology (RACT)
211.5390 Reclamation System
211.5410 Refiner
211.5430 Refinery Fuel Gas
211.5450 Refinery Fuel Gas System
211.5470 Refinery Unit or Refinery Process Unit
211.5480 Reflective Argent Coating
211.5490 Refrigerated Condenser
211.5500 Regulated Air Pollutant
211.5510 Reid Vapor Pressure
211.5530 Repair
211.5550 Repair Coat
211.5570 Repaired
211.5580 Repowering
211.5590 Residual Fuel Oil
211.5600 Resist Coat
211.5610 Restricted Area
211.5630 Retail Outlet
211.5640 Rich-Burn Engine
211.5650 Ringelmann Chart
211.5670 Roadway
211.5690 Roll Coater
211.5710 Roll Coating
211.5730 Roll Printer
211.5750 Roll Printing
211.5770 Rotogravure Printing
211.5790 Rotogravure Printing Line
211.5810 Safety Relief Valve

211.5830 Sandblasting
211.5850 Sanding Sealers
211.5870 Screening
211.5880 Screen Printing on Paper
211.5890 Sealer
211.5910 Semi-Transparent Stains
211.5930 Sensor
211.5950 Set of Safety Relief Valves
211.5970 Sheet Basecoat
211.5980 Sheet-Fed
211.5990 Shotblasting
211.6010 Side-Seam Spray Coat
211.6025 Single Unit Operation
211.6030 Smoke
211.6050 Smokeless Flare
211.6060 Soft Coat
211.6070 Solvent
211.6090 Solvent Cleaning
211.6110 Solvent Recovery System
211.6130 Source
211.6140 Specialty Coatings
211.6145 Specialty Coatings for Motor Vehicles
211.6150 Specialty High Gloss Catalyzed Coating
211.6170 Specialty Leather
211.6190 Specialty Soybean Crushing Source
211.6210 Splash Loading
211.6230 Stack
211.6250 Stain Coating
211.6270 Standard Conditions
211.6290 Standard Cubic Foot (scf)
211.6310 Start-Up
211.6330 Stationary Emission Source
211.6350 Stationary Emission Unit
211.6355 Stationary Gas Turbine
211.6360 Stationary Reciprocating Internal Combustion Engine
211.6370 Stationary Source
211.6390 Stationary Storage Tank
211.6400 Stencil Coat
211.6410 Storage Tank or Storage Vessel
211.6420 Strippable Spray Booth Coating
211.6430 Styrene Devolatilizer Unit
211.6450 Styrene Recovery Unit
211.6470 Submerged Loading Pipe
211.6490 Substrate
211.6510 Sulfuric Acid Mist
211.6530 Surface Condenser

211.6540 Surface Preparation Materials
211.6550 Synthetic Organic Chemical or Polymer Manufacturing Plant
211.6570 Tablet Coating Operation
211.6580 Texture Coat
211.6590 Thirty-Day Rolling Average
211.6610 Three-Piece Can
211.6620 Three or Four Stage Coating System
211.6630 Through-the-Valve Fill
211.6650 Tooling Resin
211.6670 Topcoat
211.6690 Topcoat Operation
211.6695 Topcoat System
211.6710 Touch-Up
211.6720 Touch-Up Coating
211.6730 Transfer Efficiency
211.6750 Tread End Cementing
211.6770 True Vapor Pressure
211.6790 Turnaround
211.6810 Two-Piece Can
211.6830 Under-the-Cup Fill
211.6850 Undertread Cementing
211.6860 Uniform Finish Blender
211.6870 Unregulated Safety Relief Valve
211.6880 Vacuum Metallizing
211.6890 Vacuum Producing System
211.6910 Vacuum Service
211.6930 Valves Not Externally Regulated
211.6950 Vapor Balance System
211.6970 Vapor Collection System
211.6990 Vapor Control System
211.7010 Vapor-Mounted Primary Seal
211.7030 Vapor Recovery System
211.7050 Vapor-Suppressed Polyester Resin
211.7070 Vinyl Coating
211.7090 Vinyl Coating Line
211.7110 Volatile Organic Liquid (VOL)
211.7130 Volatile Organic Material Content (VOMC)
211.7150 Volatile Organic Material (VOM) or Volatile Organic Compound (VOC)
211.7170 Volatile Petroleum Liquid
211.7190 Wash Coat
211.7200 Washoff Operations
211.7210 Wastewater (Oil/Water) Separator
211.7230 Weak Nitric Acid Manufacturing Process
211.7250 Web
211.7270 Wholesale Purchase - Consumer
211.7290 Wood Furniture

AUTHORITY: Implementing Sections 9, 9.1, 9.9 and 10 and authorized by Sections 27 and 28 of the Environmental Protection Act [415 ILCS 5/9, 9.1, 9.9, 10, 27 and 28].

SOURCE: Adopted as Chapter 2: Air Pollution, Rule 201: Definitions, R71-23, 4 PCB 191, filed and effective April 14, 1972; amended in R74-2 and R75-5, 32 PCB 295, at 3 Ill. Reg. 5, p. 777, effective February 3, 1979; amended in R78-3 and 4, 35 PCB 75 and 243, at 3 Ill. Reg. 30, p. 124, effective July 28, 1979; amended in R80-5, at 7 Ill. Reg. 1244, effective January 21, 1983; codified at 7 Ill. Reg. 13590; amended in R82-1 (Docket A) at 10 Ill. Reg. 12624, effective July 7, 1986; amended in R85-21(A) at 11 Ill. Reg. 11747, effective June 29, 1987; amended in R86-34 at 11 Ill. Reg. 12267, effective July 10, 1987; amended in R86-39 at 11 Ill. Reg. 20804, effective December 14, 1987; amended in R82-14 and R86-37 at 12 Ill. Reg. 787, effective December 24, 1987; amended in R86-18 at 12 Ill. Reg. 7284, effective April 8, 1988; amended in R86-10 at 12 Ill. Reg. 7621, effective April 11, 1988; amended in R88-23 at 13 Ill. Reg. 10862, effective June 27, 1989; amended in R89-8 at 13 Ill. Reg. 17457, effective January 1, 1990; amended in R89-16(A) at 14 Ill. Reg. 9141, effective May 23, 1990; amended in R88-30(B) at 15 Ill. Reg. 5223, effective March 28, 1991; amended in R88-14 at 15 Ill. Reg. 7901, effective May 14, 1991; amended in R91-10 at 15 Ill. Reg. 15564, effective October 11, 1991; amended in R91-6 at 15 Ill. Reg. 15673, effective October 14, 1991; amended in R91-22 at 16 Ill. Reg. 7656, effective May 1, 1992; amended in R91-24 at 16 Ill. Reg. 13526, effective August 24, 1992; amended in R93-9 at 17 Ill. Reg. 16504, effective September 27, 1993; amended in R93-11 at 17 Ill. Reg. 21471, effective December 7, 1993; amended in R93-14 at 18 Ill. Reg. 1253, effective January 18, 1994; amended in R94-12 at 18 Ill. Reg. 14962, effective September 21, 1994; amended in R94-14 at 18 Ill. Reg. 15744, effective October 17, 1994; amended in R94-15 at 18 Ill. Reg. 16379, effective October 25, 1994; amended in R94-16 at 18 Ill. Reg. 16929, effective November 15, 1994; amended in R94-21, R94-31 and R94-32 at 19 Ill. Reg. 6823, effective May 9, 1995; amended in R94-33 at 19 Ill. Reg. 7344, effective May 22, 1995; amended in R95-2 at 19 Ill. Reg. 11066, effective July 12, 1995; amended in R95-16 at 19 Ill. Reg. 15176, effective October 19, 1995; amended in R96-5 at 20 Ill. Reg. 7590, effective May 22, 1996; amended in R96-16 at 21 Ill. Reg. 2641, effective February 7, 1997; amended in R97-17 at 21 Ill. Reg. 6489, effective May 16, 1997; amended in R97-24 at 21 Ill. Reg. 7695, effective June 9, 1997; amended in R96-17 at 21 Ill. Reg. 7856, effective June 17, 1997; amended in R97-31 at 22 Ill. Reg. 3497, effective February 2, 1998; amended in R98-17 at 22 Ill. Reg.11405, effective June 22, 1998; amended in R01-9 at 25 Ill. Reg. 128, effective December 26, 2000; amended in R01-11 at 25 Ill. Reg. 4597, effective March 15, 2001; amended in R01-17 at 25 Ill. Reg. 5900, effective April 17, 2001; amended in R05-16 at 29 Ill. Reg. 8181, effective May 23, 2005; amended in R05-11 at 29 Ill. Reg.8892, effective June 13, 2005; amended in R04-12/20 at 30 Ill. Reg. 9654, effective May 15, 2006; amended in R07-18 at 31 Ill. Reg. 14254,

effective September 25, 2007; amended in R08-19 at 33 Ill. Reg. ____, effective _____.

Section 211.665 Auxiliary Boiler

"Auxiliary boiler" means, for purposes of Part 217, a boiler that is operated only when the main boiler or boilers at a source are not in service and is used either to maintain building heat or to assist in the startup of the main boiler or boilers. This term does not include emergency or standby units and load shaving units.

(Source: Added at 33 Ill. Reg. _____, effective _____)

Section 211.995 Circulating Fluidized Bed Combustor

"Circulating fluidized bed combustor" means, for purposes of Part 217, a fluidized bed combustor in which the majority of the fluidized bed material is carried out of the primary combustion zone and is transported back to the primary zone through a recirculation loop.

(Source: Added at 33 Ill. Reg. _____, effective _____)

Section 211.1315 Combustion Tuning

"Combustion tuning" means, for purposes of Part 217, review and adjustment of a combustion process to maintain combustion efficiency of an emission unit, as performed in accordance with procedures provided by the manufacturer or by a trained technician.

(Source: Added at 33 Ill. Reg. _____, effective _____)

Section 211.1435 Container Glass

"Container glass" means, for purposes of Part 217, glass made of soda-lime recipe, clear or colored, which is pressed or blown, or both, into bottles, jars, ampoules, and other products listed in Standard Industrial Classification 3221.

(Source: Added at 33 Ill. Reg. _____, effective _____)

Section 211.2355 Flare

"Flare" means an open combustor without enclosure or shroud.

(Source: Added at 33 Ill. Reg. _____, effective _____)

Section 211.2357 Flat Glass

"Flat glass" means, for purposes of Part 217, glass made of soda-lime recipe and produced into continuous flat sheets and other products listed in Standard Industrial Classification 3211.

(Source: Added at 33 Ill. Reg. _____, effective _____)

Section 211.2625 Glass Melting Furnace

"Glass melting furnace" means, for purposes of Part 217, a unit comprising a refractory vessel in which raw materials are charged and melted at high temperature to produce molten glass.

(Source: Added at 33 Ill. Reg. _____, effective _____)

Section 211.3100 Industrial Boiler

"Industrial boiler" means, for purposes of Part 217, an enclosed vessel in which water is heated and circulated either as hot water or as steam for heating or for power, or both. This term does not include a heat recovery steam generator that captures waste heat from a combustion turbine and boilers serving a generator that has a nameplate capacity greater than 25 MWe and produces electricity for sale, and cogeneration units, if such boilers meet the applicability criteria under Subpart M of Part 217.

(Source: Added at 33 Ill. Reg. _____, effective _____)

Section 211.3355 Lime Kiln

"Lime kiln" means, for purposes of Part 217, an enclosed combustion device used to calcine lime mud, which consists primarily of calcium carbonate, into calcium oxide.

(Source: Added at 33 Ill. Reg. _____, effective _____)

Section 211.3475 Load Shaving Unit

"Load shaving unit" means, for purposes of Part 217, a device used to generate electricity for sale or use during high electric demand days, including but not limited to stationary reciprocating internal combustion engines or turbines.

(Source: Added at 33 Ill. Reg. _____, effective _____)

Section 211.4280 Other Glass

"Other glass" means, for purposes of Part 217, glass that is neither container glass, as that term is defined in Section 211.1435, nor flat glass, as that term is defined in Section 211.2357.

(Source: Added at 33 Ill. Reg. _____, effective _____)

Section 211.5195 Process Heater

"Process heater" means, for purposes of Part 217, an enclosed combustion device that burns gaseous or liquid fuels only and that indirectly transfers heat to a process fluid or a heat transfer medium other than water. This term does not include pipeline heaters and storage tank heaters that are primarily meant to maintain fluids at a certain temperature or viscosity.

(Source: Added at 33 Ill. Reg. _____, effective _____)

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE B: AIR POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER C: EMISSION STANDARDS AND LIMITATIONS FOR STATIONARY SOURCES

PART 217
NITROGEN OXIDES EMISSIONS

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SUBPART X: VOLUNTARY NO_X EMISSIONS REDUCTION PROGRAM

Authority: Implementing Sections 9.9 and 10 and authorized by Sections 27 and 28 of the Environmental Protection Act [415 ILCS 5/9.9, 10, 27 and 28].

Source: Adopted as Chapter 2: Air Pollution, Rule 207: Nitrogen Oxides Emissions, R71-23, 4 PCB 191, April 13, 1972, filed and effective April 14, 1972; amended at 2 Ill. Reg. 17, p. 101, effective April 13, 1978; codified at 7 Ill. Reg. 13609; amended in R01-9 at 25 Ill. Reg. 128, effective December 26, 2000; amended in R01-11 at 25 Ill. Reg. 4597, effective March 15, 2001; amended in R01-16 and R01-17 at 25 Ill. Reg. 5914, effective April 17, 2001; amended in R07-18 at 31 Ill. Reg. 14254, effective September 25, 2007; amended in R08-19 at 33 Ill. Reg. ____, effective _____.

SUBPART A: GENERAL PROVISIONS

Section 217.100 Scope and Organization

a) This Part sets standards and limitations for emission of oxides of nitrogen from stationary sources.

b) Permits for sources subject to this Part may be required pursuant to 35 Ill. Adm. Code 201 or Section 39.5 of the Act.

c) Notwithstanding the provisions of this Part the air quality standards contained in 35 Ill. Adm. Code 243 may not be violated.

d) These rules have been grouped for convenience of the public; the scope of each is determined by its language and history.

(Source: Amended at 33 Ill. Reg. _____, effective _____)

Section 217.104 Incorporations by Reference

The following materials are incorporated by reference. These incorporations do not include any later amendments or editions.

a) The phenol disulfonic acid procedures, as published in 40 CFR 60, Appendix A, Method 7 (2000);

b) 40 CFR 96, subparts B, D, G, and H (1999);

c) 40 CFR 96.1 through 96.3, 96.5 through 96.7, 96.50 through 96.54, 96.55 (a) & (b), 96.56 and 96.57 (1999);

d) 40 CFR 60, 72, 75 & 76 (2006);

e) Alternative Control Techniques Document -- NO_x Emissions from Cement Manufacturing, EPA-453/R-94-004, U. S. Environmental Protection Agency-Office of Air Quality Planning and Standards, Research Triangle Park, N. C. 27711, March 1994;

f) Section 11.6, Portland Cement Manufacturing, AP-42 Compilation of Air Emission Factors, Volume 1: Stationary Point and Area Sources, U.S. Environmental Protection Agency-Office of Air Quality Planning and Standards, Research Triangle Park, N. C. 27711, revised January 1995;

g) 40 CFR 60.13 (2001);

h) 40 CFR 60, Appendix A, Methods 3A, 7, 7A, 7C, 7D, 7E, 19, and 20 (2000);

i) ASTM D6522-00, Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers (2000);

j~~k~~) Standards of Performance for Stationary Combustion Turbines, 40 CFR 60, Subpart KKKK, 60.4400 (2006); ~~and~~

k~~l~~) Compilation of Air Pollutant Emission Factors: AP-42, Volume I: Stationary Point and Area Sources (2000), USEPA;~~.~~

l) 40 CFR 60, Appendix A, Methods 1, 2, 3, and 4 (2007);

m) Alternative Control Techniques Document--NO_x Emissions from Industrial/Commercial/Institutional (ICI) Boilers, EPA-453/R-94-022, U. S. Environmental Protection Agency, Office of Air and Radiation, Office of Air Quality Planning and Standards, Research Triangle Park, N. C. 27711, March 1994;

n) Alternative Control Techniques Document--NO_x Emissions from Process Heaters (Revised), EPA-453/R-93-034, U. S. Environmental Protection Agency, Office of Air and Radiation, Office of Air Quality Planning and Standards, Research Triangle Park, N. C. 27711, September 1993;

o) Alternative Control Techniques Document--NO_x Emissions from Glass Manufacturing, EPA-453/R-94-037, U. S. Environmental Protection Agency, Office of Air and Radiation, Office of Air Quality Planning and Standards, Research Triangle Park, N. C. 27711, June 1994; and

p) Alternative Control Techniques Document--NO_x Emissions from Iron and Steel Mills, EPA-453/R-94-065, U. S. Environmental Protection Agency, Office of Air and Radiation, Office of Air Quality Planning and Standards, Research Triangle Park, N. C. 27711, September 1994.

(Source: Amended at 33 Ill. Reg. _____, effective _____)

SUBPART B: NEW FUEL COMBUSTION EMISSION SOURCES (Repealed)

Section 217.121 New Emission Sources (Repealed)

~~No person shall cause or allow the emission of nitrogen oxides (NO_X) into the atmosphere in any one hour period from any new fuel combustion emission source with an actual heat input equal to or greater than 73.2 MW (250 mmbtu/hr) to exceed the following standards and limitations:~~

~~a) For gaseous fossil fuel firing, 0.310 kg/MW-hr (0.20 lbs/mmbtu) of actual heat input;~~

~~b) For liquid fossil fuel firing, 0.464 kg/MW-hr (0.30 lbs/mmbtu) of actual heat input;~~

~~c) For dual gaseous and liquid fossil fuel firing, 0.464 kg/MW-hr (0.30 lbs/mmbtu) of actual heat input;~~

~~d) For solid fossil fuel firing, 1.08 kg/MW-hr (0.7 lbs./mmbtu) of actual heat input;~~

~~e) For fuel combustion emission sources burning simultaneously any combination of solid, liquid and gaseous fossil fuels, an allowable emission rate shall be determined by the following equation:~~

~~$E = (AG + BL + CS) Q$~~

~~Where:~~

~~E = Allowable nitrogen oxides emissions rate~~

~~Q = Actual heat input derived from all fossil fuels~~

~~G = Percent of actual heat input derived from gaseous fossil fuel~~

~~L = Percent of actual heat input derived from liquid fossil fuel~~

~~S = Percent of actual heat input derived from solid fossil fuel~~

~~G + L + S = 100.0~~

~~and, where A, B, C and appropriate metric and English units are determined from the following table:~~

	~~Metric~~	~~English~~
~~E~~	~~kg/hr~~	~~lbs/hr~~
~~Q~~	~~MW~~	~~mmbtu/hr~~
~~A~~	~~0.023~~	~~0.003~~
~~B~~	~~0.023~~	~~0.003~~
~~C~~	~~0.053~~	~~0.007~~

(Source: Repealed at 33 Ill. Reg. _____, effective _____)

SUBPART B ~~C~~: EXISTING FUEL COMBUSTION EMISSION UNITS ~~SOURCES~~

Section 217.141 Existing Emission Units ~~Sources~~ in Major Metropolitan Areas

No person shall cause or allow the emission of nitrogen oxides into the atmosphere in any one hour period from any existing fuel combustion emission unit ~~source~~ with an actual heat input equal to or greater than 73.2 MW (250 mmbtu/hr), located in the Chicago or St. Louis (Illinois) major metropolitan areas to exceed the following limitations:

a) For gaseous and/or liquid fossil fuel firing, 0.46 kg/MW-hr (0.3 lbs/mmbtu) of actual heat input;

b) For solid fossil fuel firing, 1.39 kg/MW-hr (0.9 lbs/mmbtu) of actual heat input;

c) For fuel combustion emission units ~~sources~~ burning simultaneously any combination of solid, liquid and gaseous fuel, the allowable emission rate shall be determined by the following equation:

$$E = (AG + BL + CS) Q$$

Where:

E = allowable nitrogen oxides emissions
Q = actual heat input
G = percent of actual heat input derived from gaseous fossil fuel
L = percent of actual heat input derived from liquid fossil fuel
S = percent of actual heat input derived from solid fossil fuel
G + L + S = 100.0

and, where A, B, C and appropriate metric and English units are determined from the following table:

	Metric	English
E	kg/hr	lbs/hr
Q	MW	mmbtu/hr
A	0.023	0.003
B	0.023	0.003
C	0.068	0.009

d) Exceptions: This Section ~~rule~~ shall not apply to the following:

1) Existing ~~existing~~ fuel combustion units ~~sources~~ which are either cyclone fired boilers burning solid or liquid fuel, or horizontally opposed fired boilers burning solid fuel ; or~~.~~

2) Emission units that are subject to the emissions limitations of Subpart D, E, F, G, H, M, or Q of this Part.

(Source: Amended at 33 Ill. Reg. _____, effective _____)

SUBPART C: NO_x GENERAL REQUIREMENTS

Section 217.150 Applicability

a) The provisions of this Subpart and Subparts D, E, F, G, H, and M of this Part apply to the following:

1) All sources that are located in either one of the following areas and that emit or have the potential to emit NO_x in an amount equal to or greater than 100 tons per year:

A) The area composed of the Chicago area counties of Cook, DuPage, Kane, Lake, McHenry, and Will, the Townships of Aux Sable and Goose Lake in Grundy County, and the Township of Oswego in Kendall County; or

B) The area composed of the Metro East area counties of Jersey, Madison, Monroe, and St. Clair, and the Township of Baldwin in Randolph County; and

2) Any industrial boiler, process heater, glass melting furnace, cement kiln, lime kiln, iron and steel reheat, annealing, or galvanizing furnace, aluminum reverberatory or crucible furnace, or fossil fuel-fired stationary boiler at such sources described in subsection (a)(1) of this Section that emits NO_x in an amount equal to or greater than 15 tons per year and equal to or greater than five tons per ozone season.

3) For purposes of this Section, "potential to emit" means the quantity of NO_x that potentially could be emitted by a stationary source before add-on controls based on the design capacity or maximum production capacity of the source and 8,760 hours per year or the quantity of NO_x that potentially could be emitted by a stationary source as established in a federally enforceable permit.

b) If a source ceases to fulfill the emissions criteria of subsection (a) of this Section, the requirements of this Subpart and Subpart D, E, F, G, H, or M of this Part continue to apply to any emission unit that was ever subject to the provisions of Subpart D, E, F, G, H, or M of this Part.

c) The provisions of this Subpart do not apply to afterburners, flares, and incinerators.

d) Where a construction permit, for which the application was submitted to the Agency prior to the adoption of this Subpart, is issued that relies on decreases in emissions of NO_x from existing emission units for purposes of netting or emission offsets, such NO_x decreases remain creditable notwithstanding any requirements that may apply to the existing emission units pursuant to this Subpart and Subpart D, E, F, G, H, or M of this Part .

e) The owner or operator of an emission unit that is subject to this Subpart and Subpart D, E, F, G, H, or M of this Part must operate such unit in a manner consistent with good air pollution control practice to minimize NO_x emissions.

(Source: Added at 33 Ill. Reg. _____, effective _____)

Section 217.152 Compliance Date

a) Compliance with the requirements of Subparts D, E, F, G, H, and M by an owner or operator of an emission unit that is subject to Subpart D, E, F, G, H, or M is required beginning January 1, 2012.

b) Notwithstanding subsection (a) of this Section, compliance with the requirements of Subpart F of this Part by an owner or operator of an emission unit subject to Subpart F of this Part shall be extended until December 31, 2014, if such units are required to meet emissions limitations for NOx, as measured using a continuous emissions monitoring system, and included within a legally enforceable order on or before December 31, 2009, whereby such emissions limitations are less than 30 percent of the emissions limitations set forth under Section 217.204 of Subpart F of this Part.

c) Notwithstanding subsection (a) of this Section, the owner or operator of emission units subject to Subpart D or E of this Part and located at a petroleum refinery must comply with the requirements of this Subpart and Subpart D or E of this Part,

as applicable, for those emission units beginning January 1, 2012, except that the owner or operator of emission units listed in Appendix H must comply with the requirements of this Subpart, including the option of demonstrating compliance with the applicable Subpart through an emissions averaging plan under Section 217.158 of this Subpart, and Subpart D or E of this Part, as applicable, for the listed emission units beginning on the dates set forth in Appendix H. With Agency approval, the owner or operator of emission units listed in Appendix H may elect to comply with the requirements of this Subpart and Subpart D or E of this Part, as applicable, by reducing the emissions of emission units other than those listed in Appendix H, provided that the emissions limitations of such other emission units are equal to or more stringent than the applicable emissions limitations set forth in Subpart D or E of this Part, as applicable, by the dates set forth in Appendix H.

(Source: Added at 33 Ill. Reg. _____, effective _____)

Section 217.154 Performance Testing

a) Performance testing of NO_x emissions for emission units constructed on or before July 1, 2011, and subject to Subpart D, E, F, G, or H of this Part must be conducted in accordance with Section 217.157 of this Subpart. This subsection does not apply to owners and operators of emission units demonstrating compliance through a continuous emissions monitoring system.

b) Performance testing of NO_x emissions for emission units for which construction or modification occurs after July 1, 2011, and that are subject to Subpart D, E, F, G, or H of this Part must be conducted within 60 days of achieving maximum operating rate but no later than 180 days after initial startup of the new or modified emission unit, in accordance with Section 217.157 of this Subpart. This subsection does not apply to owners and operators of emission units demonstrating compliance through a continuous emissions monitoring system.

c) Notification of the initial startup of an emission unit subject to subsection (b) of this Section must be provided to the Agency no later than 30 days after initial startup.

d) The owner or operator of an emission unit subject to subsection (a) or (b) of this Section must notify the Agency of the scheduled date for the performance testing at least 30 days in writing before such date and five days before such date.

e) If demonstrating compliance through an emissions averaging plan, at least 30 days before changing the method of compliance, the owner or operator of an emission unit must submit a written notification to the Agency describing the new method of compliance, the reason for the change in the method of compliance, and the scheduled date for performance testing, if required. Upon changing the method of compliance, the owner or operator of an emission unit must submit to

the Agency a revised compliance certification that meets the requirements of Section 217.155 of this Subpart.

(Source: Added at 33 Ill. Reg. ____, effective _____)

Section 217.155 Initial Compliance Certification

a) By the applicable compliance date set forth under Section 217.152 of this Subpart, an owner or operator of an emission unit subject to Subpart D, E, F, G, or H of this Part who is not demonstrating compliance through the use of a continuous emissions monitoring system must certify to the Agency that the emission unit will be in compliance with the applicable emissions limitation of Subpart D, E, F, G, or H of this Part beginning on such applicable compliance date. The performance testing certification must include the results of the performance testing performed in accordance with Sections 217.154(a) and (b) of this Subpart and the calculations necessary to demonstrate that the subject emission unit will be in initial compliance.

b) By the applicable compliance date set forth under Section 217.152 of this Subpart, an owner or operator of an emission unit subject to Subpart D, E, F, G, H, or M of this Part who is demonstrating compliance through the use of a continuous emissions monitoring system must certify to the Agency that the affected emission units will be in compliance with the applicable emissions limitation of Subpart D, E, F, G, H, or M of this Part beginning on such applicable compliance date. The compliance certification must include a certification of the installation and operation of a continuous emissions monitoring system required under Section 217.157 of this Subpart and the monitoring data necessary to demonstrate that the subject emission unit will be in initial compliance.

(Source: Added at 33 Ill. Reg. ____, effective _____)

Section 217.156 Recordkeeping and Reporting

a) The owner or operator of an emission unit subject to Subpart D, E, F, G, H, or M of this Part must keep and maintain all records used to demonstrate initial compliance and ongoing compliance with the requirements of those Subparts.

1) Except as otherwise provided under this Subpart or Subpart D, E, F, G, H, or M of this Part, copies of such records must be submitted by the owner or operator of the source to the Agency within 30 days after receipt of a written request by the Agency.

2) Such records must be kept at the source and maintained for at least five years and must be available for immediate inspection and copying by the Agency.

b) The owner or operator of an emission unit subject to Subpart D, E, F, G, H, or M of this Part must maintain records that demonstrate compliance with the requirements of Subpart D, E, F, G, H, or M, as applicable, that include the following:

1) Identification, type (e.g., gas-fired), and location of each unit.

2) Calendar date of the record.

3) Monthly, seasonal, and annual operating hours.

4) Type and quantity of each fuel used monthly, seasonally, and annually.

5) Product and material throughput, as applicable.

6) Reports for all applicable emissions tests for NO_x conducted on the unit, including results.

7) The date, time, and duration of any startup, shutdown, or malfunction in the operation of any emission unit subject to Subpart D, E, F, G, H, or M of this Part or any emissions monitoring equipment. The records must include a description of the malfunction and corrective maintenance activity.

8) A log of all maintenance and inspections related to the unit's air pollution control equipment for NO_x that is performed on the unit.

9) A log for the NO_x monitoring device, if present, including periods when not in service and maintenance and inspection activities that are performed on the device.

10) Identification of time periods for which operating conditions and pollutant data were not obtained by the continuous emissions monitoring system including the reasons for not obtaining sufficient data and a description of corrective actions taken.

11) If complying with the emissions averaging plan provisions of Section 217.158 of this Subpart, copies of the calculations used to demonstrate compliance with the ozone season and annual control period limitations, noncompliance reports for the ozone season, and ozone and annual control period compliance reports submitted to the Agency.

c) The owner or operator of an industrial boiler subject to Subpart D of this Part must maintain records in order to demonstrate compliance with the combustion tuning requirements under Section 217.166 of this Part.

d) The owner or operator of a process heater subject to Subpart E of this Part must maintain records in order to demonstrate compliance with the combustion tuning requirements under Section 217.186 of this Part.

e) The owner or operator of an emission unit subject to Subpart D, E, F, G, H, or M of this Part must maintain records in order to demonstrate compliance with the testing and monitoring requirements under Section 217.157 of this Subpart.

f) The owner or operator of an emission unit subject to Subpart D, E, F, G, or H of this Part must provide the following information with respect to performance testing pursuant to Section 217.157:

1) Submit a testing protocol to the Agency at least 60 days prior to testing;

2) Notify the Agency at least 30 days in writing prior to conducting performance testing for NO_x emissions and five days prior to such testing;

3) Not later than 60 days after the completion of the test, submit the results of the test to the Agency; and

4) If, after the 30-days' notice for an initially scheduled test is sent, there is a delay (e.g., due to operational problems) in conducting the test as scheduled, the owner or operator of the unit must notify the Agency as soon as practicable of the delay in the original test date, either by providing at least seven days' prior notice of the rescheduled date of the test or by arranging a new test date with the Agency by mutual agreement.

g) The owner or operator of an emission unit subject to Subpart D, E, F, G, H, or M of this Part must notify the Agency of any exceedances of an applicable emissions limitation of Subpart D, E, F, G, H, or M of this Part by sending the applicable report with an explanation of the causes of such exceedances to the Agency within 30 days following the end of the applicable compliance period in which the emissions limitation was not met.

h) Within 30 days of the receipt of a written request by the Agency, the owner or operator of an emission unit that is exempt from the requirements of Subpart D, E, F, G, H, or M of this Part must submit records that document that the emission unit is exempt from those requirements to the Agency.

i) If demonstrating compliance through an emissions averaging plan, by March 1 following the applicable calendar year, the owner or operator must submit to the Agency a report that demonstrates the following:

1) For all units that are part of the emissions averaging plan, the total mass of allowable NO_X emissions for the ozone season and for the annual control

period;

2) The total mass of actual NO_X emissions for the ozone season and annual control period for each unit included in the averaging plan;

3) The calculations that demonstrate that the total mass of actual NO_X emissions are less than the total mass of allowable NO_X emissions using equations in Section 217.158(f) of this Subpart; and

4) The information required to determine the total mass of actual NO_X emissions.

j) The owner or operator of an emission unit subject to the requirements of Section 217.157 of this Subpart and demonstrating compliance through the use of a continuous emissions monitoring system must submit to the Agency a report within 30 days after the end of each calendar quarter. This report must include the following:

1) Information identifying and explaining the times and dates when continuous emissions monitoring for NO_x was not in operation, other than for purposes of calibrating or performing quality assurance or quality control activities for the monitoring equipment; and

2) An excess emissions and monitoring systems performance report in accordance with the requirements of 40 CFR 60.7(c) and (d) and 60.13, or 40 CFR Part 75, or an alternate procedure approved by the Agency and USEPA.

k) The owner or operator of an emission unit subject to Subpart M of this Part must comply with the compliance certification and recordkeeping and reporting requirements in accordance with 40 CFR Part 96, or an alternate procedure approved by the Agency and USEPA.

(Source: Added at 33 Ill. Reg. ____, effective _____)

Section 217.157 Testing and Monitoring

a) Industrial Boilers and Process Heaters

1) The owner or operator of an industrial boiler subject to Subpart D of this Part with a rated heat input capacity greater than 250 mmBtu/hr must install, calibrate, maintain, and operate a continuous emissions monitoring system on the emission unit for the measurement of NO_x emissions discharged into the atmosphere in accordance with 40 CFR Part 75, as incorporated by reference in Section 217.104 of this Part.

2) The owner or operator of an industrial boiler subject to Subpart D of this Part with a rated heat input capacity greater than 100 mmBtu/hr but less than or equal to 250 mmBtu/hr must install, calibrate, maintain, and operate a continuous emissions monitoring system on such emission unit for the measurement of NO_x emissions discharged into the atmosphere in accordance with 40 CFR Part 60, Subpart A, and Appendix B, Performance Specifications 2 and 3, and Appendix F, Quality Assurance Procedures, as incorporated by reference in Section 217.104 of this Part.

3) The owner or operator of a process heater subject to Subpart E of this Part with a rated heat input capacity greater than 100 mmBtu/hr must install, calibrate, maintain, and operate a continuous emissions monitoring system on the emission unit for the measurement of NO_x emissions discharged into the atmosphere must monitor emissions of NO_x discharged into the atmosphere in accordance with 40 CFR Part 60, Subpart A, and Appendix B, Performance Specifications 2 and 3, and Appendix F, Quality Assurance Procedures, as incorporated by reference in Section 217.104 of this Part.

4) If demonstrating compliance through an emissions averaging plan, the owner or operator of an industrial boiler subject to Subpart D of this Part, or a process heater subject to Subpart E of this Part, with a rated heat input capacity less than or equal to 100 mmBtu/hr and not demonstrating compliance through a continuous emissions monitoring system must have an initial performance test conducted pursuant to subsection (a)(4)(B) of this Section and Section 217.154 of this Subpart.

A) An owner or operator of an industrial boiler or process heater must have subsequent performance tests conducted pursuant to subsection (a)(4)(B) of this Section at least once every five years. When in the opinion of the Agency or USEPA, it is necessary to conduct testing to demonstrate compliance with Section 217.164 or 217.184, as applicable, of this Part, the owner or operator of an industrial boiler or process heater must, at his or her own expense, have such test conducted in accordance with the applicable test methods and procedures specified in this Section within 90 days of receipt of a notice to test from the Agency or USEPA.

B) The owner or operator of an industrial boiler or process heater must have a performance test conducted using 40 CFR Part 60, Subpart A, and Appendix A, Method 1, 2, 3, 4, 7E, or 19, as incorporated by reference in Section 217.104 of this Part, or other alternative USEPA methods approved by the Agency. Each performance test must consist of three separate runs, each lasting a minimum of 60 minutes. NO_x emissions must be measured while the industrial boiler is operating at maximum operating capacity or

while the process heater is operating at normal maximum load. If the industrial boiler or process heater has combusted more than one type of fuel in the prior year, a separate performance test is required for each fuel. If a combination of fuels is typically used, a performance test may be conducted with Agency approval on such combination of fuels typically used. Except as provided under subsection (e) of this Section, this subsection (a)(4)(B) of this Section does not apply if such owner or operator is demonstrating compliance with an emissions limitation through a continuous emissions monitoring system under subsection (a)(1), (a)(2), (a)(3), or (a)(5) of this Section.

5) Instead of complying with the requirements of subsections (a)(4), (a)(4)(A), and (a)(4)(B) of this Section, an owner or operator of an industrial boiler subject to Subpart D of this Part, or a process heater subject to Subpart E of this Part, with a rated heat input capacity less than or equal to 100 mmBtu/hr may install and operate a continuous emissions monitoring system on such emission unit in accordance with the applicable requirements of 40 CFR Part 60, Subpart A, and Appendix B, Performance Specifications 2 and 3, and Appendix F, Quality Assurance Procedures, as incorporated by reference in Section 217.104 of this Part. The continuous emissions monitoring system must be used to demonstrate compliance with the applicable emissions limitation or emissions averaging plan on an ozone season and annual basis.

6) Notwithstanding subsection (a)(2) of this Section, the owner or operator of an auxiliary boiler subject to Subpart D of this Part with a rated heat input capacity less than or equal to 250 mmBtu/hr and a capacity factor of less than or equal to 20% is not required to install, calibrate, maintain, and operate a continuous emissions monitoring system on such boiler for the measurement of NO_x emissions discharged into the atmosphere, but must comply with the performance test requirements under subsections (a)(4), (a)(4)(A), and (a)(4)(B) of this Section.

b) Glass Melting Furnaces; Cement Kilns; Lime Kilns; Iron and Steel Reheat, Annealing, and Galvanizing Furnaces; and Aluminum Reverberatory and Crucible Furnaces

1) An owner or operator of a glass melting furnace subject to Subpart F of this Part, cement kiln or lime kiln subject to Subpart G of this Part, iron and steel reheat, annealing, or galvanizing furnace subject to Subpart H of this Part, or aluminum reverberatory or crucible furnace subject to Subpart H of this Part that has the potential to emit NO_x in an amount equal to or greater than one ton per day must install, calibrate, maintain, and operate a continuous emissions monitoring system on such emission unit for the measurement of NO_x emissions discharged into the atmosphere in

accordance with 40 CFR Part 60, Subpart A, and Appendix B, Performance Specifications 2 and 3, and Appendix F, Quality Assurance Procedures, as incorporated by reference in Section 217.104 of this Part.

2) An owner or operator of a glass melting furnace subject to Subpart F of this Part, cement kiln or lime kiln subject to Subpart G of this Part, iron and steel reheat, annealing, or galvanizing furnace subject to Subpart H of this Part, or aluminum reverberatory or crucible furnace subject to Subpart H of this Part that has the potential to emit NO_x in an amount less than one ton per day must have an initial performance test conducted pursuant to subsection (b)(4) of this Section and Section 217.154 of this Subpart.

3) An owner or operator of a glass melting furnace subject to Subpart F of this Part, cement kiln or lime kiln subject to Subpart G of this Part, iron and steel reheat, annealing, galvanizing furnace subject to Subpart H of this Part, or aluminum reverberatory or crucible furnace subject to Subpart H of this Part that has the potential to emit NO_x in an amount less than one ton per day must have subsequent performance tests conducted pursuant to subsection (b)(4) of this Section as follows:

A) For all glass melting furnaces subject to Subpart F of this Part, cement kilns or lime kilns subject to Subpart G of this Part, iron and steel reheat, annealing, or galvanizing furnace subject to Subpart H of this Part, or aluminum reverberatory or crucible furnaces subject to Subpart H of this Part, including all such units included in an emissions averaging plan, at least once every five years; and

B) When in the opinion of the Agency or USEPA, it is necessary to conduct testing to demonstrate compliance with Section 217.204, 217.224, or 217.244, of this Part, as applicable, the owner or operator of a glass melting furnace, cement kiln, lime kiln, iron and steel reheat, annealing, or galvanizing furnace, or aluminum reverberatory or crucible furnace must, at his or her own expense, have such test conducted in accordance with the applicable test methods and procedures specified in this Section within 90 days of receipt of a notice to test from the Agency or USEPA.

4) The owner or operator of a glass melting furnace, cement kiln, or lime kiln must have a performance test conducted using 40 CFR Part 60, Subpart A, and Appendix A, Methods 1, 2, 3, 4, and 7E, as incorporated by reference in Section 217.104 of this Part, or other alternative USEPA methods approved by the Agency. The owner or operator of an iron and steel reheat, annealing, or galvanizing furnace, or aluminum reverberatory or crucible furnace must have a performance test conducted using 40 CFR Part 60, Subpart A, and Appendix A, Method 1, 2, 3, 4, 7E, or 19, as

incorporated by reference in Section 217.104 of this Part, or other alternative USEPA methods approved by the Agency. Each performance test must consist of three separate runs, each lasting a minimum of 60 minutes. NO_x emissions must be measured while the glass melting furnace, cement kiln, lime kiln, iron and steel reheat, annealing, or galvanizing furnace, or aluminum reverberatory or crucible furnace is operating at maximum operating capacity. If the glass melting furnace, cement kiln, lime kiln, iron and steel reheat, annealing, or galvanizing furnace, or aluminum reverberatory or crucible furnace has combusted more than one type of fuel in the prior year, a separate performance test is required for each fuel. Except as provided under subsection (e) of this Section, this subsection (b)(4) of this Section does not apply if such owner or operator is demonstrating compliance with an emissions limitation through a continuous emissions monitoring system under subsection (b)(1) or (b)(5) of this Section.

5) Instead of complying with the requirements of subsections (b)(2), (b)(3), and (b)(4) of this Section, an owner or operator of a glass melting furnace subject to Subpart F of this Part, cement kiln or lime kiln subject to Subpart G of this Part, iron and steel reheat, annealing, or galvanizing furnace subject to Subpart H of this Part, or aluminum reverberatory or crucible furnace subject to Subpart H of this Part that has the potential to emit NO_x in an amount less than one ton per day may install and operate a continuous emissions monitoring system on such emission unit in accordance with the applicable requirements of 40 CFR Part 60, Subpart A, and Appendix B, Performance Specifications 2 and 3, and Appendix F, Quality Assurance Procedures, as incorporated by reference in Section 217.104 of this Part. The continuous emissions monitoring system must be used to demonstrate compliance with the applicable emissions limitation or emissions averaging plan on an ozone season and annual basis.

c) Fossil Fuel-Fired Stationary Boilers. The owner or operator of a fossil fuel-fired stationary boiler subject to Subpart M of this Part must install, calibrate, maintain, and operate a continuous emissions monitoring system on such emission unit for the measurement of NO_x emissions discharged into the atmosphere in accordance with 40 CFR Part 96, Subpart H.

d) Common Stacks. If two or more emission units subject to Subpart D, E, F, G, H, M, or Q of this Part are served by a common stack and the owner or operator of such emission units is operating a continuous emissions monitoring system, the owner or operator may, with written approval from the Agency, utilize a single continuous emissions monitoring system for the combination of emission units subject to Subpart D, E, F, G, H, M , or Q of this Part that share the common stack, provided such emission units are subject to an emissions averaging plan under this Part.

e) Compliance with the continuous emissions monitoring system (CEMS) requirements by an owner or operator of an emission unit who is required to install, calibrate, maintain, and operate a CEMS on the emission unit under subsection (a)(1), (a)(2), (a)(3), or (b)(1) of this Section, or who has elected to comply with the CEMS requirements under subsection (a)(5) or (b)(5) of this Section, or who has elected to comply with the predictive emission monitoring system (PEMS) requirements under subsection (f) of this Section, is required by the following dates:

1) For the owner or operator of an emission unit that is subject to a compliance date in calendar year 2012 under Section 217.152 of this Subpart, compliance with the CEMS or PEMS requirements, as applicable, under this Section for such emission unit is required by December 31, 2012, provided that during the time between the compliance date and December 31, 2012, the owner or operator must comply with the applicable performance test requirements under this Section and the applicable recordkeeping and reporting requirements under this Subpart. For the owner or operator of an emission unit that is in compliance with the CEMS or PEMS requirements, as applicable, under this Section on January 1, 2012, such owner or operator is not required to comply with the performance test requirements under this Section.

2) For the owner or operator of an emission unit that is subject to a compliance date in a calendar year other than calendar year 2012 under Section 217.152 of this Subpart, compliance with the CEMS or PEMS requirements, as applicable, under this Section for such emission unit is required by the applicable compliance date, and such owner or operator is not required to comply with the performance test requirements under this Section.

f) As an alternative to complying with the requirements of this Section, other than the requirements under subsections (a)(1) and (c) of this Section, the owner or operator of an emission unit who is not otherwise required by any another statute, regulation, or enforceable order to install, calibrate, maintain, and operate a CEMS on the emission unit may comply with the specifications and test procedures for a predictive emission monitoring system (PEMS) on the emission unit for the measurement of NO_x emissions discharged into the atmosphere in accordance with the requirements of 40 CFR Part 60, Subpart A, and Appendix B, Performance Specification 16. The PEMS must be used to demonstrate compliance with the applicable emissions limitation or emissions averaging plan on an ozone season and annual basis.

(Source: Added at 33 Ill. Reg. ____, effective _____)

Section 217.158 Emissions Averaging Plans

a) Notwithstanding any other emissions averaging plan provisions under this Part, an owner or operator of a source with certain emission units subject to Subpart D, E, F, G, H, or M of this Part, or subject to Subpart Q of this Part that are located in either one of the areas set forth under Section 217.150(a)(1)(A) or (B) of this Subpart, may demonstrate compliance with the applicable Subpart through an emissions averaging plan. An emissions averaging plan can only address emission units that are located at one source and each unit may only be covered by one emissions averaging plan. Such emission units at the source are affected units and are subject to the requirements of this Section.

1) The following units may be included in an emissions averaging plan:

A) Units that commenced operation on or before January 1, 2002.

B) Units that the owner or operator may claim as exempt pursuant to Section 217.162, 217.182, 217.202, 217.222, 217.242, or 217.342, of this Part, as applicable, but does not claim exempt. For as long as such a unit is included in an emissions averaging plan, it will be treated as an affected unit and subject to the applicable emissions limitations, and testing, monitoring, recordkeeping and reporting requirements.

C) Units that commence operation after January 1, 2002, if the unit replaces a unit that commenced operation on or before January 1, 2002, or it replaces a unit that replaced a unit that commenced operation on or before January 1, 2002. The new unit must be used for the same purpose and have substantially equivalent or less process capacity or be permitted for less NO_x emissions on an annual basis than the actual NO_x emissions of the unit or units that are replaced. Within 90 days after permanently shutting down a unit that is replaced, the owner or operator of such unit must submit a written request to withdraw or amend the applicable permit to reflect that the unit is no longer in service before the replacement unit may be included in an emissions averaging plan.

2) The following types of units may not be included in an emissions averaging plan:

A) Units that commence operation after January 1, 2002, except as provided by subsection (a)(1)(C) of this Section.

B) Units that the owner or operator is claiming are exempt pursuant to Section 217.162, 217.182, 217.202, 217.222, 217.242, or 217.342, of this Part, as applicable.

C) Units that are required to meet emission limits or control requirements for NO_x as provided for in an enforceable order, unless such order allows for emissions averaging.

b) An owner or operator must submit an emissions averaging plan to the Agency by January 1, 2012. The plan must include, but is not limited to, the following:

1) The list of affected units included in the plan by unit identification number; and

2) A sample calculation demonstrating compliance using the methodology provided in subsection (f) of this Section for the ozone season (May 1 through September 30) and calendar year (January 1 through December 31).

c) An owner or operator may amend an emissions averaging plan only once per calendar year. Such an amended plan must be submitted to the Agency by January 1 of the applicable calendar year. If an amended plan is not received by the Agency by January 1 of the applicable calendar year, the previous year's plan will be the applicable emissions averaging plan.

d) Notwithstanding subsection (c) of this Section:

1) If a unit that is listed in an emissions averaging plan is taken out of service, the owner or operator must submit to the Agency, within 30 days of such occurrence, an updated emissions averaging plan; or

2) If a unit that was exempt from the requirements of Subpart D, E, F, G, H, or M of this Part pursuant to Section 217.162, 217.182, 217.202, 217.222, 217.242, or 217.342, of this Part, as applicable, no longer qualifies for an exemption, the owner or operator may amend its existing averaging plan to include such unit within 30 days of the unit no longer qualifying for the exemption.

e) An owner or operator must:

1) Demonstrate compliance for the ozone season (May 1 through September 30) and the calendar year (January 1 through December 31) by using the methodology and the units listed in the most recent emissions averaging plan submitted to the Agency pursuant to subsection (b) of this Section, the monitoring data or test data determined pursuant to Section 217.157 of this Subpart, and the actual hours of operation for the applicable averaging plan period; and

2) Submit to the Agency by March 1 following each calendar year, a compliance report containing the information required by Section

217.156(i) of this Subpart.

f) The total mass of actual NO_X emissions from the units listed in the emissions averaging plan must be equal to or less than the total mass of allowable NO_X emissions for those units for both the ozone season and calendar year. The following equation must be used to determine compliance:

$N_{act} \leq N_{all}$

Where:

$N_{act} = \sum_{i=1}^{n}\sum_{j=1}^{k} EM_{act(i,j)}$

$N_{all} = \sum_{i=1}^{n}\sum_{j=1}^{k} EM_{all(i,j)}$

N_{act} = Total sum of the actual NO_X mass emissions from units included in the averaging plan for each fuel used (tons per ozone season and year).

N_{all} = Total sum of the allowable NO_X mass emissions from units included in the averaging plan for each fuel used (tons per ozone season and year).

$EM_{act(i)}$ = Total mass of actual NO_X emissions in tons for a unit as determined in subsection (f)(1) of this Section.

i = Subscript denoting an individual unit.

j = Subscript denoting the fuel type used.

k = Number of different fuel types.

n = Number of different units in the averaging plan.

$EM_{all(i)}$ = Total mass of allowable NO_X emissions in tons for a unit as determined in subsection (f)(2) of this Section.

For each unit in the averaging plan, and each fuel used by such unit, determineactual and allowable NO_X emissions using the following equations:

1) Actual emissions must be determined as follows:

When emission limits are prescribed in lb/mmBtu,

$EM_{act(i)} = E_{act(i)} \times H_i/2000$

When emission limits are prescribed in lb/ton of processed product,

$EM_{act(i)} = E_{act(i)} \times P_i/2000$

2) Allowable emissions must be determined as follows:

When emission limits are prescribed in lb/mmBtu,

$EM_{all(i)} = E_{all(i)} \times H_i/2000$

When emission limits are prescribed in lb/ton of processed product,

$EM_{all(i)} = E_{all(i)} \times P_i/2000$

Where:

$EM_{act(i)}$ = Total mass of actual NO_X emissions in tons for a unit.

$EM_{all(i)}$ = Total mass of allowable NO_X emissions in tons for a unit.

E_{act} = Actual NO_X emission rate (lbs/mmBtu or lbs/ton of product) as determined by a performance test, continuous emissions monitoring system, or an alternative method approved by the Agency.

E_{all} = Allowable NO_X emission rate (lbs/mmBtu or lbs/ton of product) as provided in Section 217.164, 217.184, 217.204, 217.224, 217.244, or 217.344, as applicable, of this Part. For an affected industrial boiler subject to Subpart D of this Part, or process heater subject to Subpart E of this Part, with a rated heat input capacity less than or equal to 100 mmBtu/hr demonstrating compliance through an emissions averaging plan, the allowable NOx emission rate is to be determined from a performance test after such boiler or heater has undergone combustion tuning. For all other units in an emissions averaging plan, an uncontrolled NOx emission rate from USEPA's AP-42, as incorporated by reference in Section 217.104 of this Part, or an uncontrolled NOx emission rate as determined by an alternative method approved by the Agency will be used.

H = Heat input (mmBtu/ozone season or mmBtu/year) calculated from fuel flow meter and the heating value of the fuel used.

P = weight in tons of processed product.

g) An owner or operator of an emission unit subject to Subpart Q of this Part that is located in either one of the areas set forth under Section 217.150(a)(1)(A) or (B) that is complying through an emissions averaging plan under this Section must comply with the applicable provisions for determining actual and allowable

emissions under Section 217.390 of Subpart Q of this Part, the testing and monitoring requirements under Section 217.394 of Subpart Q of this Part, and the recordkeeping and reporting requirements under Section 217.396 of Subpart Q of this Part.

h) The owner or operator of an emission unit located at a petroleum refinery who is demonstrating compliance with an applicable Subpart through an emissions averaging plan under this Section may exclude from the calculation demonstrating compliance those time periods when an emission unit included in the emissions averaging plan is shut down for a maintenance turnaround, provided that such owner or operator notify the Agency in writing at least 30 days in advance of the shutdown of the emission unit for the maintenance turnaround and the shutdown of the emission unit does not exceed 45 days per ozone season or calendar year and NO_x pollution control equipment, if any, continues to operate on all other emission units operating during the maintenance turnaround.

i) The owner or operator of an emission unit that combusts a combination of coke oven gas and other gaseous fuels and located at a source that manufactures iron and steel who is demonstrating compliance with an applicable Subpart through an emissions averaging plan under this Section may exclude from the calculation demonstrating compliance those time periods when the coke oven gas desulfurization unit included in the emissions averaging plan is shut down for maintenance, provided that such owner or operator notify the Agency in writing at least 30 days in advance of the shutdown of the coke oven gas desulfurization unit for maintenance and such shutdown does not exceed 35 days per ozone season or calendar year and NO_x pollution control equipment, if any, continues to operate on all other emission units operating during the maintenance period..

(Source: Added at 33 Ill. Reg. ____, effective _____)

SUBPART D: INDUSTRIAL BOILERS

Section 217.160 Applicability

a) The provisions of Subpart C of this Part and this Subpart apply to all industrial boilers located at sources subject to this Subpart pursuant to Section 217.150 of this Part, except as provided in subsections (b) and (c) of this Section.

b) The provisions of this Subpart do not apply to boilers serving a generator that has a nameplate capacity greater than 25 MWe and produces electricity for sale, and cogeneration units, as that term is defined in Section 225.130 of Part 225, if such boilers or cogeneration units are subject to the CAIR NO_x Trading Programs under Subpart D or E of Part 225.

c) The provisions of this Subpart do not apply to fluidized catalytic cracking units, their regenerator and associated CO boiler or boilers and CO furnace or furnaces

where present, if such units are located at a petroleum refinery and such units are required to meet emission limits or control requirements for NO_x as provided for in an enforceable order.

(Source: Added at 33 Ill. Reg. ____, effective _____)

Section 217.162 Exemptions

Notwithstanding Section 217.160 of this Subpart, the provisions of this Subpart do not apply to an industrial boiler operating under a federally enforceable limit of NO_x emissions from such boiler to less than 15 tons per year and less than five tons per ozone season.

(Source: Added at 33 Ill. Reg. ____, effective _____)

Section 217.164 Emissions Limitations

On and after January 1, 2012, no person shall cause or allow emissions of NO_x into the atmosphere from any industrial boiler to exceed the following limitations. Compliance must be demonstrated with the applicable emissions limitation on an ozone season and annual basis.

	Fuel	Emission Unit Type and Rated Heat Input Capacity (mmBtu/hr)		NO_x Emissions Limitation (lb/mmBtu) or Requirement
a)	Natural Gas or Other Gaseous Fuels	1)	Industrial boiler greater than 100	0.08
		2)	Industrial boiler less than or equal to 100	Combustion tuning
b)	Distillate Fuel Oil	1)	Industrial boiler greater than 100	0.10
		2)	Industrial boiler less than or equal to 100	Combustion tuning
c)	Other Liquid Fuels	1)	Industrial boiler greater than 100	0.15
		2)	Industrial boiler less than or equal to 100	Combustion tuning
d)	Solid Fuel	1)	Industrial boiler	0.12

	greater than 100, circulating fluidized bed combustor	
2)	Industrial boiler greater than 250	0.18
3)	Industrial boiler greater than 100 but less than or equal to 250	0.25
4)	Industrial boiler Less than or equal to 100	Combustion tuning

e) For an industrial boiler combusting a combination of natural gas, coke oven gas, and blast furnace gas, the NO_x emissions limitation shall be calculated using the following equation:

NO_x emissions limitation for period in lb/MMBtu= $(NOx_{NG} * BTU_{NG} + NOx_{COG} * BTU_{COG} + NOx_{BFG} * BTU_{BFG}) / (BTU_{NG} + BTU_{COG} + BTU_{BFG})$

Where:

NOx_{NG} = 0.084 lb/MMBtu for natural gas

BTU_{NG} = the heat input of natural gas in BTU over that period

NOx_{COG} = 0.144 lb/MMBtu for coke oven gas

BTU_{COG} = the heat input of coke oven gas in BTU over that period

NOx_{BFG} = 0.0288 lb/MMBtu for blast furnace gas

BTU_{BFG} = the heat input of blast furnace gas in BTU over that period

(Source: Added at 33 Ill. Reg. ____, effective _____)

Section 217.165 Combination of Fuels

The owner or operator of an industrial boiler subject to this Subpart and operated with any combination of fuels must comply with a heat input weighted average emissions limitation to demonstrate compliance with Section 217.164 of this Subpart.

(Source: Added at 33 Ill. Reg. ____, effective _____)

Section 217.166 Methods and Procedures for Combustion Tuning

The owner or operator of an industrial boiler subject to the combustion tuning requirements of Section 217.164 of this Subpart must have combustion tuning performed on the boiler at least

annually. The combustion tuning must be performed by an employee of the owner or operator or a contractor who has successfully completed a training course on the combustion tuning of boilers firing the fuel or fuels that are fired in the boiler. The owner or operator must maintain the following records that must be made available to the Agency upon request:

1) The date the combustion tuning was performed;

2) The name, title, and affiliation of the person who performed the combustion tuning;

3) Documentation demonstrating the provider of the combustion tuning training course, the dates the training course was taken, and proof of successful completion of the training course;

4) Tune-up procedure followed and checklist of items (such as burners, flame conditions, air supply, scaling on heating surface, etc.) inspected prior to the actual tune-up; and

5) Operating parameters recorded at the start and at conclusion of combustion tuning.

(Source: Added at 33 Ill. Reg. ____, effective _____)

SUBPART E: PROCESS HEATERS

Section 217.180 Applicability

The provisions of Subpart C of this Part and this Subpart apply to all process heaters located at sources subject to this Subpart pursuant to Section 217.150 of this Part.

(Source: Added at 33 Ill. Reg. ____, effective _____)

Section 217.182 Exemptions

Notwithstanding Section 217.180 of this Subpart, the provisions of this Subpart do not apply to a process heater operating under a federally enforceable limit of NO_x emissions from such heater to less than 15 tons per year and less than five tons per ozone season.

(Source: Added at 33 Ill. Reg. ____, effective _____)

Section 217.184 Emissions Limitations

On and after January 1, 2012, no person shall cause or allow emissions of NO_x into the On and after January 1, 2012, no person shall cause or allow emissions of NO_x into the atmosphere from any process heater to exceed the following limitations. Compliance must be demonstrated with the applicable emissions limitation on an ozone season and annual basis.

Fuel		Emission Unit Type and Rated Heat Input Capacity (mmBtu/hr)		NO_x Emissions Limitation (lb/mmBtu) or Requirement
a)	Natural Gas or Other Gaseous Fuels	1)	Process heater greater than 100	0.08
		2)	Process heater less than or equal to 100	Combustion tuning
b)	Residual Fuel Oil	1)	Process heater greater than 100, natural draft	0.10
		2)	Process heater greater than 100, mechanical draft	0.15
		3)	Process heater less than or equal to 100	Combustion tuning
c)	Other Liquid Fuels	1)	Process heater greater than 100, natural draft	0.05
		2)	Process heater greater than 100, mechanical draft	0.08
		3)	Process heater less than or equal to 100	Combustion tuning

(Source: Added at 33 Ill. Reg. ____, effective _____)

Section 217.185 Combination of Fuels

The owner or operator of a process heater subject to this Subpart and operated with any combination of fuels must comply with a heat input weighted average emissions limitation to demonstrate compliance with Section 217.184 of this Subpart.

(Source: Added at 33 Ill. Reg. ____, effective _____)

Section 217.186 Methods and Procedures for Combustion Tuning

The owner or operator of a process heater subject to the combustion tuning requirements of Section 217.184 of this Subpart must have combustion tuning performed on the heater at least annually. The combustion tuning must be performed by an employee of the owner or operator or a contractor who has successfully completed a training course on the combustion tuning of heaters firing the fuel or fuels that are fired in the heater. The owner or operator must maintain the following records that must be made available to the Agency upon request:

1) The date the combustion tuning was performed;

2) The name, title, and affiliation of the person who performed the combustion tuning;

3) Documentation demonstrating the provider of the combustion tuning training course, the dates the training course was taken, and proof of successful completion of the training course;

4) Tune-up procedure followed and checklist of items (such as burners, flame conditions, air supply, scaling on heating surface, etc.) inspected prior to the actual tune-up; and

5) Operating parameters recorded at the start and at conclusion of combustion tuning.

(Source: Added at 33 Ill. Reg. ____, effective _____)

SUBPART F: GLASS MELTING FURNACES

Section 217.200 Applicability

The provisions of Subpart C of this Part and this Subpart apply to all glass melting furnaces located at sources subject to this Subpart pursuant to Section 217.150 of this Part.

(Source: Added at 33 Ill. Reg. ____, effective _____)

Section 217.202 Exemptions

Notwithstanding Section 217.200 of this Subpart, the provisions of this Subpart do not apply to a glass melting furnace operating under a federally enforceable limit of NO_x emissions from such furnace to less than 15 tons per year and less than five tons per ozone season.

(Source: Added at 33 Ill. Reg. ____, effective _____)

Section 217.204 Emissions Limitations

a) On and after January 1, 2012, no person shall cause or allow emissions of NO_x into the atmosphere from any glass melting furnace to exceed the following limitations. Compliance must be demonstrated with the emissions limitation on an ozone season and annual basis.

	Product	Emission Unit Type	NO_x Emissions Limitation (lb/ton glass produced)
1)	Container Glass	Glass melting furnace	5.0
2)	Flat Glass	Glass melting furnace	7.9
3)	Other Glass	Glass melting furnace	11.0

b) The emissions limitations under this Section do not apply during glass melting furnace startup (not to exceed 70 days) or idling (operation at less than 35% of furnace capacity). For the purposes of demonstrating seasonal and annual compliance, the emissions limitation during such periods shall be calculated as follows:

NOx emissions limitation (lb/day) = (ANL) / (PPC)

Where: ANL = The applicable NOx emissions limitation under this Section in pounds per ton of glass produced
PPC = Permitted production capacity in tons of glass produced per day

(Source: Added at 33 Ill. Reg. ____, effective _____)

SUBPART G: CEMENT AND LIME KILNS

Section 217.220 Applicability

a) Notwithstanding Subpart T of this Part, the provisions of Subpart C of this Part and this Subpart apply to all cement kilns located at sources subject to this Subpart pursuant to Section 217.150 of this Part.

b) The provisions of Subpart C of this Part and this Subpart apply to all lime kilns located at sources subject to this Subpart pursuant to Section 217.150 of this Part.

(Source: Added at 33 Ill. Reg. ____, effective _____)

Section 217.222 Exemptions

Notwithstanding Section 217.220 of this Subpart, the provisions of this Subpart do not apply to a cement kiln or lime kiln operating under a federally enforceable limit of NO_x emissions from such kiln to less than 15 tons per year and less than five tons per ozone season.

(Source: Added at 33 Ill. Reg. ____, effective _____)

Section 217.224 Emissions Limitations

a) On and after January 1, 2012, no person shall cause or allow emissions of NO_x into the atmosphere from any cement kiln to exceed the following limitations. Compliance must be demonstrated with the applicable emissions limitation on an ozone season and annual basis.

	Emission Unit Type	NO_x Emissions Limitation (lb/ton clinker produced)
1)	Long dry kiln	5.1
2)	Short dry kiln	5.1
3)	Preheater kiln	3.8
4)	Preheater/precalciner kiln	2.8

b) On and after January 1, 2012, no person shall cause or allow emissions of NO_x into the atmosphere from any lime kiln to exceed the following limitations. Compliance must be demonstrated with the applicable emissions limitation on an ozone season and annual basis.

	Fuel	Emission Unit Type	NO_x Emissions Limitation (lb/ton lime produced)
1)	Gas	Rotary kiln	2.2
2)	Coal	Rotary kiln	2.5

(Source: Added at 33 Ill. Reg. ____, effective _____)

SUBPART H: IRON AND STEEL AND ALUMINUM MANUFACTURING

Section 217.240 Applicability

a) The provisions of Subpart C of this Part and this Subpart apply to all reheat furnaces, annealing furnaces, and galvanizing furnaces used in iron and steel making located at sources subject to this Subpart pursuant to Section 217.150 of this Part.

b) The provisions of Subpart C of this Part and this Subpart apply to all reverberatory furnaces and crucible furnaces used in aluminum melting located at sources subject to this Subpart pursuant to Section 217.150 of this Part.

(Source: Added at 33 Ill. Reg. ____, effective _____)

Section 217.242 Exemptions

Notwithstanding Section 217.240 of this Subpart, the provisions of this Subpart do not apply to an iron and steel reheat furnace, annealing furnace, or galvanizing furnace, or aluminum reverberatory furnace or crucible furnace operating under a federally enforceable limit of NO_x emissions from such furnace to less than 15 tons per year and less than five tons per ozone season.

(Source: Added at 33 Ill. Reg. ____, effective _____)_____)

Section 217.244 Emissions Limitations

a) On and after January 1, 2012, no person shall cause or allow emissions of NO_x into the atmosphere from any reheat furnace, annealing furnace, or galvanizing furnace used in iron and steel making to exceed the following limitations. Compliance must be demonstrated with the applicable emissions limitation on an ozone season and annual basis.

	Emission Unit Type	NO_x Emissions Limitation (lb/mmBtu)
1)	Reheat furnace, regenerative	0.18
2)	Reheat furnace, recuperative, combusting natural gas	0.09
3)	Reheat furnace, recuperative, combusting a combination of natural gas and coke oven gas	0.142

4)	Reheat furnace, cold-air	0.03
5)	Annealing furnace, regenerative	0.38
6)	Annealing furnace, recuperative	0.16
7)	Annealing furnace, cold-air	0.07
8)	Galvanizing furnace, regenerative	0.46
9)	Galvanizing furnace, recuperative	0.16
10)	Galvanizing furnace, cold-air	0.06

b) On and after January 1, 2012, no person shall cause or allow emissions of NO_x into the atmosphere from any reverberatory furnace or crucible furnace used in aluminum melting to exceed the following limitations. Compliance must be demonstrated with the applicable emissions limitation on an ozone season and annual basis.

	Emission Unit Type	NO_x Emissions Limitation (lb/mmBtu)
1)	Reverberatory furnace	0.08
2)	Crucible furnace	0.16

(Source: Added at 33 Ill. Reg. ____, effective _____)

SUBPART M: ELECTRICAL GENERATING UNITS

Section 217.340 Applicability

Notwithstanding Subpart V or W of this Part, the provisions of Subpart C of this Part and this Subpart apply to any fuel-fired stationary boiler serving a generator that has a nameplate capacity greater than 25 MWe and produces electricity for sale, excluding any units listed in Appendix D of this Part, located at sources subject to this Subpart pursuant to Section 217.150 of this Part.

(Source: Added at 33 Ill. Reg. ____, effective _____)

Section 217.342 Exemptions

a) Notwithstanding Section 217.340 of this Subpart, the provisions of this Subpart and this Subpart do not apply to a fossil fuel-fired stationary boiler operating under a federally enforceable limit of NO_x emissions from such boiler to less than 15 tons per year and less than five tons per ozone season.

b) Notwithstanding Section 217.340 of this Subpart, the provisions of this Subpart do not apply to a coal-fired stationary boiler that commenced operation before January 1, 2008, that is complying with thePart 225 Subpart B through the multi-pollutant standard under Section 225.233 of Part 225 or the combined pollutant standards under Subpart F of Part 225.

(Source: Added at 33 Ill. Reg. ____, effective _____)

Section 217.344 Emissions Limitations

On and after January 1, 2012, no person shall cause or allow emissions of NO_x into the atmosphere from any fossil fuel-fired stationary boiler to exceed the following limitations. Compliance must be demonstrated with the applicable emissions limitation on an ozone season and annual basis.

Fuel		Emission Unit Type		NO_x Emissions Limitation (lb/mmBtu)
a)	Solid	Boiler		0.12
b)	Natural gas	Boiler		0.06
c)	Liquid	1)	Boiler that commenced operation before January 1, 2008	0.10
		2)	Boiler that commenced operation on or after January 1, 2008	0.08

(Source: Added at 33 Ill. Reg. ____, effective _____)

Section 217.345 Combination of Fuels

The owner or operator of a fossil fuel-fired stationary boiler subject to this Subpart and operated with any combination of fuels must comply with a heat input weighted average emissions limitation to demonstrate compliance with Section 217.344 of this Subpart.

(Source: Added at 33 Ill. Reg. ____, effective _____)

Section 217.APPENDIX H: Compliance Dates for Certain Emission Units at Petroleum

Refineries

ExxonMobil Oil Corporation (Facility ID 197800AAA)

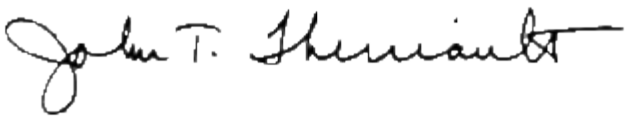
Point	Emission Unit Description	Compliance Date
0019	Crude Vacuum Heater (13-B-2)	December 31, 2014
0038	Alky Iso-Stripper Reboiler (7-B-1)	December 31, 2014
0033	CHD Charge Heater (3-B-1)	December 31, 2014
0034	CHD Stripper Reboiler (3-B-2)	December 31, 2014
0021	Coker East Charge Heater (16-B-1A)	December 31, 2014

Point	Emission Unit Description	Compliance Date
0017	BEU HM-1	December 31, 2012
0018	BEU HM-2	December 31, 2012
0004	CR-1 Feed Preheat, H-1	December 31, 2012
0005	CR-1 1st Interreactor Heater, H-2	December 31, 2012
0009	CR-1 3rd Interreactor Heater, H-7	December 31, 2012
0091	CR-3 Charge Heater	December 31, 2012
0092	CR-3 1st Reheat Heater, H-5	December 31, 2012
0082	Boiler 17	December 31, 2012
0080	Boiler 15	December 31, 2012
0073	Alky HM-2 Heater	December 31, 2012
0662	VF-4 Charge Heater, H-28	December 31, 2012
0664	DU-4 Charge Heater, H-24	December 31, 2014
0617	DCU Charge Heater, H-20	December 31, 2014
0014	HCU Fractionator Reboil, H-3	December 31, 2016
0024	DU-1 Primary Heater South, F-301	December 31, 2016
0025	DU-1 Secondary Heater North, F-302	December 31, 2016
0081	Boiler 16	December 31, 2016
0083	Boiler 18	December 31, 2016
0095	DHT Charge Heater	December 31, 2016
0028	DU-2 Lube Crude Heater, F-200	December 31, 2016
0029	DU-2 Mixed Crude Heater West, F-202	December 31, 2016
0030	DU-2 Mixed Crude Heater East, F-203	December 31, 2016
0084	CR-2 North Heater	December 31, 2016
0021	Coker East Charge Heater (16-B-1B)	December 31, 2014
0018	Crude Atmospheric Heater (1-B-1A)	December 31, 2014
0018	Crude Atmospheric Heater (1-B-1B)	December 31, 2014

ConocoPhillips Company Wood River Refinery (Facility ID 119090AAA)

IT IS SO ORDERED.

I, John T. Therriault, Assistant Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on May 7, 2009, by a vote of 5-0.



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John T. Therriault, Assistant Clerk
Illinois Pollution Control Board