ILLINOIS POLLUTION CONTROL BOARD
September 16, 2008

IN THE MATTER OF:	)	
	)	
SECTION 27 PROPOSED RULES FOR	)	R07-19
NITROGEN OXIDE (NO_x) EMISSIONS	)	(Rulemaking - Air)
FROM STATIONARY RECIPROCATING	)	
INTERNAL COMBUSTION ENGINES AND	)	
TURBINES: AMENDMENTS TO 35 ILL.	)	
ADM. CODE SECTION 201.146 AND	)	
PARTS 211 AND 217	)	

Proposed Rule. First Notice.

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

Today the Board proposes amendments to its regulations governing emission of nitrogen oxides (NO_x) (35 Ill. Adm. Code 201, 211, 217) for first-notice publication in the *Illinois Register*. On December 20, 2007, the Illinois Environmental Protection Agency (Agency or IEPA) filed a motion to proceed in this docket with an amended rulemaking proposal, which the Board granted on January 10, 2008. After conducting two public hearings on the amended proposal and considering the entire record, the Board adopts for first notice the amendments described below in this opinion and order.

The first-notice amendments are intended primarily to control NO_x emissions from engines and turbines located at 100 ton per year sources located in the Greater Chicago and Metro East/St. Louis nonattainment areas with a capacity of 500 brake horsepower (bhp) or 3.5 megawatts (MW). In its motion to proceed with an amended proposal, the Agency stated that its proposed regulations would help Illinois to meet Clean Air Act (CAA) requirements for NO_x reasonably available control technology (RACT) under the under the eight-hour National Ambient Air Quality Standard (NAAQS) for ozone and would also improve air quality by reducing precursors of fine particulate matter ($PM_{2.5}$). Publication of these proposed amendments in the *Illinois Register* will begin a 45-day public comment period.

In this opinion, the Board first provides an abbreviated procedural background of this rulemaking. Next, the Board analyzes the Agency's proposal and the issues raised both at hearing and in six public comments. The Board then analyzes technical and economic considerations before making its findings and reaching its conclusions. The order following this opinion then sets forth the proposed amendments for first notice publication.

ABBREVIATED PROCEDURAL BACKGROUND

On April 6, 2007, the Agency filed a rulemaking proposal intended to reduce emissions of nitrogen oxides (NO_x) from stationary reciprocating engines and turbines. The Board docketed the proposal as R07-18. In an order dated May 17, 2007, the Board concluded that the

Agency's entire proposal was not "required to be adopted" by the CAA under Section 28.5 of the Environmental Protection Act (Act). 415 ILCS 5/28.5 (2006). Accordingly, the Board bifurcated the proposal and continued to consider in docket R07-18 under Section 28.5 "fast-track" procedures only the portion of the proposal applicable to the 28 internal combustion (IC) engines affected by the NO_x State Implementation Plan (SIP) Call Phase II. In a new docket R07-19, the Board provided first-notice publication of the remainder of the Agency's proposal under the general rulemaking provisions of Sections 27 and 28 of the Act (415 ILCS 5/27, 28 (2006)). Fast-Track Rules Under Nitrogen Oxide (NO_x) SIP Call Phase II: Amendments to 35 Ill. Adm. Code Section 201.146 and Parts 211 and 217, R07-18, slip op. at 2, 34-35 (May 17, 2007). The Board's opinion and order bifurcating the Agency's original proposal did not comment on the merits of docket R07-19. *See id.* The Board adopted final rules in R07-18 on September 20, 2007. *See* Fast-Track Rules Under Nitrogen Oxide (NO_x) SIP Call Phase II: Amendments to 35 Ill. Adm. Code Section 201.146 and Parts 211 and 217, R07-18 (Sept. 20, 2007); *see also* 31 Ill. Reg. 14254-71 (Oct. 12, 2007).

On June 15, 2007, the hearing officer issued an order in R07-19 scheduling two hearings and setting deadlines for prefiled testimony. On August 23, 2007, the Agency filed a motion to cancel the scheduled hearings and prefiling deadlines. In an order dated August 27, 2007, the hearing officer granted the motion. At the direction of the hearing officer, the Agency subsequently filed two status reports, a first on October 31, 2007, and a second on November 19, 2007, which indicated that the Agency would file an amended proposal with the Board before the end of December 2007.

On December 20, 2007, the Agency filed its "Motion to Proceed with Amended Proposal and Withdraw Testimony" (Mot. Amend). The motion included as Attachment B an amended Technical Support Document (TSD). On January 3, 2008, the Illinois Environmental Regulatory Group (IERG) filed its response. In an order dated January 10, 2008, the Board granted the Agency's motion. In a letter dated January 23, 2008, the Board requested that the Department of Commerce and Economic Opportunity conduct an economic impact study of the amended proposal. *See* 415 ILCS 5/27(b) (2006). The Board has not received a response to this request.

On March 26, 2008, the Board received prefiled testimony from four witnesses: Mr. Robert Kaleel (Kaleel Test.) and Mr. Yoginder Mahajan (Mahajan Test.) on behalf of the Agency; Mr. Kevin Wagner on behalf of the Illinois Municipal Electric Agency (IMEA) (Wagner Test.); and Ms. Deirdre Hirner (Hirner Test.) on behalf of IERG. The first hearing in this proceeding (Tr.1) took place on April 9, 2008, in Edwardsville, Madison County. At the first hearing, the hearing officer admitted into the record one exhibit, a finding by the United States Environmental Protection Agency (USEPA) that Illinois had failed to submit SIPs required under the eight-hour NAAQS for ozone (Exh. 1). *See* 73 Fed. Reg. 15416-21 (Mar. 24, 2008).

In an order dated April 17, 2008, the Board directed its Clerk to withdraw the proposed amendments that the Board had originally sent to first-notice publication in this docket. *See* Section 27 Proposed Rules for Nitrogen Oxide (NO_x) Emissions from Stationary Reciprocating Internal Combustion Engines and Turbines: Amendments to 35 Ill. Adm. Code Parts 211 and

217, R07-19, slip op. at 1-2 (Apr. 17, 2008). The Secretary of State subsequently published notice of withdrawal of the proposed amendments. 32 Ill. Reg. 7230-31 (May 2, 2008).

On April 23, 2008, the Board received prefiled testimony from Mr. James McCarthy (McCarthy Test.) of Innovative Environmental Solutions, Inc. on behalf of two natural gas transmission companies, ANR Pipeline Company and Natural Gas Pipeline Company of America (collectively, the Pipeline Group). The second hearing in this proceeding (Tr.2) took place on May 7, 2008 in Chicago. At the second hearing, the hearing officer admitted into the record one exhibit, a document offered by the Agency and entitled "Clarifications and *Errata* Sheet" (Exh. 2).

In an order dated May 12, 2008, the hearing officer set a deadline of June 9, 2008 for filing post-hearing comments and a deadline of June 23, 2008 for filing a response to post-hearing comments. On June 9, 2008, the Board received post-hearing comments from the Agency (PC 1), IMEA (PC 2), and IERG (PC 3). On June 23, 2008, the Board received a response to post-hearing comments from the Agency (PC 4). On July 1, 2008, the Board received a comment from Mr. Don C. DiCristoforo of Blue Sky Environmental LLC (Blue Sky) (PC 5). On July 16, 2008, the Board received from the Agency a motion for leave to file *instanter* a response to the comment filed on behalf of Blue Sky (Mot. Leave), accompanied by the Agency's response to that comment (PC 6).

Filing Public Comments

First-notice publication of these proposed rule changes in the *Illinois Register* will start a period of at least 45 days during which anyone may file a public comment with the Board, regardless of whether the person has already filed a public comment in this proceeding. The Board encourages persons to file public comments on these proposed amendments. The docket number for this rulemaking, R07-19, should be indicated on the public comment.

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

As an alternative, public comments may be filed with the Clerk electronically through the Clerk's Office On-Line (COOL) at www.ipcb.state.il.us. 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 July 16, 2008, the Agency filed a motion for leave to file *instanter* (Mot. Leave) a response to the comment filed on behalf of Blue Sky. Mot. Leave at 1. The Agency's response accompanied its motion. *See id*. at 1-2. In the motion, the Agency states that Blue Sky submitted a post-hearing comment to the Board on July 1, 2008, one week beyond the June 23, 2008, deadline for filing a response to post-hearing comments. *Id*. The Agency further states that, because the comment was neither filed nor served until after that deadline, the Agency could not file a response before the applicable deadline. *Id*. Accordingly, the Agency sought leave to file a response to Blue Sky's comment *instanter*. *Id*.

The Board's procedural rules provide that, "[w]ithin 14 days after service of a motion, a party may file a response to the motion. If no response is filed, the party will be deemed to have waived objection to the granting of the motion, but the waiver of objection does not bind the Board . . . in its disposition of the motion." 35 Ill. Adm. Code 101.500(d); *see* 35 Ill. Adm. Code 102.402. The Board has received no response to the Agency's motion for leave to file *instanter*. Accordingly, the Board grants the Agency's motion, accepts the Agency's response to the post-hearing comment by Blue Sky, and addresses that response in the opinion below.

BACKGROUND OF FEDERAL REQUIREMENTS

USEPA revised the NAAQS for $PM_{2.5}$ and ozone in 1997. TSD at 11 (§2.1), citing 62 Fed. Reg. 38652 (July 18, 1997) ($PM_{2.5}$ standards), 62 Fed. Reg. 38855 (July 17, 1997) (ozone standards); *see* Kaleel Test. at 2. Upon setting the NAAQS for $PM_{2.5}$, USEPA designated two areas in Illinois, Chicago and Metro East/St. Louis, as nonattainment areas.[1] TSD at 11, *id*. at 12 (Figure 2-1). "These designations became effective on April 5, 2005." *Id*. at 11, citing 70 Fed. Reg. 943 (Jan. 5, 2005). USEPA has since reviewed the NAAQS for $PM_{2.5}$ and strengthened the 24-hour standard. Kaleel Test. at 2, citing 71 Fed. Reg. 61144 (Oct. 17, 2006).

"The revised NAAQS for ozone replaced the previous 1-hour averaging time with an 8-hour averaging time, and reduced the applicable ambient concentration threshold from 0.12 parts per million (ppm) to 0.08 ppm." TSD at 11, Kaleel Test. at 2. USEPA has designated two areas in Illinois, greater Chicago and Metro East/St. Louis, as moderate nonattainment areas for ozone.[2] TSD at 11, *id*. at 12 (Figure 2-2), Kaleel Test. at 2. "These designations become effective on June 15, 2004." TSD at 11, citing 69 Fed. Reg. 23858 (Apr. 3, 2004).

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[1] For the $PM_{2.5}$ NAAQS, the following jurisdictions comprise the greater Chicago nonattainment area: Cook, DuPage, Kane, Lake, McHenry, and Will Counties, Aux Sable and Goose Lake Townships in Grundy County, and Oswego Township in Kendall County. TSD at 11, Mot. Amend at 2 n.1. The following jurisdictions comprise the Metro-East/St. Louis nonattainment area: Madison, Monroe, and St. Clair Counties and Baldwin Township of Randolph County. TSD at 11, Mot. Amend at 2, n.1.

[2] For the eight-hour ozone NAAQS, the following jurisdictions comprise the greater Chicago nonattainment area: Cook, DuPage, Kane, Lake, McHenry, and Will Counties, Aux Sable and Goose Lake Townships in Grundy County, and Oswego Township in Kendall County. TSD at 11, Mot. Amend at 2 n.1. The following counties comprise the Metro-East/St. Louis nonattainment area: Jersey, Madison, Monroe, and St. Clair.

"Under Section 110 of the CAA and related provisions, states are required to submit for USEPA's approval, SIPs that provide for the attainment and maintenance of standards established by USEPA through control programs directed to sources of the pollutant involved." Kaleel Test. at 3, citing 42 U.S.C. §7410. "USEPA has determined that, in addition to direct particulate matter, that NO_x, sulfur dioxide (SO_2), VOCs [volatile organic compounds], and ammonia are precursors to the formation of $PM_{2.5}$." Kaleel Test. at 2-3. Accordingly, states are required to address issue including NO_x emissions in their attainment plans under the 1997 $PM_{2.5}$ NAAQS. *Id*. at 3. "This rulemaking address NO_x as a precursor to ozone and $PM_{2.5.}$" TSD at 13 (§2.2).

The CAA includes provisions for the state to address emissions sources on an area-wide basis through requirements including reasonably available control measures (RACM) and reasonably available control technology (RACT). Kaleel Test. at 3, citing 42 U.S.C. §§ 7502, 7511a. In nonattainment areas,

> the CAA requires the State 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 reasonably available control technology) and shall provide for attainment of the national primary ambient air quality standards.' Kaleel Test. at 3, citing 42 U.S.C. § 7502(c)(1).

Under Sections 172 and 182 of the CAA, "RACT is required for all existing major sources of the applicable criteria pollutant and its precursors" in the nonattainment areas. TSD at 13. USEPA has recently defined RACT as "the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological feasibility and economic reasonableness." TSD at 13, citing 70 Fed. Reg. 71612 (Nov. 29, 2005). In moderate nonattainment areas such as Illinois', the major source threshold is 100 tons per year (tpy). TSD at 13.

USEPA recently issued "Finding of Failure to Submit State Implementation Plans (SIP) Required for the 1997 8-Hour Ozone NAAQS." PC 1 at 1, citing 73 Fed. Reg. 15416 (Mar. 24, 2008); *see* Exh. 1. This action issued a SIP call to all states with ozone nonattainment areas that had failed to submit complete RACT SIPs and began the running of sanctions clock. Exh. 1, Tr. 1 at 7-8. USEPA's SIP Call included both the greater Chicago and Metro East/St/. Louis areas. PC 1 at 3; 73 Fed. Reg. 15417-18.

SUMMARY OF THE AGENCY'S AMENDED PROPOSAL

Part 201: Permits and General Provisions

Exemptions from State Permit Requirements (Section 201.146)

Section 201.146 of the Board's air permit regulations exempts specified equipment and activities from the requirement of obtaining state construction or operating permits. 35 Ill. Adm.

Code 201.146. Subsection (i) specifically addresses stationary internal combustion engines and stationary gas turbines. 35 Ill. Adm. Code 201.146(i).

The Agency originally proposed to amend this subsection in docket R07-18. After the Board order bifurcating the original proposal, however, the Agency agreed that this particular amendment should instead be addressed in this docket. Fast-Track Rules Under Nitrogen Oxide (NO_x) SIP Call Phase II: Amendments to 35 Ill. Adm. Code Section 201.146 and Parts 211 and 217, R07-18, slip op. at 5-6 (Aug. 9, 2007). The Board found that the issue of this proposed permit exemption "must be addressed in docket R07-19" and accordingly did not include the proposed amendment to Section 201.146(i) in the Second Notice opinion and order in R07-18. *Id*.

In its motion to proceed with an amended proposal, the Agency addressed Section 201.146 by directing the Board to "[u]se the language as it appeared in the first notice as set forth in the Ill. Reg. dated May 4, 2007." Mot. at 19; *see* NO_x Emissions from Stationary Reciprocating Internal Combustion Engines and Turbines: Amendments to 35 Ill. Adm. Code Section 201.146 and Parts 211 and 217, R 07-18, slip op at 7-8 (Apr. 19, 2007) (first-notice opinion and order); 31 Ill. Reg. 6559-77 (May 4, 2007); *see also* Tr.1 at 32-33. However, in its subsequent "Clarifications and *Errata* Sheet" submitted at the second hearing on May 7, 2008, the Agency proposes an amendment to Section 201.146 that differs from the amendment it had originally proposed in R07-18.[3] Exh. 2 at 3.

In its "Clarifications and *Errata* Sheet," the Agency proposes to amend Section 201.146(i) to provide that the criteria of the permit exemption apply both to specified engines and stationary turbines. Exh. 2 at 3; *see* 35 Ill. Adm. Code 201.146(i). Finally, the Agency also proposes to provide that "[a]ny internal combustion engine with a rating at equal to or greater than 500 bhp output that is subject to the control requirements of 35 Ill. Adm. Code Part 217.388(a) or (b)" must obtain a permit. Exh. 2 at 3; *see* 35 Ill. Adm. Code 217.388.

Part 211: Definitions and General Provisions

Emergency or Standby Unit (Section 211.1920)

Part 211 of the Board's air regulations provides definitions and general provisions with regard to emission standards and limitations for stationary sources. 35 Ill. Adm. Code 211. Specifically, Section 211.1920 defines, for a stationary gas turbine or a stationary reciprocating IC engine, an "emergency or standby unit." 35 Ill. Adm. Code 211.1920. The Agency proposes to add to this definition a new subsection (e) providing that, "[n]otwithstanding any other subsection in this Section, emergency or standby units may operate an additional 50 hours per year in non-emergency situations." Mot. at 3, 18. The Agency states that "[t]his change is

[3] At the first hearing in this proceeding, counsel for the Agency suggested that the Agency wished to amend the caption to reflect the proposed amendment to Section 201.146. Tr.1 at 11. Although the Agency did not formally offer a motion to that effect, the Board today on its own motion amends the caption as reflected above.

consistent with a similar definition that applies to maximum achievable control technology units." Mot. at 3.

After the deadlines to file post-hearing comments and any responses to post-hearing comments had passed, the Board on July 1, 2008 received a comment from Blue Sky (PC 5). Blue Sky recommends "that the definition of emergency or standby unit in Section 211.1920 be amended to include the operation during PJM's Emergency Load Response Program ("ELRP")."[4] PC 5 at 1. Blue Sky indicates that PJM activates the ELRP and the use of emergency units according to specific procedures in the event of a declared emergency. PC 5 at 1. Blue Sky argues that

> [n]umerous states now allow emergency engines to participate during such time (as opposed to waiting for a blackout), principally because studies prove that it is better to prevent a blackout by using a subset of emergency generators for a short period of time as opposed to losing the grid, which would mean all emergency generators in the state operating for many hours or possibly days. PC 5 at 1.

Blue Sky states that that the ELRP is distinct from other PJM programs that are implemented for economic reasons and that PJM has activated the program only five times for a total of 20 hours in the last five years. *Id*. at 1-2.

Blue Sky suggests that the current definition of "emergency or standby unit" allows operation of those units only after a voltage reduction, brownout, or blackout has occurred. PC 5 at 2; *see* 35 Ill. Adm. Code 211.1920. Because it characterizes the ELRP as a "panic button" to be pushed just before those occurrences, Blue Sky recommends adding the following language to the definition:

> [a]n engine that operates during an emergency condition according to the procedures in the PJM Emergency Operations Manual for a PJM Declared Emergency. A PJM Declared Emergency means a condition that exists where the PJM Interconnections, LLC, or its successor, notifies electric distributors that an emergency exists or may occur and it is necessary to implement the procedures in the PJM Manual 13 Emergency Operations, as revised. PC 5 at 2.

On July 16, 2008, the Agency filed a motion for leave to file *instanter* a response to Blue Sky's comment and its response (PC 6). Above, the Board granted the Agency's motion and accepted its response. The Agency suggests that Blue Sky represents Klein Tool, which "enrolled in ELRP to provide emergency electrical service for short periods of time to prevent

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[4] Although Blue Sky's comment provides no description or background of PJM, the Board finds the prefiled testimony of Mr. Wagner of IMEA to be instructive on this issue. Mr. Wagner states that the high-voltage electric transmission grid is administered by regional transmission organizations (RTOs), one of which is PJM. Wagner Test. at 4. He further states that these RTOs operate wholesale power markets and oversee use of the grid and assure its availability on a non-discriminatory basis. *Id*. at 4-5. Mr. Wagner indicates that "PJM's footprint is primarily north of Interstate 80." *Id*. at 5.

black outs." PC 6 at 1. The Agency states that Blue Sky raised the possibility that Klein Tool generating units operating at the request of PJM might not meet the Board's definition of an "emergency or standby unit" or comply with Klein Tool's current permit. PC 6 at 1. The Agency has indicated to Klein Tool that, under the described circumstances, its units fall within that definition. *Id.* at 1-2. The Agency states that it has also indicated to Klein Tool that, based on the same circumstances, there is no need to modify its permit. *Id*. The Agency concludes that "no amendments to the current or proposed definition of emergency/standby unit are necessary at this time." *Id*. at 2. In addition, the Agency argues that the amendment proposed by Blue Sky "falls beyond the scope of the current rulemaking[,] which was proposed to address NO_x RACT." *Id*.

Having considered Blue Sky's comment and the Agency's response to it, the Board declines to adopt the language proposed by Blue Sky and adopts for first-notice publication the language proposed by the Agency to amend the definition of "emergency or standby unit" at Section 211.1920. The Board reflects that language in its order below.

Part 217: Nitrogen Oxides Emissions

On September 20, 2007, the Board adopted a new Subpart Q to Part 217 of the Board's air regulations. Fast-Track Rules Under Nitrogen Oxide (NO_x) SIP Call Phase II: Amendments to 35 Ill. Adm. Code Section 201.146 and Parts 211 and 217, R07-18 (Sept. 20, 2007); *see* 31 Ill. Reg. 14254-71 (Oct. 12, 2007); *see also* 35 Ill. Adm. Code 217.386-396. Section 217.386 of the Board's NO_x regulations now provides in its entirety that "[a] stationary reciprocating internal combustion engine listed in Appendix G of this Part is subject to the requirements of this Subpart Q." 35 Ill. Adm. Code 217.386. Appendix G lists 28 existing reciprocating internal combustion engines affected by Phase II of the NO_x SIP Call. *See* 217 Ill. Adm. Code Appendix G.

The Agency states that its rulemaking proposal in this docket would amend the requirements of Subpart Q "but would not change the substantive elements as they apply to NO_x SIP Call engines." Mot. Amend at 2. In his prefiled testimony on behalf of the Agency, Mr. Kaleel stated that the approach to NO_x control in this proposal is consistent with the approach adopted in R07-18 for large engines subject to Phase II of the NO_x SIP Call. Kaleel Test. at 4; citing Fast-Track Rules Under Nitrogen Oxide (NO_x SIP Call Phase II: Amendments to 35 Ill. Adm. Code Section 201.146 and Parts 211 and 217, R07-18 (Sept. 20, 2007); *see* 31 Ill. Reg. 14254-71 (Oct. 12, 2007); *see also* 35 Ill. Adm. Code 217.386–396. Specifically, Mr. Kaleel stated that the Agency has proposed that "turbines and engines not subject to Phase II of the NO_x SIP Call be subject to NO_x emissions limits at the same level as that required by R07-18 which met the State's obligations under Phase II of the NO_x SIP Call." Kaleel Test. at 4; *see* Mot. Amend, Att. A.

Applicability (Section 217.386)

Section 217.386(a). The Agency's proposal would apply Subpart Q to specified units in the greater Chicago and Metro East/St. Louis nonattainment areas. Mot. Amend at 2-3; *see* Mot. Amend, Att. A at 1 (proposed new Section 217.386(a)(2)); *see also* Kaleel Test. at 4, TSD at 13 (RACT). In her testimony on behalf of IERG, Ms. Hirner supported the geographical

applicability of the proposed rule to the nonattainment areas. Hirner Test. at 3. She stated that "IERG has long advocated this approach and it is supported by NO_x emissions modeling." *Id*., citing Mot. Amend. In his testimony on behalf of the Pipeline Group, Mr. McCarthy also noted that the Agency limited the geographical applicability of the proposed regulation to the nonattainment areas. McCarthy Test. at 5. He stated that "[t]his applicability criterion was adamantly supported by the Pipeline Group throughout rule development, and substantiated by regional air quality modeling completed in the fall of 2007." *Id*. at 5-6.

In addition to limiting its geographical applicability to the nonattainment areas, the Agency also proposed to limit the proposed regulation to "[s]tationary reciprocating internal combustion engines and turbines located at a source that emits or has the potential to emit NO_x in an amount equal to or greater than 100 tons per year." Mot. Amend, Att. A at 1 (proposed new Section 217.386(a)(2)); *see* Mot. Amend at 2-3, TSD at 13 (major source threshold for RACT). In her testimony on behalf of IERG, Ms. Hirner stated that IERG had misgivings about the applicability language originally proposed by the Agency. Hirner Test. at 3; *see also* PC 3 at 4. Because that original language was not consistent with existing permit exemptions, IERG feared that it would impose new requirements on "an unknown universe of engines and turbines." Hirner Test. at 3, PC 3 at 4. Ms. Hirner testified that, because the Agency's amended proposal applies only to major sources of NO_x, it "provides more certainty to the reach of this rulemaking." Hirner Test. at 3; *see also* PC 3 at 4. In its post-hearing comments, IERG characterized this applicability provision as one of the "vitally important" elements of the Agency's amended proposal. PC 3 at 8.

Responding to questions at the first hearing, Mr. Kaleel clarified that the threshold of 100 tpy is not calculated solely on the basis of NO_x emission from engines and turbines. *See* Tr. 1 at 19. Specifically, he stated that Section 217.386(a)(2) "could refer to any emission units that emits NO_x at a source." *Id*. Mr. Kaleel also indicated that the Agency's proposed rule would not apply to engines or turbines located in one of the nonattainment areas at a source that does not emit or have the potential to emit 100 tpy of NO_x. Tr.1 at 27-28. Mr. Kaleel further indicated that a single engine or turbine located in one of the nonattainment areas that emits or has a potential to emit 100 tpy of NO_x would be subject to the proposed regulations. Tr.1 at 28. However, Mr. Kaleel acknowledged that, if actual emissions from that engine or turbine are less than 100 tpy, the operator could seek a federally enforceable emissions limit or restriction on operation that would reduce the potential to emit below 100 tpy. *Id*. Mr. Kaleel stated that, if the operator accepted such an enforceable limit, "they could avoid the requirements of the rule." *Id.* at 28-29.

In addition to applying to major sources of NO_x emission in the nonattainment areas, the Agency's proposed regulations apply to stationary internal combustion engines and turbines where "[t]he engine at nameplate capacity is rated at equal to or greater than 500 bhp output; or [t]he turbine is rated at equal to or greater than 3.5 MW . . ." Mot. Amend, Att. B at 1; Mahajan Test. at 2; Kaleel Test. at 5.

In his testimony on behalf of the Pipeline Group, Mr. McCarthy expressed a firm belief that larger "engines and turbines provide the most cost effective and environmentally beneficial avenue for emission reductions" and questioned both the basis and legitimacy of the 500 bhp

threshold for engines and the 3.5 MW threshold for turbines. McCarthy Test. at 6. Responding to a question at the second hearing, Mr. Kaleel stated that the Agency developed these thresholds based on the belief that units of that size have the potential to emit 100 tpy of NO_x. Tr.2 at 15. Mr. Kaleel acknowledged that engines of this size would not necessarily operate continuously throughout the year and may not actually emit 100 tons of NO_x. *Id*. He noted that the proposed rule includes mechanisms through which "engines of this size could avoid having to comply with the rule." *Id*. at 15-16. Specifically, "[s]ources can opt for a federally enforceable emissions limit or a low usage limit in terms of the number of hours the unit will be operated." PC 1 at 5. Mr. McCarthy testified that the limited geographical applicability of the proposed rule and the option of low usage operation "partially ameliorate our concerns and thus the Pipeline Group does not strenuously object here. . . ." McCarthy Test. at 6.

Section 217.386(b). The Agency's proposal also provides an exemption for mobile or portable units: "[n]otwithstanding subsection (a) of this Section, an affected unit is not subject to the requirements of this Subpart Q if the engine or turbine is or has been . . . [a]n engine with nameplate capacity rated at less than 1,500 bhp (1,118kW) output, mounted on a chassis or skids, designed to be movable, and moved to a different source at least once every 12 months." Mot. Amend, Att. A at 1 (proposed Section 217.386(b)(5)). In responding to questions at the first hearing, Mr. Kaleel expressed the intent that, in order for this exemption to apply, the engine or turbine would have to be physically moved to a different Clean Air Act source at least once every 12 months. Tr.1 at 14. He further clarified that the Agency did not intend the exemption to apply to engines or turbines that moved between different locations within a source. *Id*. at 14-16. Mr. Kaleel suggested that units remaining at a particular source may effectively be stationary, while others may be moved frequently from source to source. Tr.1 at 14.

> We're really thinking of things like construction sites or perhaps asphalt plants that are movable and mobile. They're not going to be in the same general location for any significant length of time. It's difficult to regulate units like that, difficult to track them, to inspect them on a regular basis or routine basis. Tr.1 at 16; *see also* PC 1 at 6.

The Agency also accounted for the cap of 1,500 bhp in this proposed exemption. The Agency indicated that this threshold is based in part on regulatory language exempting engines rated at 1,500 bhp or less from permit requirements. PC 1 at 5, citing 35 Ill. Adm. Code 201.146. Although the Agency acknowledges that its proposal generally applies to engines rated at or greater than 500 bhp, it states that potentially-affected sources confirm that "many units rated between 500 bhp and 1,500 bhp will have low emissions, especially those engines that are mounted on skids and moved around a particular source." PC 1 at 5. The Agency further states that small units may be used on a limited basis as back-up generation and have low emissions but will not fall under the exemption for an emergency or standby unit. PC 1 at 5; *see* 35 Ill. Adm. Code 211.1920; Mot. Amend, Att. A at 18 (proposing amendment to definition of "emergency or standby unit"). For engines rated higher than 1,500 bhp that have low emissions, the Agency states that "an owner or operator may opt for a federally enforceable emission limit or a limit on the hours of operation." PC 1 at 5.

In addition to mobile or portable units, the Agency proposed to exempt four other categories of units from the requirements of Subpart Q. First, the Agency proposes to exempt an engine or turbine that "is or has been [u]sed as an emergency or standby unit as defined by 35 Ill Adm. Code 211.1920." Mot. Amend, Att. A at 1 (proposed new Section 217.386(b)(1)); *see supra* at 6-8 (proposing to amend definition). Second, the Agency suggested to exempt those "[u]sed for research or for the purposes of performance verification or testing." Mot. Amend, Att. A at 1 (proposed new Section 217.386(b)(2)). Third, the Agency also proposed an exemption for units "[u]sed to control emissions from landfills, where at least 50 percent of the heat input is gas collected from a landfill." Mot. Amend, Att. A at 1 (proposed new Section 217.386(b)(3)). Fourth, the Agency recommended an exemption for units "[u]sed for agricultural purposes including the raising of crops or livestock that are produced on site, but not for associated businesses like packing operations, sale of equipment or repair." Mot. Amend, Att. A at 1 (proposed new Section 217.386(b)(4). These four proposed exemptions did not generate significant comment or dispute in the course of these proceedings.

Section 217.386(c). The Agency proposes to add a new subsection (c) providing that, "[i]f an exempt unit ceases to fulfill the criteria specified in subsection (b) of this Section, the owner or operator must notify the Agency in writing within 30 days after becoming aware that the exemption no longer applies and comply with the control requirements of this Subpart Q." Mot. Amend, Att. A at 2 (proposed new Section 218.386(c)). This proposed language did not generate significant comment or dispute in the course of these proceedings.

Section 217.386(d). The Agency proposes to add a new subsection (d) providing that "[t]he requirements of this Subpart Q will continue to apply to any engine or turbine that has ever been subject to the control requirements of Section 217.388, even if the affected unit or source ceases to fulfill the rating requirements of subsection (a) of this Section or becomes eligible for an exemption pursuant to subsection (b) of this Section." Mot. Amend, Att. A at 2 (proposed new Section 217.386(d)). This proposed language did not generate significant comment or dispute in the course of these proceedings.

Subsection (e). In testimony on behalf of IERG, Ms. Hirner noted that the Agency's proposal includes a compliance deadline of May 1, 2010. Hirner Test. at 5; *see* Mot. Amend, Att. A at 10 (proposed new Section 217.392(b)). Ms. Hirner testified that

> sources may have already implemented or may be implementing emission reductions at units that would be affected by the Proposed Rule. Reasons for such reductions may involve a larger decision across the source to target reductions in one area in order to offset additional NO_x emissions that may be planned in another area, which is often referred to as 'netting.' Similarly, sources may decide to reduce their own emissions in order to sell emission reduction credits as 'offsets' so that another source may add NO_x emission. Hirner Test. at 5.

Ms. Hirner further testifies that both netting and offsetting typically involve the permitting process "in order to recognize the creditable emissions decreases and their use for the corresponding emissions increases." *Id*. at 5-6. Ms. Hirner expressed the concern that permits could "rely on NO_x emissions reductions at units that would now be subject to the Proposed

Rule." *Id*. at 6. In order to prevent any conflicts between prior permits and the Agency's proposal, IERG proposed as a new subsection (e) the following language:

> [w]here 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 shall remain creditable notwithstanding any requirements that may apply to the existing emissions units pursuant to this Subpart. *Id*.

Ms. Hirner further testified that the Agency concurred in this adding this subsection "ín order to provide certainty in past, current and future permitting decisions." *Id*.

Indeed, in filing its "Clarifications and *Errata* Sheet" as Exhibit 2, the Agency proposed a new subsection (e) substantially identical to that proposed by IERG in Ms. Hirner's testimony. Exh. 2 at 1. In post-hearing comments, IERG noted this proposal on the part of the Agency. PC 3 at 7. Emphasizing that this proposed subsection (e) "would preserve NO_x emission reductions in qualifying netting or offset situations," IERG urged the Board to adopt this language. The Board finds that the provision proposed by IERG and the Agency resolves conflicts between prior permits and the instant proposal and adopts the proposed Section 217.386(e) for first notice.

Control and Maintenance Requirements (Section 217.388)

Section 217.388(a). Section 217.388(a) now provides that "[t]he owner or operator must limit the discharge from an affected unit into the atmosphere of any gases that contain NO_x" to separate emissions concentration limits for spark-ignited rich-burn engines and spark-ignited lean-burn engines. 35 Ill. Adm. Code 217.388(a). In addition to these two types of units, Mr. Kaleel testified that the Agency's proposal offers four new and "separate concentration limits for different types of engines and turbines, and based on the kind of fuel used." Kaleel Test. at 5. Specifically, the Agency first proposes to amend the current emission concentration level for spark-ignited lean-burn engines to provide an exception "for existing spark-ignited Worthington engines that are not listed in Appendix G." Mot. Amend, Att. A at 2 (proposed Section 217.388(a)(2)); *see* 35 Ill. Adm. Code 217. Appendix G (Existing Reciprocal Internal Combustion Engines Affected by the NO_x SIP Call). The Agency then proposes a new subsection (a)(3), which provides a new emissions concentration level applicable to those engines. Mot. Amend, Att. A at 2 (proposed new Section 217.388(a)(3)). In addition, the Agency proposes new language providing three separate emissions concentration levels applicable to diesel engines, gaseous fuel-fired turbines, and liquid fuel-fired turbines. Mot. Amend, Att. A at 2 (proposed new Sections 217.388(a)(4), (a)(5), (a)(6)).

In his testimony on behalf of the Pipeline Group, Mr. McCarthy stated that engines and turbines respond to emission controls in a manner that varies among the manufacturers and models of those units. McCarthy Test. at 5. Specifically, he stated that "[u]nit-specific technology costs and performance can vary dramatically for the slow speed, integral IC engines prevalent in gas transmission," requiring flexibility in NO_x regulation. *Id*. Mr. McCarthy lends support to the Agency's proposal to add Section 217.388(a)(3) by stating that the Agency "has

properly considered an example of performance limitations by including a less stringent NO_x standard under Section 217.388(a)(3) for a certain engine type found in the gas transmission sector." *Id*.

In its post-hearing comments, the IMEA stated that it "has not challenged" aspects of the Agency's proposed rule, including the control requirements. PC 2 at 7 (noting proposed compliance options); Tr.1 at 43. Similarly, post-hearing comments from IERG indicated that it "has not objected to the emission concentration limits" in the Agency's proposal. PC 3 at 1-2 (noting compliance options); Tr.1 at 43.

Section 217.388(b). Section 217.388(b) now provides that the owner or operator of an affected unit may, as an alternative to complying with the emissions concentration limits in subsection (a), comply with the requirements of an emissions averaging plan as set forth in Section 217.390. 35 Ill. Adm. Code 217.388(b); *see* 35 Ill. Adm. Code 217.390. The Agency proposes to amend this subsection in two respects. First, the Agency proposes that "*any* affected unit identified by Section 217.386" may satisfy the control requirements of Subpart Q by complying with the "requirements of the applicable emissions averaging plan as set forth in Section 217.390." Mot. Amend, Att. A at 2-3 (proposed Section 217.388(b)(1)) (emphasis added); *see* 35 Ill. Adm. Code 217.390. Second, the Agency proposes that "units identified in Section 217.386(a)(2)," may satisfy the control requirements by complying with "[t]he requirements of an emissions averaging plan adopted pursuant to any other Subpart of this Part." Mot. Amend, Att. A at 3 (proposed new Section 217.388(b)(2)).

In her testimony on behalf of IERG, Ms. Hirner stated generally that emissions averaging plans allow "source to decide which emission units are the most effective to control, thus allowing over-compliant units to offset emissions from units that are not effective to control." Hirner Test. at 4. She lent support to the Agency's proposed Section 217.388(b)(2), stating that the language would allow averaging plans "to span across different Subparts of Part 217." *Id*. She further stated that "[t]his will be helpful to our members that may not be able to utilize averaging among Subpart Q units alone, but could achieve compliance for Subpart Q units by averaging with emission units affected by other Part 217 provisions." *Id*.

Section 217.388(c). The Agency proposes to add language allowing the owner or operator of an affected unit to comply with the control requirements of Subpart Q by operating as a low usage unit. Mot. Amend, Att. A at 3 (proposed new Section 217.388(c)). This proposed new language specifically provides that "[l]ow usage units are not subject to the requirements of this Subpart Q except for the requirements to inspect and maintain the unit pursuant to subsection (d) of this Section, and retain records pursuant to Sections 217.396(b) and (d)." *Id*. "Testing and monitoring do not apply to low usage units." Mot. Amend at 3 (¶6e). The Agency proposes two ways for sources to qualify for this low usage exemption.

First, a source qualifies as low usage under the proposed rule if "[t]he potential to emit (PTE) is no more than 100 TPY NO_x aggregated from all engines and turbines located at the source that are not otherwise exempt pursuant to Section 217.386(b), and not complying with the requirements of subsection (a) or (b) of this Section, and the NO_x PTE limit is contained in a federally enforceable permit." Mot. Amend, Att. A at 3 (proposed new Section 217.388(c)(1)).

Responding to questions at the first hearing, Mr. Kaleel clarified that units complying with the control requirements of the proposed rule and units exempt from those requirements are not counted toward this 100 tpy threshold. Tr.1 at 18-20 (distinguishing low usage from general applicability threshold); *see also* Tr.1 at 47-48 (Wagner response); PC 2 at 4.

Second, a source qualifies as a low usage unit under the proposed rule if "[t]he aggregate bhp-hrs/MW-hrs from all affected units at the source that are not exempt pursuant to Section 217.386(b), and not complying with the requirements of subsection (a) or (b) of this Section, are less than or equal to . . . 8 mm bhp-hrs or less on an annual basis for engines; and 20,000 MW-hrs or less on an annual basis for turbines." Mot. Amend, Att. A at 3 (proposed Section 217.388(c)(2)). In his testimony on behalf of the Agency, Mr. Kaleel stated that stakeholders proposed these operating limits and that the actual thresholds resulted from negotiations with them. Tr.1 at 48-49. Mr. Kaleel explained the rationale for these thresholds by stating that "a relatively small unit could operate for a lot of hours and not trigger that threshold, and the smaller unit would have fewer emissions. A larger unit would be allowed fewer hours before it triggered that requirements because that larger unit would be expected to have larger emissions." Id. at 49. In responding to questions at the first hearing, Mr. Kaleel clarified that, if a source includes both engines and turbines, it could count those hours separately by limiting annual operation of engines to 8 mm bhp-hrs and turbines to 20,000MW-hrs and still remain a low usage unit. Tr.1 at 21-22. However, Mr. Kaleel also stated that a source could qualify as a low usage unit either through the enforceable NO_x PTE limit in subsection (c)(1), or through the operation limits in subsection (c)(2), but not both. *Id*.; Mot. Amend, Att. A at 3 (proposed Section 217.388(c)).

In her testimony on behalf of IERG, Ms. Hirner stated that the low usage option "will be particularly useful to our industrial members who employ engine-driven electric generators. Because such units typically operate only on an as-needed basis, our members believe that retrofitting these types of units with controls in not practical or cost effective. Hirner Test. at 4; *see also* PC 3 at 2. In his testimony on behalf of IMEA, Mr. Wagner stated that "[a]n emissions averaging plan offers little compliance relief due to the uniformity in design and operation among most municipal units. Thus, the low usage designation is critical for our member to be able to comply with this Proposed Rule." Wagner Test. at 10; *see also* PC 2 at 4. Noting that proposed Section 217.388(c)(2) allows a source including both engines and turbines to count their annual operating hours separately, Mr. Wagner stated that "[t]his approach provides important flexibility for IMEA's members, which IMEA strongly supports." Wagner Test. at 8. In his testimony on behalf of the Pipeline Group, Mr. McCarthy characterized the low usage criteria as one notable way that the Agency's proposal provides flexibility to affected sources. McCarthy Test. at 5. He further stated that the provision is one of the compliance options "necessary for a workable rule" and one strongly supported by the Pipeline Group. *Id*.

Emissions Averaging Plan (Section 217.390)

Section 217.390 allows an owner or operator of certain affected units to comply with the control requirements of Subpart Q through an emissions averaging plan. 35 Ill. Adm. Code 217.390. The section includes language implementing this compliance option. *See* 35 Ill. Adm. Code 217.390(a) – (h).

As noted above, Ms. Hirner characterized emissions averaging as a "useful addition" to the Agency's proposal: "[t]his compliance option allows sources to decide which emission units are the most effective to control , thus allowing over-compliant units to offset emissions from units that are not effective to control." Hirner Test. at 4, PC 3 at 2. She emphasized that the Agency proposes to allow averaging of emissions from Subpart Q units "with emission units affected by other Part 217 provisions." PC 3 at 2; *see also* Hirner Test. at 4, citing Mot. Amend, Att. A at 3 (proposed new Section 217.388(b)(2)). In his testimony on behalf of the Pipeline Group, Mr. McCarthy characterized emissions averaging as one notable way that the Agency's proposal provides flexibility to affected sources. McCarthy Test. at 5. He further stated that the provision is one of the compliance options "necessary for a workable rule" and one strongly supported by the Pipeline Group. *Id*.

The Agency has not proposed significant amendments to subsections addressing the following matters: demonstrating compliance with a plan (35 Ill. Adm. Code 217.390(e)); the equation for determining compliance with a plan (35 Ill. Adm. Code 217.390(f)); and compliance for units that use continuous emissions monitoring systems (CEMS) (35 Ill. Adm. Code 217.390(h)). *See* Mot. Amend, Att. A at 6-7, 10; Exh. 2 at 1-2. The Board below summarizes amendments proposed by the Agency to the remaining subsections of Section 217.390 on a subsection-by-subsection basis.

Section 217.390(a). In the provision describing units that commenced operation before January 1, 2002 that may be included in a single emission averaging plan, the Agency proposes to add language under which "owners or operators with affected engines and turbines located at more than one source within a given nonattainment area may develop a companywide emissions averaging plan for the given nonattainment area." Mot. Amend at 3 (¶6d); *see* Mot. Amend, Att. A at 4 (proposed new Section 217.390(a)(1)(A)(ii)), Exh. 2 at 1 (¶4) (correction); *see generally* Kaleel Test. at 6. The Agency also proposes to add new language making eligible for averaging plans "[u]nits that have a compliance date later than the control period for which the averaging plan is being used for compliance." Mot. Amend, Att. A at 4 (proposed new Section 217.390(a)(1)(B)). The Agency also proposes to add language making eligible

> [u]nits which the owner or operator may claim as exempt pursuant to Section 217.386(a) but does not claim as exempt. For as long as such unit is included in an emissions averaging plan, it will be treated as an affected unit and subject to the applicable emission concentration, limits, testing, monitoring, recordkeeping and reporting requirements. Mot. Amend, Att. A at 5 (proposed new Section 217.390(a)(1)(C)).

Finally, the Agency also proposes language adding to the types of units may not be included in an averaging plan "[u]nits which the owner or operator is claiming are exempt pursuant to Section 217.386(b) or as low usage units pursuant to Section 217.388(c)." Mot. Amend, Att. A at 5 (proposed new Section 217.390(a)(2)(B)).

Section 217.390(b). The prefatory paragraph of Section 217.390(b) now provides in part that "[a]n owner or operator must submit an emissions averaging plan to the Agency by the

applicable compliance date set forth in Section 217.392." 35 Ill. Adm. Code 217.390(b). The subsection continues by describing information the submitted plan must include. *Id.* In its "Clarification and *Errata* Sheet," the Agency states that this "submission date needs to be clarified to include an option for an owner or operator to change their method of compliance after the initial compliance date." Exh. 2 at 2 (¶5). Specifically, the Agency proposes to add to the current language cited above that the plan may be submitted "by May 1 of the year in which the owner or operator is using a new emissions averaging plan to comply." *Id*.

The Agency also proposes in Exhibit 2 to provide the effective date of averaging plans. After re-numbering existing subsection (b)(1) and (b)(2) to subsection (b)(1)(A) and (B)(1)(B), respectively, the Agency proposes to add a new Section 217.390(b)(2):

> Those plans will be effective as follows:
>
> A) An initial plan for units required to comply by January 1, 2008, is effective January 1, 2008;
>
> B) An initial plan for units required to comply by May 1, 2010, is effective May 1, 2010 for those units;
>
> C) A new plan submitted pursuant to subsection (b) of this Section but not submitted by January 1, 2008 or May 1, 2010 is effective retroactively to January 1 of the applicable year;
>
> D) An amended plan submitted pursuant to subsection (c) of this Section is effective retroactively to January 1 of the applicable year; or
>
> E) An amended plan submitted pursuant to subsection (d) of this Section is effective on the date it is received by the Agency. Exh. 2 at 2.

Section 217.390(c). Section 217.390(c) allows an owner or operator to amend an averaging plan only once per calendar year. 35 Ill. Adm. Code 217.390(c). The Agency proposes to add to this subsection language providing that "[a]n amended plan must include the information from subsection (b)(1) and may, but is not limited to changing the group of affected units or reflecting changes in the operation of the affected units." Exh. 2 at 2. The Agency also proposes to add language providing that amended plans submitted to the Agency become effective as set forth in the proposed new subsection (b)(2). *Id*. at 3.

Section 217.390(d). Subsection (d) provides that, notwithstanding subsection (c) allowing an emissions averaging plan to be amended only once per calendar year, "an owner or operator, and the buyer, if applicable, must submit an updated emissions averaging plan or plans to the Agency within 60 days if a unit that is listed in an emissions averaging plan is sold or taken out of service." 35 Ill. Adm. Code 217.390(d); *see* 35 Ill. Adm. Code 217.390(c). The Agency proposes to re-number this language as subsection (d)(1). Mot. Amend, Att. A at 6. The

Agency also proposed to add as subsection (d)(2) language providing that, notwithstanding subsection (c), an owner or operator, and the buyer, if applicable, "[m]ay amend its emissions averaging plan to include another unit within 30 days of discovering that the unit no longer qualifies as an exempt unit pursuant to Section 217.386(b) or as a low usage unit pursuant to Section 217.388(c)." Mot. Amend, Att. A at 6.

Section 217.390(g). Section 217.390(g)(6) establishes, for "non-Appendix G units used in an emissions averaging plan," the allowable emissions rate to be used in determining allowable emissions under subsection (g)(2). 35 Ill. Adm. Code 217.390(g)(6); *see* 35 Ill. Adm. Code 217.390(g)(2). Specifically, that rate is "the higher of the actual NO_x emissions as determined by testing or monitoring data, or the applicable uncontrolled NO_x emissions factor from Compilation of Air Pollutant Emission Factors: AP-42, Volume I: Stationary Point and Areas Sources, as incorporated by reference in Section 217.104." 35 Ill. Adm. Code 217.390(g)(6).

The Agency first proposes to amend subsection (g)(6) by providing that it applies not to "non-Appendix G units used in an emissions averaging plan," but to "units that have a later compliance date." Mot. Amend, Att. A at 9. Second, the Agency proposes that the allowable emissions rate must be the higher of the actual NO_x emissions or the applicable uncontrolled NO_x emissions factor "[p]rior to the applicable compliance date pursuant to Section 217.392." Mot. Amend, Att. A at 9; *see* 35 Ill. Adm. Code 217.390(g)(6). Finally, the Agency proposes to add language providing that, "[o]n and after the unit's applicable compliance date pursuant to section 217.392, the applicable emissions concentration for that type of unit pursuant to Section 217.388(a)." Mot. Amend, Att. A at 9; *see* 35 Ill. Adm. Code 217.388(a).

Compliance (Section 217.392)

Section 217.392 now provides in its entirety that "[o]n and after January 1, 2008, an owner or operator of an affected engine listed in Appendix G may not operate the affected engine unless the requirements of this Subpart Q are met or the affected engine is exempt pursuant to Section 217.386(b)." 35 Ill. Adm. Code 217.392; *see* 35 Ill. Adm. Code 217.386(b), 35 Ill. Adm. Code Appendix G. The Agency proposes to re-number this provision as Section 217.392(a). Mot. Amend, Att. A at 10. In its amended proposal, the Agency seeks to add a compliance date of May 1, 2010 for RACT units. Mot. Amend at 3 (¶6b); Kaleel Test. at 7. Specifically, the Agency proposes to add a new Section 217.392(b) providing that, "[o]n and after May 1, 2010, an owner or operator of a unit identified by Section 217.386 (a)(2), and that is not listed in Appendix G, may not operate the affected unit unless the requirements of this Subpart Q are met or the affected unit is exempt pursuant to Section 217.386(b)." Mot. Amend, Att. A at 10; *see* Exh. 2 at 3 (¶6) (correction).

The Agency also proposed to add to Section 217.392 a compliance option allowing owners and operators under certain circumstances to use NO_x trading program allowances to satisfy the control requirements of Subpart Q. Kaleel Test. at 6; Mot. Amend, Att. A at 10-11 (proposed new Section 217.392(c)). The Agency's proposed language defines a NO_x allowance as "an allowance used to meet the requirements of a NO_x trading program administered by USEPA where one allowance is equal to one ton of NO_x emissions." Mot. Amend, Att. A at 10-

11 (proposed new Section 217.392(c)). In his prefiled testimony on behalf of the Agency, Mr. Kaleel stated that "[t]his option is included in the proposal at the request of stakeholders and will again provide increased operating flexibility and will reduce compliance costs." Kaleel Test. at 7; Tr.1 at 51.

The Agency's proposal lists three circumstances, all of which must apply for NO_x allowances to be used. First, the allowances may be used only "[f]or a unit that is not listed in Appendix G." Mot. Amend, Att. A at 11 (proposed new Section 217.392(c)(1)(C)). Second, there must occur "[a]n anomalous or unforeseen operating scenario inconsistent with historical operation for a particular ozone season or calendar year that causes an exceedance of an emissions or operating hour limitation." Mot. Amend, Att. A at 11 (proposed new Section 217.392(c)(1)(A)); *see* Tr.1 at 51, Kaleel Test. at 7, *see also* Exh. 2 at 3 (¶7) (correction). In responding to questions at the first hearing, Mr.Kaleel recognized that operators of engines and turbines may face unforeseen circumstances, and he indicated that the Agency included NO_x allowances in its proposal in order to address those. Tr.1 at 54.

Third, the owner or operator may use NO_x allowances "[t]o achieve compliance for no more than two events in any rolling five-year period." Mot. Amend, Att. A at 11 (proposed new Section 217.392(c)(1)(B)); *see* Kaleel Test. at 7, *see also* Exh. 2 at 3 (¶8) (correction). In responding to questions at the first hearing, Mr. Kaleel suggested that exceedances occurring more often than twice in any rolling five-year period may not be truly unforeseeable and may require "better planning" on the part of owners and operators. Tr.1 at 51. He indicated that the Agency did not want this option to become "open-ended" and felt that the option should not become "an unlimited way of complying with the rule." *Id*.

The Agency also has proposed language on surrendering NO_x allowances. Specifically, "[t]he applicable type of NO_x allowances must be used, that is, annual allowances must be used for exceedances of an annual limit and ozone season allowances must be used for exceedances of a seasonal limit." Kaleel Test. at 7; *see* Mot. Amend, Att. A at 11 (proposed new Section 217.392(c)(2)). The Agency also proposes that, when an affected unit exceeds a low usage limitation, "the owner or operator of the affected unit must calculate the NO_x emissions resulting from the number of hours that exceeded the operating hour low usage limit and surrender to the Agency one NO_x allowance for each ton or portion of a ton of NO_x that was calculated." Mot. Amend, Att. A at 11 (proposed new Section 217.392(c)(2)).

In addition, the Agency proposes to require that the owner or operator must file with the Agency "a report documenting the circumstances that required the use of NO_x allowances and identify what actions will be taken in subsequent years to address these circumstances." Mot. Amend, Att. A at 11 (proposed new Section 217.392(c)(3)). This proposed requirements includes deadlines for submitting those reports: "by October 31 for exceedances during the ozone season and March 1 for exceedances of the emissions concentration limits, the annual emissions averaging plan limits, or low usage limitations." *Id.*

In his testimony on behalf of IMEA, Mr. Wagner stated that, for his association, "[a]n emission averaging plan offers little compliance relief due to the uniformity in design and operation among most municipal units." Wagner Test. at 10. He further stated that "[m]any of

the IMEA members' units, particularly the older units, will be forced to operate as low usage units because it is economically not feasible to modify these units to comply with the emission requirements of the Proposed Rule, particularly given that these units operate sporadically." *Id*. at 8-9. Mr. Wagner suggested, however, that the benefit of the low usage option is significantly reduced by "the substantial reduction on permitted capacity that some members will likely face." *Id*. at 11. He states allowing use of NO_x allowances addresses this concern. *Id*., PC 2 at 5. He argues that "[t]he low usage compliance option would simply not be workable without the NO_x allowance provision." Wagner Test. at 11-12 (citing flexibility); PC 2 at 5. He summarizes by stating that provision for low usage operation and the use of NO_x allowances "are considered by IMEA to be absolutely essential." Wagner Test. at 13; PC 2 at 7.

In her testimony on behalf of IERG, Ms. Hirner characterized the ability to use NO_x allowances as an "important component" of the Agency's proposed rule. Hirner Test. at 5. She states that "IERG supports the ability for regulated sources to utilize the emissions marketplace when compliance difficulties arise. Such an approach is beneficial to the environment as well, as NO_x emission allowances, in an amount equivalent to the compliance excursion, would be retired from the allowance pool." *Id*.; PC 3 at 3.

In his testimony on behalf of the Pipeline Group, Mr. McCarthy characterized the limited use of NO_x emissions allowances in anomalous circumstances as one notable way in which the Agency's proposal provides flexibility to affected sources. McCarthy Test. at 5. He further stated that the provision is one of the compliance options "necessary for a workable rule" and one strongly supported by the Pipeline Group. *Id*.

Testing and Monitoring (Section 217.394)

Section 217.394 includes provisions relating to initial performance tests of affected units (35 Ill. Adm. Code 217.394(a)), subsequent performance tests (35 Ill. Adm. Code 217.394(b)), testing procedures (35 Ill. Adm. Code 217.394(c)), monitoring (35 Ill. Adm. Code 217.394(d)), and units that use CEMS (35 Ill. Adm. Code 217.394(e)).

In his prefiled testimony on behalf of the Agency, Mr. Kaleel claims that the Agency's proposal "provides a flexible approach for meeting the requirements for testing and monitoring." Kaleel Test. at 7. He stated that, "[i]n general, affected units must conduct a compliance test by the applicable compliance date." *Id.*; *see* Mot. Amend, Att. A at 12 (proposed Section 217.394(a)(2)). He further stated that "[a]ffected units that operate intermittently do not need to be tested until after they have operated at least 876 hours in a year." Kaleel Test. at 7. *see* Mot. Amend, Att. A at 12 (proposed Section 217.394(a)(2)). Mr. Kaleel also stated that "[u]nits that operate less than 876 hours per calendar year can be tested at the owner's or operator's choosing any time within the first five years after the applicable compliance date." Kaleel Test. at 7; *see* Mot. Amend, Att. A at 12 (proposed Section 217.394(a)(3)).

Although the Agency does not propose significant amendments to subsections (b), (c), (d), or (e), it proposes a new subsection (f) regarding low usage units. *See* Mot. Amend, Att. A at 14. That new subsection clarifies that, "[t]he testing and monitoring requirements of this Section do not apply to affected units in compliance with the requirements of the low usage

limitations pursuant to Section 217.388(c) or low usage units using NO_x allowances to comply with the requirements of this Subpart pursuant to Section 217.392(c)." *Id*. (proposed new Section 217.394(f)); *see* Mot. Amend at 3 (¶6e), Tr.1 at 36 (Kaleel testimony). The Agency also proposes to require that, if the Agency or USEPA determines that "it is necessary to conduct testing to demonstrate compliance with Section 217.388, the owner or operator of a unit must, at his or her own expense, conduct the test in accordance with the applicable test methods and procedures specified in this Section within 90 days after receipt of a notice to test from the Agency or USEPA." Mot. Amend, Att. A at 14 (proposed new Section 217.394(f)); *see* Tr.1 at 36 (Kaleel testimony).

Recordkeeping and Reporting (Section 217.396)

Section 217.396 now provides requirements with regard to recordkeeping and reporting. 35 Ill. Adm. Code 217.396. Recordkeeping requirements now apply to an owner or operator of an Appendix G unit or a unit included in an emissions averaging plan. 35 Ill. Adm. Code 217.396(a). The Agency first proposes to amend this subsection by clarifying that its requirements apply to the owner or operator of "a unit included in an emissions averaging plan or an affected unit that it not exempt pursuant to Section 217.386(b) and is not subject to the low usage exemption of Section 217.388(c)." Mot. Amend, Att. A at 14 (proposed amendment to existing Section 217.396(a)).

Section 217.396(a) requires maintenance of "records that demonstrate compliance with the requirements of Subpart Q which include, but are not limited to" ten specified items. 35 Ill. Adm. Code 217.396(a)(1) – (10). The Agency proposes to add an eleventh required record: "[a]ny NO_x allowance reconciliation reports submitted pursuant to Section 217.392(c)(3)." Mot. Amend , Att. A at 15 (proposed new Section 217.396(a)(11)).

Section 217.396(c) places reporting requirements on the owner or operator of an affected unit. 35 Ill. Adm. Code 217.396(c)(1) – (5). The Agency proposes to add a new Section 217.396(c)(6) providing that, if an owner or operator uses NO_x allowances to comply with the requirements of Section 217.388, he or she must submit "reconciliation report as required by Section 217.392(c)(3)." Mot. Amend, Att. A at 17 (proposed new Section 217.396(c)(6)).

In addition, the Agency proposes to add a new Section 217.396(d) requiring that low usage units "maintain records that demonstrate that they continue to qualify for that exemption." Tr.1 at 36 (Kaleel testimony). Specifically, the proposed language requires that the owner or operator of a low usage unit must maintain a record of NO_x emissions for each calendar year if the unit complies through an enforceable limit on NO_x PTE. Mot. Amend, Att. A at 17 (proposed new Section 217.396(d)(1)). The proposed language also requires a record of bhp or MW hours operated each calendar year if the unit complies through an operation limit. *Id*. (proposed new Section 217.396(d)(2)). The proposed language also requires the maintenance and submission of any NO_x allowance reconciliation reports if the unit relies upon those allowances for compliance. *Id.* (proposed new Section 217.396(d)(3)).

ECONOMIC AND TECHNICAL CONSIDERATIONS

Economic Impact Study

In a letter dated January 23, 2008, the Board requested that the Department of Commerce and Economic Opportunity (DCEO) conduct an economic impact study on this amended rulemaking proposal. *See* 415 ILCS 5/27(b)(1) (2006). To date, the Board has received no response to that request. At the second hearing, the Board received no testimony or comment regarding the absence of any response to the request. *See* Tr.2 at 16-17.

Technical Feasibility of Controls

In his testimony on behalf of the Agency, Mr. Mahajan stated that the Agency "identified several sources of guidance" on the issue of controlling NO_x emissions from engines and turbines. Mahajan Test. at 2. He further stated that these sources include detailed information on issues including strategies for controlling NO_x and the cost of those strategies. *Id*. He indicated that the Agency relied upon specific sources of information "for the proposed level of NO_x controls, costs and economic impacts for this proposal." *Id*. The Agency first lists as a source Alternative Control Techniques Document – NO_x Emissions from Stationary Reciprocating Internal Combustion Engines (EPA-453/R-93-032), published by USEPA. *Id.* at 2, TSD at 42 (§10.0 References); *see* Fast-Track Rules Under Nitrogen Oxide (NO_x) SIP Call Phase II: Amendments to 35 Ill. Adm. Code Section 201.146 and Parts 211 and 217, R07-18 (Apr. 6, 2007) (Attachment 11c to original Agency proposal). The Agency also lists as a source Alternative Control Techniques Document – NO_x Emissions from Stationary Gas Turbines (EPA-453/R-93-007), published by USEPA. Mahajan Test. at 2, TSD at 42 (§10.0 References); *see* Fast-Track Rules Under Nitrogen Oxide (NO_x) SIP Call Phase II: Amendments to 35 Ill. Adm. Code Section 201.146 and Parts 211 and 217, R07-18 (Apr. 6, 2007) (Attachment 11d to original Agency proposal). Finally, the Agency also lists Controlling Nitrogen Oxides Under the Clean Air Act: A Menu of Options, published by the State and Territorial Air Pollution Program Administrators and Association of Local Air Pollution Control Officials (STAPPA/ALAPCO). Mahajan Test. at 2, TSD at 42 (§10.0 References); *see* Fast-Track Rules Under Nitrogen Oxide (NO_x) SIP Call Phase II: Amendments to 35 Ill. Adm. Code Section 201.146 and Parts 211 and 217, R07-18 (Apr. 6, 2007) (Attachment 11e to original Agency proposal).

Combustion Controls for Engines

In his testimony on behalf of the Agency, Mr. Mahajan addressed the issue of NO_x emission controls by stating that, "[f]or reciprocating engines and turbines, both combustion controls and post-combustion catalytic reduction have been developed." Mahajan Test. at 3; *see* TSD at 19 (§4.0 Technical Feasibility of Controls). Mr. Mahajan's testimony first listed combustion controls for reciprocating engines: air/fuel ratio adjustments, low emission combustion, and prestratified charge. Mahajan Test. at 3. "These controls function by modifying the combustion zone air/fuel ratio, thus influencing oxygen availability and peak flame temperature." TSD at 19. Mr. Mahajan also listed ignition timing retard, which "lowers the peak flame temperature by delaying the onset of combustion." Mahajan Test. at 3; TSD at 19. The Board addresses these strategies one-by-one in the succeeding paragraphs.

Air/Fuel Ratio Adjustments. In its TSD, the Agency states that "[l]owering the air-to-fuel (A/F) ratio in rich-burn engines limits oxygen availability in the cylinder, thus decreasing NO_x emissions both by lowering peak flame temperature and by producing a reducing atmosphere." TSD at 19 (§4.1). In addition to actual adjustment of the A/F ratio, this strategy requires a feedback controller in order to follow changes in load and other operating conditions. *Id*. The Agency claims that, for rich-burn engines, this adjustment of the A/F ratio is "well-demonstrated" and "typically yields 10-40 percent reductions in NO_x emissions." *Id*. The Agency further claims that this range reflects the wide variety of existing A/F ratios. *Id*.

Regarding lean-burn engines, the Agency states in its TSD that "increasing the A/F ratio decreases NO_x emissions." TSD at 19. "Extra air dilutes the combustion gases, thus lowering peak flame temperature and reducing thermal NO_x formation." *Id*. This strategy requires either installation of a turbocharger or modification of an existing one in order to increase air flow at constant fuel flow and to avoid de-rating the engine's capacity. *Id*. at 19-20. The Agency notes that "space constraints may limit the extent to which turbocharger capacity may be increased." *Id*. at 20. The Agency further notes that this strategy may be less effective in carbureted engines, which do not have the same A/F ratio in each cylinder. *Id*. The Agency claims that, with A/F ratio adjustment, "[r]eductions in lean-burn engine NO_x emissions of 5-30 percent are possible." *Id*. The Agency states that these reductions may be limited by combustion instability, lean misfire, and decreased engine efficiency. *Id*. The Agency concludes its discussion of this strategy by noting that it "is not applicable to compression ignition engines." *Id*.

Low Emission Combustion. In its TSD, the Agency states that "[l]ow emission combustion (LEC) is the combustion of very fuel-lean mixture." TSD at 21 (§4.4). The Agency reports that this strategy "requires considerable engine modification," including the complete rebuilding of rich-burn engines. *Id*. The Agency further reports that LEC has limited applicability, as "[c]onversion kits are not available for all engines and refitted engines may have degraded load-following capabilities." *Id*. at 21-22. For rich-burn engines, however, LEC can achieve emission reductions of 70-90 percent. *Id*. at 22. Lean-burn engines can achieve a "reduction of about 80-93 percent." *Id*.

The Agency stresses that "LEC is not effective for diesel engines, but does work for dual-fuel engines." TSD at 22. Specifically, the Agency claims that these engines can decrease emissions by 60-80 percent with LEC. *Id*. The Agency also claims that "[s]ome reductions in exhaust opacity have been claimed when LEC is implemented on dual-fuel engines." *Id*.

Prestratified Charge. In its TSD, the Agency describes prestratified charge (PSC) as "a technology for injecting fuel and air into the intake manifold in distinct 'slugs,' which become separate fuel and air layers upon intake into the cylinders." TSD at 21 (§4.3). The Agency states that this strategy allows combustion to occur at lower temperatures and to produce less thermal NO_x without misfiring. *Id*. The Agency further states that PSC "is applicable to carbureted, spark ignition four-stroke engines" and that retrofitting kits area available for most of them. *Id.* The Agency notes, however, that PSC is not applicable to fuel-injected or blower-scavenged engines. *Id*. The Agency concludes its discussion of this strategy by claiming that this strategy can reduce emission by 80-95 percent. *Id*.

Ignition Timing Retard. In its TSD, the Agency claims that ignition timing retard (ITR) "is applicable to all engines." TSD at 20 (§4.2). The Agency states that this strategy moves "the ignition event to later in the power stroke when the piston has begun to move downward," lowering the peak flame temperature and thermal NO_x formation. *Id*. Although the Agency indicates that these timing adjustments are relatively simple, it suggests that replacing the ignition system "will provide better performance with varying engine load and conditions." *Id*.

The Agency claims that ITR can achieve emission reductions of 0-40 percent for spark-ignited engines and 20-30 percent for compression-ignited engines. TSD at 21. The Agency states that these reductions vary with engine design and operating conditions, particularly air/fuel ratio. *Id*. The Agency further states that "[r]eductions are also restricted by limitations on the extent to which ignition may be delayed, in that excess retard results in engine misfire." *Id*. at 20-21. The Agency acknowledges that ITR normally decreases fuel efficiency and increases exhaust temperatures, which can result in reducing the life of exhaust valves and turbochargers. *Id*. at 21. Also, the Agency notes that, "[o]n diesel engines, it also may result in black smoke." *Id*.

Combustion Controls for Turbines

In his testimony on behalf of the Agency, Mr. Mahajan addressed turbines by stating that "water/steam injection and dry low-NO_x combustors are the combustion control technologies used to control NO_x emissions." Mahajan Test. at 3; *see* TSD at 19 (§4.0 Technical Feasibility of Controls). The Board addresses these two strategies in the succeeding paragraphs.

Water/Steam Injection. In its TSD, the Agency states that this strategy "lowers peak flame temperature by providing an inert diluent, thus limiting thermal NO_x formation." TSD at 22 (§4.5). The Agency claims that this "[w]et injection is applicable to most, if not all, turbines, and has been applied to a large number of turbines in the United States." *Id*. The Agency further claims that "[m]ost turbine manufacturers sell water and steam injection systems." *Id*.

Because wet injection limits only thermal NO_x formation, controlling emissions depends on the amount of injected water and the fuel/nitrogen content. TSD at 23. The Agency claims that emission reductions of 60-90 percent can be obtained with both natural gas and distillate oil. *Id*. The Agency acknowledges, however, that "[h]igh water-to-fuel ratios result in increased hydrocarbon and greatly increased CO [carbon monoxide] emissions." *Id*. Also, the energy used to heat injected water may reduce the fuel efficiency of the turbine. *Id*. In addition, this strategy may require increased turbine maintenance. *Id*. Finally, the Agency states that treating water for injection generates wastewater. *Id*.

Dry Low NO_x Combustors. In its TSD, the Agency states that, while "[d]ry low-NO_x combustors encompass several different technologies, "[l]ean premixed combustion is the commercially available technology that affords the largest NO_x reductions." TSD at 23 (§4.6). The Agency explains that this strategy operates by providing excess air to the combustion chamber, which lowers peak temperatures. *Id*.

The Agency acknowledges that, while retrofit low-NO_x combustors have been installed on may turbines, they are not available for all models. TSD at 23. The Agency further acknowledges that these retrofits face difficulties. First, "they are less effective on oil-fired than on gas-fired turbines" because they reduce only thermal NO_x generation. *Id*. Second, the retrofit may require "some modification of the combustor section of the turbine." *Id*. at 23-24. Finally, oil-fired turbines can obtain comparable emission reductions without retrofitting. *Id*. at 24. Nonetheless, the Agency claims that this strategy obtains emission reductions of 60-95 percent. *Id*.

Post-Combustion Controls

In his testimony on behalf of the Agency, Mr. Mahajan addressed post-combustion controls for both engines and turbines. Mahajan Test. at 3; *see* TSD at 19 (§4.0 Technical Feasibility of Controls). He stated that these strategies destroy NO_x once it is formed. Mahajan Test. at 3. The Board addresses these two strategies in the succeeding paragraphs.

Non-Selective Catalytic Reduction. In its TSD, the Agency states that "[n]on-selective catalytic reduction (NSCR) uses the three-way catalysts found in automotive applications to promote that reduction of NO_x to nitrogen and water." TSD at 24 (§4.7). The Agency further states that "NSCR is applicable only to rich burn engines with exhaust oxygen concentrations below about one percent." *Id.* The Agency reports that NSCR is not feasible for turbines and that the exhaust from lean-burn engines will not be sufficient for reduction of the NO_x present. *Id*. In addition, the Agency notes that NSCR retrofits involve installation of a catalyst, catalyst housing, and "an oxygen sensor and feedback controller to maintain an appropriate A/F ratio under variable load conditions." *Id*. Nonetheless, the Agency claims that this strategy can achieve emission reductions greater than 90 percent. *Id*.

Selective Catalytic Reduction. In its TSD, the Agency describes selective catalytic reduction (SCR) as "[t]he catalyzed reduction of NO_x with injected ammonia." TSD at 24 (§4.8). The Agency states that this strategy applies "only to lean-burn engines with greater than about one percent exhaust oxygen, as oxygen is a reagent in the selective reduction reaction." *Id*. The Agency further states that an SCR retrofit involves installation of "the reactor and catalyst, appropriate ductwork, an ammonia storage and distribution system, and a control system for variable load operation." *Id*. at 25. The Agency claims that emission reductions with this strategy "are limited only by the amount of catalyst used and typically are on the order of 90 percent." *Id*.

Potentially Affected Sources

In its TSD, the Agency stated that it reviewed its 2004 inventory of reciprocating internal combustion engines and turbines in order to determine those that may be affected by its proposal. TSD at 38 (§7.0 Potentially Affected Sources). This review concluded that 541 engines located in the nonattainment areas had the potential to be affected by the proposed regulations. *Id*.; *see* Mahajan Test. at 3. After applying an exemption of approximately 100 tons of NO_x per year from all engines at a facility, the Agency estimates that its proposal will have an actual impact on

55 of those engines. Mahajan Test. at 3, TSD at 38 (Table 7-1), TSD, Attachment A (listing impacted engines).

Because current regulations do not require a permit to operate an engine with a capacity of less than 1,500 bhp, the Agency's "NO_x inventory does not include all the engines from 500 to 1,500 bhp that may be affected by this proposal." TSD at 38. In order to identify those sources, the Agency conducted a statewide survey of businesses and industries with the assistance of the DCEO. *Id*. From the results of that survey, the Agency estimated that there are 79 units in that range that may also be affected by the proposal. *Id*. The Agency "further assumed that many of these units would qualify for exemptions and therefore, only approximately eight engines would be impacted by this proposal." TSD at 38, TSD, Attachment A (listing impacted engines); *see* Mahajan Test. at 3-4. The Agency expects a total of 63 engines to be affected by its proposed regulations. Mahajan Test. at 4, TSD at 38 (Table 7-1).

The Agency also states in its TSD that the review of inventory revealed 220 turbines located in the nonattainment areas that may be affected by its proposal. TSD at 38, Mahajan Test. at 4. After applying an exemption of approximately 100 tons of NO_x per year from all turbines at a facility, the Agency concluded that its proposal would affect 58 of those turbines. TSD at 38 (Table 7-1), TSD, Attachment A (listing impacted turbines), Mahajan Test. at 4.

In her testimony on behalf of IERG, Ms. Hirner noted that the Agency in Attachment A to its amended TSD had sought to list potentially affected engines and turbines in the nonattainment areas. Hirner Test. at 3; *see* TSD, Attachment A. She claimed that "IERG has nonattainment area members that will be affected by this Proposed Rule, yet these units are not listed in Attachment A." Hirner Test. at 3. Ms. Hirner stated that IERG considers the Agency's proposed language on applicability of Subpart Q to be, for the most part, "acceptable." *Id*. However, she stated that "IERG does not believe that the Amended Technical Support Document provides correct information regarding the applicability of the Proposed Rule." *Id*.; *see* Tr.1 at 56-57.

In post-hearing comments, IERG stated that it had conferred with its members who have major sources of NO_x emissions in the nonattainment areas. PC 3 at 5. With its comments, IERG submitted an Exhibit 1, a preliminary list of its members having "engines and turbines that seem to be potentially subject to the Proposed Rule." *Id*., *see* PC 3, Exhibit 1. IERG notes that it did not include in its exhibit insignificant activities such as qualifying emergency/standby units or units with capacity less than 150 bhp. *Id*., citing 35 Ill. Adm. Code 201.210(a)(15), 210(a)(16). The comment claimed that "[t]he vast majority of the units in Exhibit 1 were not identified by Illinois EPA as potentially subject to the Proposed Rule." PC 3 at 5.

IERG further commented that, "[w]here units identified in Exhibit 1 currently have federally enforceable [emission] limits, those limits were included in the unit descriptions." PC 3 at 5; *see* PC 3, Exhibit 1. IERG stated that it included those limits to demonstrate that the Agency had not identified as potentially subject to the proposed rule units that do not appear to qualify for the low usage exemption. PC 3 at 6. IERG states that, if these units wished to qualify for that exemption, they would be required to expend permitting resources to obtain a federally enforceable emissions limit and restrict its operating ability. *Id*. Alternatively, those

units may have to comply with the proposed emissions limits, which could require retrofit technology. *Id*. IERG argues that units facing elections of this nature should be addressed in any discussion of the proposal's impact. *Id*. at 7.

In its post-hearing comments, the Agency acknowledged that, although it drew its list of potentially impacted engines and turbines from a database on which it heavily relies, its inventory is not a perfect document. PC 4 at 1, citing Tr.1 at 24-26. The Agency emphasized that the inventory included only units that it believed would require NO_x controls after taking into account the low usage option and the exemptions in the proposal. PC 4 at 2.

Nonetheless, the Agency stated that it had reviewed IERG's comments and determined that IERG had identified 35 additional engines that the proposed rule may affect. PC 4 at 1. Of those 35, the Agency concludes based on facility reported NO_x emission data that 30 will qualify for the low-usage option and two will qualify for the landfill gas usage exemption. *Id*. at 2. For the remaining three engines at U.S. Steel Corporation, the Agency stated that it could not "find the facility reported NO_x emissions because these emissions were reported as part of their associated processes." *Id*. The Agency stated that U.S. Steel Corporation's most recent permit application includes one emergency generator limited to emitting 19.9 tons of NO_x annually and one engine that will have NSCR installed to control NO_x. *Id*.

The Agency also reviewed IERG's comments to determine that IERG had identified 78 additional turbines that the proposed rule may affect. PC 4 at 1. Of those 78, the Agency states that "24 turbines are already retrofitted with NO_x controls, 11 turbines will qualify for [the] landfill gas exemption, and 43 turbines, mostly used as peaking units at power plants, will qualify for the 20,000 MW-hrs limit compliance option." *Id*. at 2. The Agency expresses the belief that the units retrofitted with emission controls comply with the proposed regulations. The Agency claims that "there will not be any additional cost of controlling NO_x emissions to the sources except for some administrative cost of recordkeeping and reporting." *Id*.

Emissions Reductions

In its TSD, the Agency represented that, of the 541 permitted engines it identified as potentially affected by the proposed rule, it expected the proposal actually to affect 55 of them. TSD at 38 (Table 7-1). The Agency estimated the total 2004 NO_x emissions from those 55 engines to be 1,198 tpy and 528 tons per ozone season. TSD at 39 (Table 8-1). To estimate NO_x emission reductions from the proposal, the Agency then applied an 82 percent control level to gas-fired engines and a 25 percent control efficiency to diesel engines. *Id*. Accordingly, the Agency concludes that the proposed rule will achieve estimated NO_x emissions reductions from these 55 engines of 983 tpy and 433 tons per ozone season. *Id*. (Table 8-1).

In its TSD, the Agency also represented that, of the 79 smaller engines potentially affected by the proposed rule, it expected the proposal to actually to affect eight of them. To estimate NO_x emission reductions from smaller engines rated between 500 bhp and 1,500 bhp, the Agency assumed capacity of the affected engines to be 1,000 bhp and the annual operating schedule to be 4,000 hours. TSD at 39. "At a NO_x emission rate of 16.8 g/bhp-hr, the estimated 2004 NO_x emissions were determined to be 593 tpy and 247 tons per ozone season." *Id*.

Applying a control efficiency of 82 percent, the Agency calculated the estimated NO_x emissions reductions from these smaller engines to be 486 tpy and 203 tons per ozone season. *Id.*; *see* Mahajan Test. at 4 (estimating emission reductions from all 63 engines).

In its TSD, the Agency also represented that, of the 220 turbines it identified as potentially affected by the proposed rule, it expected the proposal actually to affect 58 of them. TSD at 38 (Table 7-1). The Agency estimated the total 2004 NO_x emissions from those 58 turbines to be 1,316 tpy and 706 tons per ozone season. TSD at 39 (Table 8-1). To estimate NO_x emissions reductions from the proposal, the Agency then applied a 60 percent control efficiency, although "[n]o control was applied to a turbine which is subject to NSPS [New Source Performance Standards] for NO_x emissions." TSD at 39. Accordingly, the Agency concludes that the proposed rule will achieve estimated NO_x emissions reductions from these 58 turbines of 686 tpy and 381 tons per ozone season. TSD at 39 (Table 8-1), Mahajan Test. at 4.

The Agency states that the total 2004 NO_x emissions from all three categories of units was 3,107 tpy and 1,481 tons per ozone season. TSD at 39. The Agency further states that, when fully implemented, the proposal will provide NO_x emission reductions of 2,155 tpy and 1,017 tons per ozone season. *Id*. (Table 8-1).

Cost Effectiveness of Controls

The Agency indicates that USEPA has in its alterative control techniques (ACT) documents estimated the cost effectiveness of controlling NO_x emissions from engines and turbines. TSD at 27 (§5.0 Cost Effectiveness of Controls). The Agency cites Alternative Control Techniques Document – NO_x Emissions from Stationary Reciprocating Internal Combustion Engines (EPA-453/R-93-032). TSD at 27; *see* TSD at 42 (§10.0 References); Fast-Track Rules Under Nitrogen Oxide (NO_x) SIP Call Phase II: Amendments to 35 Ill. Adm. Code Section 201.146 and Parts 211 and 217, R07-18 (Apr. 6, 2007) (Attachment 11c to original Agency proposal). The Agency also cites Alternative Control Techniques Document – NO_x Emissions from Stationary Gas Turbines (EPA-453/R-93-007). TSD at 27; *see* TSD at 42 (§10.0 References); Fast-Track Rules Under Nitrogen Oxide (NO_x) SIP Call Phase II: Amendments to 35 Ill. Adm. Code Section 201.146 and Parts 211 and 217, R07-18 (Apr. 6, 2007) (Attachment 11d to original Agency proposal). The Agency states that it "relied on these documents to estimate the cost effectiveness of controlling Illinois NO_x emissions [from] sources potentially affected by this proposed rulemaking." TSD at 27.

Cost Effectiveness of Controls on Engines

The Agency indicates that USEPA estimates the cost effectiveness of NO_x emission controls by considering total capital costs and total annual costs. TSD at 27 (§5.1), citing Alternative Control Techniques Document – NO_x Emissions from Stationary Reciprocating Internal Combustion Engines (EPA-453/R-93-032).

> The total capital cost is the sum of the purchased equipment costs, direct installation costs, indirect installation costs, and emergency costs. Annual costs consist of the direct operating costs of materials and labor for maintenance,

> operation, utilities, material replacement and disposal, and indirect operating charges including plant overhead, general administration, and capital recovery charges. TSD at 27.

The Agency states that USEPA's ACT document includes the costs of various NO_x controls. *Id.* The Agency further states that cost effectiveness of each control technique is calculated in dollars per ton of NO_x removed "by dividing the total annual cost by the annual tons of NO_x removed" and varies with the type, size, and operating hours of an engine. *Id*. Based on USEPA's ACT document, the Agency reports that available control options achieve the proposed control levels with cost effectiveness ranging from $163 to $5,961 per ton of NO_x removed on an annual basis. *Id*. at 28 (Table 5-1).

With regard to engines, the Agency reports that it also relied upon the reference document "Stationary Reciprocating Internal Combustion Engines." TSD at 28; *see* TSD at 42 (§10.0 References), Fast-Track Rules Under Nitrogen Oxide (NO_x) SIP Call Phase II: Amendments to 35 Ill. Adm. Code Section 201.146 and Parts 211 and 217, R07-18 (Apr. 6, 2007) (Attachment 11s to original Agency proposal). This document incorporates information on LEC from various sources and assesses the cost effectiveness of LEC. TSD at 28. The Agency states that, "[i]n most respects the analysis was conducted according to the methodology of the 1993 ACT document." *Id*. at 28-29. For engines at or above 500 bhp in size and based upon specific inputs the cost effectiveness on an annual basis ranges from $230 to $1,360 per ton of NO_x removed. *Id*. at 29 (Table 5-2) (adjusting cost data from 1990 to 2004 dollars). For the same engines on an ozone season basis, the cost effectiveness ranges from $550 to $3,270 per ton of NO_x removed. *Id*.

Cost Effectiveness of Controls on Turbines

The Agency states that USEPA's ACT document describes the capital costs and cost effectiveness of various NO_x emission controls for turbines based on 1990 dollars. TSD at 29 (§5.2), citing Alternative Control Techniques Document – NO_x Emissions from Stationary Gas Turbines (EPA-453/R-93-007).

> The cost effectiveness of two types of controls for smaller turbines of 3.3 MW varies from $2,645 per ton of NO_x on an annual basis removed for steam injection to $3,005 per ton of NO_x removed for water injection control. For dry low-NO_x combustion, cost effectiveness was $1,532 per ton of NO_x removed for a four MW gas-fired turbine. TSD at 29 (adjusting estimates to 2004 dollars).

The Agency reports that, based on USEPA's ACT document, STAPPA/ALAPCO has estimated the cost of controlling various sizes of turbines. *Id*., citing Controlling Nitrogen Oxides Under the Clean Air Act: A Menu of Options (Attachment 11e to original Agency proposal). The Agency claims that the cost effectiveness of controlling NO_x emissions from 5 to 25 MW turbines operating 8,000 hours annually ranges from $314 to $3,203 per ton of NO_x removed. TSD at 29-30 (Table 5-3) (adjusting costs from 1993 to 2004 dollars).

The Agency summarizes by stating that affected sources will comply with Subpart Q by installing combustion controls. TSD at 30. Rich burn engines will install NSCR and lean burn engines will install LEC technologies to comply with the regulations. *Id*. Based on these options, the Agency estimates that controlling sources at proposed levels will result in retrofitting costs of $319 to $2,575 per ton of NO_x reduced for engines and $314 to $3,005 per ton of NO_x reduced for turbines in 2004 dollars. *Id*.

Pipeline Group Comment

In testimony pre-filed for the second hearing, the Pipeline Group raised issues relating generally to the technical feasibility and economic reasonableness of the Agency's proposal. *See* 415 ILCS 5/27(a) (2006). On behalf of the Pipeline Group, Mr. McCarthy commented on the TSD, stating that "[s]everal technologies discussed in the TSD are not proven for application to natural gas transmission IC [internal combustion] engines and turbines are of limited or no benefit." McCarthy Test. at 6. The Board below addresses these comments.

Mr. McCarthy states that, although the TSD lists SCR as a control strategy for both engines and turbines, "to date, SCR has not been successfully applied to gas transmission units, and U.S. EPA has acknowledged this situation." McCarthy Test. at 7. He cites USEPA as believing that "that there is an insufficient basis to conclude that SCR is an appropriate technology for large lean-burn engines." *Id*., citing 67 Fed. Reg. 8395, 8411 (Feb. 22, 2002). He also cites USEPA as stating that, "[f]or engines which typically operate at variable loads, such as engines on gas transmission pipelines, an SCR system may not function effectively, causing either periods of ammonia slip or insufficient ammonia to gain the reductions needed." McCarthy Test. at 7 (citing AP-42 document on control of lean-burn engines).

Mr. McCarthy states that SCR has not been successfully demonstrated on retrofit units at natural gas compressor stations. McCarthy Test. at 7. Although the technology was installed on a turbine in California, he claims that the installation "resulted in significant site-specific re-engineering that has resulted in exorbitant costs and a relaxation of the initial emission limits." *Id*. He also states that SCR has been installed on new engines at a compressor station in the eastern United States, although the station has limited operation during periods of high gas demand. *Id*. Mr. McCarthy acknowledges that "SCR is marketed for application to IC engines." *Id.* However, he argues that, "based on the U.S. EPA record and very limited industry experience, SCR is not a demonstrated technology for retrofit application to IC engines or turbines in gas transmission." *Id*.

Mr. McCarthy also notes that the TSD lists water or steam injection as a NO_x control strategy. McCarthy Test. at 8. He characterizes that technology as " a 'first generation' retrofit control that introduces operational, efficiency, and emissions challenges." *Id*. Mr. McCarthy states that water or steam injection has not been used in any gas transmissions turbines and that the strategy has been "supplanted by DLN technology." *Id*. In addition, Mr. McCarthy claims that ignition timing retard has only questionable applicability to natural gas-fired engines and that it "may not provide meaningful emission reduction." *Id*. Finally, he argues that "the commercial availability and performance of prestratified charge technology are questionable." *Id*.

PARTICIPANTS' POSITIONS ON AMENDED PROPOSAL

In the course of this proceeding, participants including the Pipeline Group, IMEA, and IERG voiced no significant objection to the Agency's amended proposal. Mr. McCarthy stated in his prefiled testimony that "[t]he Pipeline Group does not object to the IEPA Subpart Q proposal under consideration at today's hearing." McCarthy Test. at 6; *see* Tr.2 at 10-11. He elaborated that "the Pipeline Group has worked with IEPA to integrate compliance options that provide compliance flexibility and address some of the unique technology and operating attributes and limitation of the natural gas transmission sector." *Id*.

In her testimony on behalf of IMEA and IERG, Ms. Driver stated that

> we have not talked about, nor challenged, the level of the emission limits in the proposed rule, the control technology that the Agency has focused on for getting to those limits, or the costs of those controls, and the reason is because for the most part we feel that our membership in both organizations will be able to find an approach in the rule that works for them as long as those approaches remain as proposed. Tr.1 at 43.

In its post-hearing comments, IMEA emphasized that it had not challenged the approach taken by the Agency in its proposal, "either in term of applicability, control requirements or projected compliance costs." PC 2 at 7. IMEA stated that it based this position "solely on the ability of its members to comply with the Proposed Rule via Sections 217.388(c) [low usage] and 217.392(c) [NO_x allowances]." *Id*. IMEA recommended that the Board retain these provisions in proceeding to First Notice. *Id*.

In its post-hearing comments, IERG stated that its most significant concerns with the proposed rule had ultimately been addressed in the course of working with the Agency. PC 3 at 1. IERG questioned whether the Agency had identified all units that may be affected by the requirements of the proposed rule and whether the Agency had accurately represented the technical feasibility and economic reasonableness of that proposal. PC 3 at 8. Nonetheless, IERG stated that it

> believes that the Proposed Rule, as currently situated, provides the necessary flexibility of compliance options, including the ability to utilize NO_x allowances, for the diversity of covered units and operating needs for those units. These components of the Proposed Rule are vitally important, as is the current approach for applicability to major source of NO_x emissions in the ozone and $PM_{2.5}$ nonattainment areas. *Id.*

Board Findings

The Board finds the proposed amendments technically feasible and economically reasonable. The Board adopts the Agency's amended proposal, as amended by the clarifications and *errata* sheet submitted by the Agency at the second hearing as Exhibit 2. In addition, the

Board makes additional technical corrections necessary to keep the rule language consistent with regulatory language typically reviewed by the Joint Committee on Administrative Rules and adopted by the Board.

CONCLUSION

The Board proposes for first notice amendments to the Board's regulations governing emissions of NO_x in Parts 201, 211, and 217 (35 Ill. Adm. Code 201, 211, 217). Substantively, the Board is adopting the Agency's amended proposal, including changes reflected in the clarifications and *errata* sheet submitted by the Agency at the second hearing. *See* Exh. 2.

Publication of the proposed amendment in the *Illinois Register* will start a period of at least 45 days during which any person may file public comments with the Clerk of the Board at the address provided above at page 3 of this opinion. As noted above, persons may also file comments electronically through COOL at www.ipcb.state.il.us.

ORDER

The Board directs the Clerk to cause publication of the following proposed amendments in the *Illinois Register* for first notice. Proposed additions to Parts 201, 211, and 217 are underlined, and proposed deletions appear stricken.

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE B: AIR POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER a: PERMITS AND GENERAL PROVISIONS

PART 201
PERMITS AND GENERAL PROVISIONS

SUBPART A: DEFINITIONS

Section
201.101 Other Definitions
201.102 Definitions
201.103 Abbreviations and Units
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SUBPART B: GENERAL PROVISIONS

Section
201.121 Existence of Permit No Defense
201.122 Proof of Emissions
201.123 Burden of Persuasion Regarding Exceptions
201.124 Annual Report

SUBPART C: PROHIBITIONS

SUBPART D: PERMIT APPLICATIONS AND REVIEW PROCESS

SUBPART E: SPECIAL PROVISIONS FOR OPERATING PERMITS FOR CERTAIN SMALLER SOURCES

SUBPART F: CAAPP PERMITS

SUBPART G: EXPERIMENTAL PERMITS (Reserved)

SUBPART H: COMPLIANCE PROGRAMS AND PROJECT COMPLETION SCHEDULES

SUBPART I: MALFUNCTIONS, BREAKDOWNS OR STARTUPS

SUBPART J: MONITORING AND TESTING

SUBPART K: RECORDS AND REPORTS

SUBPART L: CONTINUOUS MONITORING

AUTHORITY: Implementing Sections 10, 39, and 39.5 and authorized by Sections 27 and 28.5 of the Environmental Protection Act [415 ILCS 5/10, 27, 28.5, 39, and 39.5].

SOURCE: Adopted as Chapter 2: Air Pollution, Part I: General Provisions, in R71-23, 4 PCB 191, filed and effective April 14, 1972; 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. 13579; amended in R82-1 (Docket A) at 10 Ill. Reg. 12628, effective July 7, 1986; amended in R87-38 at 13 Ill. Reg. 2066, effective February 3, 1989; amended in R89-7(A) at 13 Ill. Reg. 19444, effective December 5, 1989; amended in R89-7(B) at 15 Ill. Reg. 17710, effective November 26, 1991; amended in R93-11 at 17 Ill. Reg. 21483, effective December 7, 1993; amended in R94-12 at 18 Ill. Reg. 15002, effective September 21, 1994; amended in R94-14 at 18 Ill. Reg. 15760, effective October 17, 1994; amended in R96-17 at 21 Ill. Reg. 7878, effective June 17, 1997; amended in R98-13 at 22 Ill. Reg. 11451, effective June 23, 1998; amended in R98-28 at 22 Ill. Reg. 11823, effective July 31, 1998; amended in R02-10 at 27 Ill. Reg. 5820, effective March 21, 2003; amended in R05-19 and R05-20 at 30 Ill. Reg. 4901, effective March 3, 2006; amended in R07-19 at 32 Ill. Reg. _____, effective _____.

SUBPART C: PROHIBITIONS

Section 201.146 Exemptions from State Permit Requirements

Construction or operating permits, pursuant to Sections 201.142, 201.143 and 201.144 of this Part, are not required for the classes of equipment and activities listed below in this Section. The

permitting exemptions in this Section do not relieve the owner or operator of any source from any obligation to comply with any other applicable requirements, including the obligation to obtain a permit pursuant to Sections 9.1(d) and 39.5 of the Act, Sections 165, 173 and 502 of the Clean Air Act or any other applicable permit or registration requirements.

a) Air contaminant detectors or recorders, combustion controllers or combustion shutoffs;

b) Air conditioning or ventilating equipment not designed to remove air contaminants generated by or released from associated equipment;

c) Each fuel burning emission unit for indirect systems and for heating and reheating furnace systems used exclusively for residential, or commercial establishments using gas and/or fuel oil exclusively with a design heat input capacity of less than 14.6 MW (50 mmbtu/hr), except that a permit shall be required for any such emission unit with a design heat input capacity of at least 10 mmbtu/hr that was constructed, reconstructed or modified after June 9, 1989 and that is subject to 40 CFR 60, Subpart D;

d) Each fuel burning emission unit other than those listed in subsection (c) of this Section for direct systems used for comfort heating purposes and indirect heating systems with a design heat input capacity of less than 2930 kW (10 mmbtu/hr);

e) Internal combustion engines or boilers (including the fuel system) of motor vehicles, locomotives, air craft, watercraft, lifttrucks and other vehicles powered by nonroad engines;

f) Bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analysis, including associated laboratory fume hoods, vacuum producing devices and control devices installed primarily to address potential accidental releases;

g) Coating operations located at a source using not in excess of 18,925 l (5,000 gal) of coating (including thinner) per year;

h) Any emission unit acquired exclusively for domestic use, except that a permit shall be required for any incinerator and for any fuel combustion emission unit using solid fuel with a design heat input capacity of 14.6 MW (50 mmbtu/hr) or more;

i) Any stationary internal combustion engine with a rated power output of less than 1118 kW (1500 bhp~~horsepower~~) or stationary turbine, except that a permit shall be required for the following:

1) Any internal combustion engine with a rating at equal to or greater than 500 bhp output that is subject to the control requirements of 35 Ill. Adm. Code Part 217.388(a) or (b); or

2) Anyany stationary gas turbine engine with a rated heat input at peak load of 10.7 gigajoules/hr (10 mmbtu/hr) or more that is constructed, reconstructed or modified after October 3, 1977 and that is subject to requirements of 40 CFR 60, Subpart GG;

j) Rest room facilities and associated cleanup operations, and stacks or vents used to prevent the escape of sewer gases through plumbing traps;

k) Safety devices designed to protect life and limb, provided that a permit is not otherwise required for the emission unit with which the safety device is associated;

l) Storage tanks for liquids for retail dispensing except for storage tanks that are subject to the requirements of 35 Ill. Adm. Code 215.583(a)(2), 218.583(a)(2) or 219.583(a)(2);

m) Printing operations with aggregate organic solvent usage that never exceeds 2,839 l (750 gal) per year from all printing lines at the source, including organic solvent from inks, dilutents, fountain solutions and cleaning materials;

n) Storage tanks of:

1) Organic liquids with a capacity of less than 37,850 l (10,000 gal), provided the storage tank is not used to store any material listed as a hazardous air pollutant pursuant to Section 112(b) of the Clean Air Act, and provided the storage tank is not subject to the requirements of 35 Ill. Adm. Code 215.583(a)(2), 218.583(a)(2) or 219.583(a)(2);

2) Any size containing exclusively soaps, detergents, surfactants, waxes, glycerin, vegetable oils, greases, animal fats, sweetener, corn syrup, aqueous salt solutions or aqueous caustic solutions, provided an organic solvent has not been mixed with such materials; or

3) Any size containing virgin or re-refined distillate oil, hydrocarbon condensate from natural gas pipeline or storage systems, lubricating oil or residual fuel oils;.

o) Threaded pipe connections, vessel manways, flanges, valves, pump seals, pressure relief valves, pressure relief devices and pumps;

p) Sampling connections used exclusively to withdraw materials for testing and analyses;

q) All storage tanks of Illinois crude oil with capacity of less than 151,400 l (40,000 gal) located on oil field sites;

r) All organic material-water single or multiple compartment effluent water separator facilities for Illinois crude oil of vapor pressure of less than 34.5 kPa absolute (5 psia);

s) Grain-handling operations, exclusive of grain-drying operations, with an annual grain through-put not exceeding 300,000 bushels;

t) Grain-drying operations with a total grain-drying capacity not exceeding 750 bushels per hour for 5% moisture extraction at manufacturer's rated capacity, using the American Society of Agricultural Engineers Standard 248.2, Section 9, Basis for Stating Drying Capacity of Batch and Continuous-Flow Grain Dryers;

u) Portable grain-handling equipment and one-turn storage space;

v) Cold cleaning degreasers that are not in-line cleaning machines, where the vapor pressure of the solvents used never exceeds 2 kPa (15 mmHg or 0.3 psi) measured at 38°C (100°F) or 0.7 kPa (5 mmHg or 0.1 psi) at 20°C (68°F);

w) Coin-operated dry cleaning operations;

x) Dry cleaning operations at a source that consume less than 30 gallons per month of perchloroethylene;

y) Brazing, soldering, wave soldering or welding equipment, including associated ventilation hoods;

z) Cafeterias, kitchens, and other similar facilities, including smokehouses, used for preparing food or beverages, but not including facilities used in the manufacturing and wholesale distribution of food, beverages, food or beverage products, or food or beverage components;

aa) Equipment for carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planing, buffing, sand blast cleaning, shot blasting, shot peening, or polishing ceramic artwork, leather, metals (other than beryllium), plastics, concrete, rubber, paper stock, wood or wood products, where such equipment is either:

1) Used for maintenance activity;

2) Manually operated;

3) Exhausted inside a building; or

4) Vented externally with emissions controlled by an appropriately operated cyclonic inertial separator (cyclone), filter, electro-static precipitor or a scrubber;

bb) Feed mills that produce no more than 10,000 tons of feed per calendar year, provided that a permit is not otherwise required for the source pursuant to Section 201.142, 201.143 or 201.144;

cc) Extruders used for the extrusion of metals, minerals, plastics, rubber or wood, excluding:

1) Extruders used in the manufacture of polymers;

2) Extruders using foaming agents or release agents that contain volatile organic materials or Class I or II substances subject to the requirements of Title VI of the Clean Air Act; and

3) Extruders processing scrap material that was produced using foaming agents containing volatile organic materials or Class I or II substances subject to the requirements of Title VI of the Clean Air Act;

dd) Furnaces used for melting metals, other than beryllium, with a brim full capacity of less than 450 cubic inches by volume;

ee) Equipment used for the melting or application of less than 22,767 kg/yr (50,000 lbs/yr) of wax to which no organic solvent has been added;

ff) Equipment used for filling drums, pails or other packaging containers, excluding aerosol cans, with soaps, detergents, surfactants, lubricating oils, waxes, vegetable oils, greases, animal fats, glycerin, sweeteners, corn syrup, aqueous salt solutions or aqueous caustic solutions, provided an organic solvent has not been mixed with such materials;

gg) Loading and unloading systems for railcars, tank trucks, or watercraft that handle only the following liquid materials: soaps, detergents, surfactants, lubricating oils, waxes, glycerin, vegetable oils, greases, animal fats, sweetener, corn syrup, aqueous salt solutions or aqueous caustic solutions, provided an organic solvent has not been mixed with such materials;

hh) Equipment used for the mixing and blending of materials at ambient temperatures to make water based adhesives, provided each material mixed or blended contains less than 5% organic solvent by weight;

ii) Die casting machines where a metal or plastic is formed under pressure in a die located at a source with a through-put of less than 2,000,000 lbs of metal or plastic per year, in the aggregate, from all die casting machines;

jj) Air pollution control devices used exclusively with other equipment that is exempt from permitting, as provided in this Section;

kk) An emission unit for which a registration system designed to identify sources and emission units subject to emission control requirements is in place, such as the registration system found at 35 Ill. Adm. Code 218.586 (Gasoline Dispensing Operations - Motor Vehicle Fueling Operations) and 35 Ill. Adm. Code 218, Subpart HH (Motor Vehicle Refinishing);

ll) Photographic process equipment by which an image is reproduced upon material sensitized to radiant energy;

mm) Equipment used for hydraulic or hydrostatic testing;

nn) General vehicle maintenance and servicing activities conducted at a source, motor vehicle repair shops, and motor vehicle body shops, but not including:

1) Gasoline fuel handling; and

2) Motor vehicle refinishing;~~.~~

oo) Equipment using water, water and soap or detergent, or a suspension of abrasives in water for purposes of cleaning or finishing, provided no organic solvent has been added to the water;

pp) Administrative activities including, but not limited to, paper shredding, copying, photographic activities and blueprinting machines. This does not include incinerators;

qq) Laundry dryers, extractors, and tumblers processing that have been cleaned with water solutions of bleach or detergents that are:

1) Located at a source and process clothing, bedding and other fabric items used at the source, provided that any organic solvent present in such items before processing that is retained from cleanup operations shall be addressed as part of the VOM emissions from use of cleaning materials;

2) Located at a commercial laundry; or

3) Coin operated;~~.~~

rr) Housekeeping activities for cleaning purposes, including collecting spilled and accumulated materials, including operation of fixed vacuum cleaning systems specifically for such purposes, but not including use of cleaning materials that contain organic solvent;

ss) Refrigeration systems, including storage tanks used in refrigeration systems, but excluding any combustion equipment associated with such systems;

tt) Activities associated with the construction, on-site repair, maintenance or dismantlement of buildings, utility lines, pipelines, wells, excavations, earthworks and other structures that do not constitute emission units;

uu) Piping and storage systems for natural gas, propane and liquefied petroleum gas;

vv) Water treatment or storage systems, as follows:

1) Systems for potable water or boiler feedwater;

2) Systems, including cooling towers, for process water, provided that such water has not been in direct or indirect contact with process streams that contain volatile organic material or materials listed as hazardous air pollutants pursuant to Section 112(b) of the Clean Air Act;~~.~~

ww) Lawn care, landscape maintenance and grounds keeping activities;

xx) Containers, reservoirs or tanks used exclusively in dipping operations to coat objects with oils, waxes or greases, provided no organic solvent has been mixed with such materials;

yy) Use of consumer products, including hazardous substances as that term is defined in the Federal Hazardous Substances Act (15 USC ~~U.S.C~~. 1261 et seq.), where the product is used at a source in the same manner as normal consumer use;

zz) Activities directly used in the diagnosis and treatment of disease, injury or other medical condition;

aaa) Activities associated with the construction, repair or maintenance of roads or other paved or open areas, including operation of street sweepers, vacuum trucks, spray trucks and other vehicles related to the control of fugitive emissions of such roads or other areas;

bbb) Storage and handling of drums or other transportable containers, where the containers are sealed during storage and handling;

ccc) Activities at a source associated with the maintenance, repair or dismantlement of an emission unit or other equipment installed at the source, not including the

shutdown of the unit or equipment, including preparation for maintenance, repair or dismantlement, and preparation for subsequent startup, including preparation of a shutdown vessel for entry, replacement of insulation, welding and cutting, and steam purging of a vessel prior to startup;

ddd) Equipment used for corona arc discharge surface treatment of plastic with a power rating of 5 kW or less or equipped with an ozone destruction device;

eee) Equipment used to seal or cut plastic bags for commercial, industrial or domestic use;

fff) Each direct-fired gas dryer used for a washing, cleaning, coating or printing line, excluding:

1) Dryers with a rated heat input capacity of 2930 kW (10 mmbtu/hr) or more; and

2) Dryers for which emissions other than those attributable to combustion of fuel in the dryer, including emissions attributable to use or application of cleaning agents, washing materials, coatings or inks or other process materials that contain volatile organic material are not addressed as part of the permitting of such line, if a permit is otherwise required for the line;

ggg) Municipal solid waste landfills with a maximum total design capacity of less than 2.5 million Mg or 2.5 million m^3 that are not required to install a gas collection and control system pursuant to 35 Ill. Adm. Code 220 or 800 through 849 or Section 9.1 of the Act; ~~and~~

hhh) Replacement or addition of air pollution control equipment for existing emission units in circumstances where:

1) The existing emission unit is permitted and has operated in compliance for the past year;

2) The new control equipment will provide equal or better control of the target pollutants;

3) The new control device will not be accompanied by a net increase in emissions of any non-targeted criteria air pollutant;

4) Different State or federal regulatory requirements or newly proposed regulatory requirements will not apply to the unit; and
BOARD NOTE: All sources must comply with underlying federal regulations and future State regulations.

5) Where the existing air pollution control equipment had required monitoring equipment, the new air pollution control equipment will be equipped with the instrumentation and monitoring devices that are typically installed on the new equipment of that type.
BOARD NOTE: For major sources subject to Section 39.5 of the Act, where the new air pollution control equipment will require a different compliance determination method in the facility's CAAPP permit, the facility may need a permit modification to address the changed compliance determination method;

iii) Replacement, addition, or modification of emission units at facilities with federally enforceable State operating permits limiting their potential to emit in circumstances where:

1) The potential to emit any regulated air pollutant in the absence of air pollution control equipment from the new emission unit, or the increase in the potential to emit resulting from the modification of any existing emission unit, is less than 0.1 pound per hour or 0.44 tons per year;

2) The raw materials and fuels used or present in the emission unit that cause or contribute to emissions, based on the information contained in Material Safety Data Sheets for those materials, do not contain equal to or greater than 0.01 percent by weight of any hazardous air pollutant as defined under Section 112(b) of the federal Clean Air Act;

3) The emission unit or modification is not subject to an emission standard or other regulatory requirement pursuant to Section 111 of the federal Clean Air Act;

4) Potential emissions of regulated air pollutants from the emission unit or modification will not, in combination with emissions from existing units or other proposed units, trigger permitting requirements under Section 39.5, permitting requirements under Section 165 or 173 of the federal Clean Air Act, or the requirement to obtain a revised federally enforceable State operating permit limiting the source's potential to emit; and

5) The source is not currently the subject of a Non-compliance Advisory, Clean Air Act Section 114 Request, Violation Notice, Notice of Violation, Compliance Commitment Agreement, Administrative Order, or civil or criminal enforcement action, related to the air emissions of the source;

jjj) Replacement, addition, or modification of emission units at permitted sources that are not major sources subject to Section 39.5 and that do not have a federally enforceable state operating permit limiting their potential to emit, in circumstances where:

1) The potential to emit of any regulated air pollutant in the absence of air pollution control equipment from the new emission unit, or the increase in the potential to emit resulting from the modification of any existing emission unit is either:

A) Less than 0.1 pound per hour or 0.44 tons per year; or

B) Less than 0.5 pound per hour, and the permittee provides prior notification to the Agency of the intent to construct or install the unit. The unit may be constructed, installed or modified immediately after the notification is filed;

2) The emission unit or modification is not subject to an emission standard or other regulatory requirement under Section 111 or 112 of the federal Clean Air Act;

3) Potential emissions of regulated air pollutants from the emission unit or modification will not, in combination with the emissions from existing units or other proposed units, trigger permitting requirements under Section 39.5 or the requirement to obtain a federally enforceable permit limiting the source's potential to emit; and

4) The source is not currently the subject of a Non-compliance Advisory, Clean Air Act Section 114 Request, Violation Notice, Notice of Violation, Compliance Commitment Agreement, Administrative Order, or civil or criminal enforcement action, related to the air emissions of the source;~~.~~

kkk) The owner or operator of a CAAPP source is not required to obtain an air pollution control construction permit for the construction or modification of an emission unit or activity that is an insignificant activity as addressed by Section 201.210 or 201.211 of this Part. Section 201.212 of this Part must still be followed, as applicable. Other than excusing the owner or operator of a CAAPP source from the requirement to obtain an air pollution control construction permit for the emission units or activities, nothing in this subsection shall alter or affect the liability of the CAAPP source for compliance with emission standards and other requirements that apply to the emission units or activities, either individually or in conjunction with other emission units or activities constructed, modified or located at the source;~~.~~

lll) Plastic injection molding equipment with an annual through-put not exceeding 5,000 tons of plastic resin in the aggregate from all plastic injection molding equipment at the source, and all associated plastic resin loading, unloading, conveying, mixing, storage, grinding, and drying equipment and associated mold release and mold cleaning agents.

(Source: Amended at 32 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 211
DEFINITIONS AND GENERAL PROVISIONS

SUBPART A: GENERAL PROVISIONS

Section

SUBPART B: DEFINITIONS

Section

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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

AUTHORITY: Implementing Sections 9, 9.1, 9.9 and 10 and authorized by Sections 27 and 28.5 of the Environmental Protection Act [415 ILCS 5/9, 9.1, 9.9, 10, 27 and 28.5].

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. 108, effective December 26, 2000; amended in R01-11 at 25 Ill. Reg. 4582, 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. 14271, effective September 25, 2007; amended in R07-19 at 32 Ill. Reg. _____, effective _____..

SUBPART B: DEFINITIONS

Section 211.1920 Emergency or Standby Unit

"Emergency or Standby Unit" means, for a stationary gas turbine or a stationary reciprocating internal combustion engine, a unit that:

a) Supplies power for the source at which it is located but operates only when the normal supply of power has been rendered unavailable by circumstances beyond the control of the owner or operator of the source and only as necessary to assure the availability of the engine or turbine.–An emergency or standby unit may not be operated to supplement a primary power source when the load capacity or rating of the primary power source has been reached or exceeded.

b) Operates exclusively for firefighting or flood control or both.

c) Operates in response to and during the existence of any officially declared disaster or state of emergency.

d) Operates for the purpose of testing, repair or routine maintenance to verify its readiness for emergency or standby use.

e) Notwithstanding any other subsection in this Section, emergency or standby units may operate an additional 50 hours per year in non-emergency situations.

The term does not include equipment used for purposes other than emergencies, as described above, such as to supply power during high electric demand days.

(Source: Amended at 32 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
SUBPART A: GENERAL PROVISIONS

Section

SUBPART B: NEW FUEL COMBUSTION EMISSION SOURCES

Section

SUBPART C: EXISTING FUEL COMBUSTION EMISSION SOURCES

Section

SUBPART K: PROCESS EMISSION SOURCES

Section

SUBPART O: CHEMICAL MANUFACTURE

Section

SUBPART Q: STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES AND TURBINES

Section

SUBPART T: CEMENT KILNS

SUBPART U: NO_X CONTROL AND TRADING PROGRAM FOR SPECIFIED NO_X GENERATING UNITS

SUBPART V: ELECTRIC POWER GENERATION

SUBPART W: NO_X TRADING PROGRAM FOR ELECTRICAL GENERATING UNITS

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 R07-19 at 32. Ill. Reg. _____, effective _____.

SUBPART Q: STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES AND TURBINES

Section 217.386 Applicability

a) The provisions of this Subpart shall apply to all:

1) ~~A stationary~~ Stationary reciprocating internal combustion engines ~~engine~~ listed in Appendix G of this Part ~~is subject to the requirements of this Subpart Q~~.

2) Stationary reciprocating internal combustion engines and turbines located at a source that emits or has the potential to emit NO_x in an amount equal to or greater than 100 tons per year and is in either 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 in the area composed of the Metro-East counties of Jersey, Madison, Monroe, and St. Clair, and the Township of Baldwin in Randolph County, where:

A) The engine at nameplate capacity is rated at equal to or greater than 500 bhp output; or

B) The turbine is rated at equal to or greater than 3.5 MW (4,694 bhp) output at 14.7 psia, 59ºF and 60 percent relative humidity.

b) Notwithstanding subsection (a) of this Section, an affected unit is not subject to the requirements of this Subpart Q if the engine or turbine is or has been:

1) Used as an emergency or standby unit as defined by 35 Ill. Adm. Code 211.1920;

2) Used for research or for the purposes of performance verification or testing;

3) Used to control emissions from landfills, where at least 50 percent of the heat input is gas collected from a landfill;

4) Used for agricultural purposes including the raising of crops or livestock that are produced on site, but not for associated businesses like packing operations, sale of equipment or repair; or

5) An engine with nameplate capacity rated at less than 1,500 bhp (1,118kW) output, mounted on a chassis or skids, designed to be moveable, and moved to a different source at least once every 12 months;

c) If an exempt unit ceases to fulfill the criteria specified in subsection (b) of this Section, the owner or operator must notify the Agency in writing within 30 days after becoming aware that the exemption no longer applies and comply with the control requirements of this Subpart Q.

d) The requirements of this Subpart Q will continue to apply to any engine or turbine that has ever been subject to the control requirements of Section 217.388, even if the affected unit or source ceases to fulfill the rating requirements of subsection (a) of this Section or becomes eligible for an exemption pursuant to subsection (b) of this Section.

e) 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 emissions offsets, such NO_x decreases shall remain creditable notwithstanding any requirements that may apply to the existing emissions units pursuant to this Subpart.

(Source: Amended at 32 Ill. Reg. _____, effective _____)

Section 217.388 Control and Maintenance Requirements

On and after the applicable compliance date in Section 217.392, an owner or operator of an affected unit must inspect and maintain affected units as required by subsection (~~c~~d) of this Section and comply with one of the following:~~either~~ the applicable emissions concentration as set forth in subsection (a) of this Section, ~~or~~ the requirements for an emissions averaging plan as specified in subsection (b) of this Section, or the requirements for operation as a low usage unit as specified in subsection (c) of this Section.

a) The owner or operator ~~must~~ limits the discharge from an affected unit into the atmosphere of any gases that contain NO_X to no more than:

1) 150 ppmv (corrected to 15 percent O_2 on a dry basis) for spark-ignited rich-burn engines;

2) 210 ppmv (corrected to 15 percent O_2 on a dry basis) for spark-ignited lean-burn engines, except for existing spark-ignited Worthington engines that are not listed in Appendix G;

3) 365 ppmv (corrected to 15 percent O_2 on a dry basis) for existing spark-ignited Worthington engines that are not listed in Appendix G;

4) 660 ppmv (corrected to 15 percent O_2 on a dry basis) for diesel engines;

5) 42 ppmv (corrected to 15 percent O_2 on a dry basis) for gaseous fuel-fired turbines; and

6) 96 ppmv (corrected to 15 percent O_2 on a dry basis) for liquid fuel-fired turbines.

b) The owner or operator ~~must~~ complies~~y~~ with an emissions averaging plan as provided for in either subsection (b)(1) or (b)(2) of this Section:

1) For any affected unit identified by Section 217.386: The ~~the~~ requirements of the applicable emissions averaging plan as set forth in Section 217.390; or

2) For units identified in Section 217.386(a)(2): The requirements of an emissions averaging plan adopted pursuant to any other Subpart of this Part. For such affected engines and turbines the applicable requirements of this Subpart apply, including but not limited to, calculation of NO_x allowable and actual emissions rates, compliance dates, monitoring, testing, reporting, and recordkeeping.

c) The owner or operator operates the affected unit as a low usage unit pursuant to subsection (c)(1) or (c)(2) of this Section. Low usage units are not subject to the requirements of this Subpart Q except for the requirements to inspect and maintain the unit pursuant to subsection (d) of this Section, and retain records pursuant to Sections 217.396(b) and (d). Either the limitation in subsection (c)(1) or (c)(2) may be utilized at a source, but not both:

1) The potential to emit (PTE) is no more than 100 TPY NO_x aggregated from all engines and turbines located at the source that are not otherwise exempt pursuant to Section 217.386(b), and not complying with the requirements of subsection (a) or (b) of this Section, and the NO_x PTE limit is contained in a federally enforceable permit; or

2) The aggregate bhp-hrs/MW-hrs from all affected units located at the source that are not exempt pursuant to Section 217.386(b), and not complying with the requirements of subsection (a) or (b) of this Section, are less than or equal to the bhp-hrs and MW-hrs operation limit listed in subsection (c)(2)(A) and (c)(2)(B) of this Section. For units that drive a natural gas compressor station but that are not located at a natural gas compressor station or storage facility, the operation limits of subsection

(c)(2)(A) and (c)(2)(B) of this Section must be contained in a federally enforceable permit. The operation limits are:

A) 8 mm bhp-hrs or less on an annual basis for engines; and

B) 20,000 MW-hrs or less on an annual basis for turbines.

d) The owner or operator ~~must~~ inspects and performs periodic maintenance on the affected unit, in accordance with a Maintenance Plan that documents:

1) For a unit not located at natural gas transmission compressor station or storage facility, either:

A) The manufacturer's recommended inspection and maintenance of the applicable air pollution control equipment, monitoring device, and affected unit; or

B) If the original equipment manual is not available or substantial modifications have been made that require an alternative procedure for the applicable air pollution control device, monitoring device, or affected unit, the owner or operator must establish a plan for inspection and maintenance in accordance with what is customary for the type of air pollution control equipment, monitoring device, and affected unit.

2) For a unit located at a natural gas compressor station or storage facility, the operator's maintenance procedures for the applicable air pollution control device, monitoring device, and affected unit.

(Source: Amended at 32 Ill. Reg. _____, effective _____)

Section 217.390 Emissions Averaging Plans

a) An owner or operator of certain affected units may comply through an emissions averaging plan.

1) The unit or units that commenced operation before January 1, 2002~~,~~ may be included in only one~~an~~ emissions averaging plan, as follows:

A) ~~units~~Units:

i) Listed in Appendix G and located at a single source or at multiple sources in Illinois, so long as the units are owned by the same company or parent company where the parent company has working control through stock ownership of its subsidiary corporations. ~~A unit may be listed in only~~

~~one emissions averaging plan~~; or

ii) Identified in Section 217.386(a)(2), and located at a single source or at multiple sources in either the Chicago area counties or Metro-East area counties, so long as the units are owned by the same company or parent company where the parent company has working control through stock ownership of its subsidiary corporations.

B) Units that have a compliance date later than the control period for which the averaging plan is being used for compliance; and

C) Units which the owner or operator may claim as exempt pursuant to Section 217.386(b) but does not claim as exempt. For as long as such unit is included in an emissions averaging plan, it will be treated as an affected unit and subject to the applicable emission concentration, limits, testing, monitoring, recordkeeping and reporting requirements.

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

A) Units ~~units~~ that commence operation after January 1, 2002, unless the unit replaces an engine or turbine that commenced operation on or before January 1, 2002, or it replaces an engine or turbine 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. The owner or operator of a unit that is shutdown and replaced must comply with the provisions of Section 217.396(~~d~~c)(3) before the replacement unit may be included in an emissions averaging plan.

B) Units which the owner or operator is claiming are exempt pursuant to Section 217.386(b) or as low usage units pursuant to Section 217.388(c).

b) An owner or operator must submit an emissions averaging plan to the Agency by the applicable compliance date set forth in Section 217.392, or by May 1 of the year in which the owner or operator is using a new emissions averaging plan to comply.

1) The plan must include, but is not limited to:

~~1~~A) The list of affected units included in the plan by unit identification number and permit number.

~~2~~B) A sample calculation demonstrating compliance using the methodology provided in subsection (f) of this Section for both the ozone season and calendar year.

2) The plan will be effective as follows

A) An initial plan for units required to comply by January 1, 2008, is effective January 1, 2008;

B) An initial plan for units required to comply by May 1, 2010, is effective May 1, 2010 for those units;

C) A new plan submitted pursuant to subsection (b) of this Section but not submitted by January 1, 2008 or May 1, 2010 is effective retroactively to January 1 of the applicable year;

D) An amended plan submitted pursuant to subsection (c) of this Section is effective retroactively to January 1 of the applicable year; or

E) An amended plan submitted pursuant to subsection (d) of this Section is effective on the date it is received by the Agency.

c) An owner or operator may amend an emissions averaging plan only once per calendar year. An amended plan must include the information from subsection (b)(1) and may, but is not limited to changing the group of affected units or reflecting changes in the operation of the affected units. An amended plan must be submitted to the Agency by May 1 of the applicable calendar year and is effective as set forth in subsection (b)(2) of this Section. 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.

d) Notwithstanding subsection (c) of this Section, an owner or operator, and the buyer, if applicable:~~, must~~

1) Must submit an updated emissions averaging plan or plans to the Agency within 60 days~~,~~ if a unit that is listed in an emissions averaging plan is sold or taken out of service.

2) May amend its emissions averaging plan to include another unit within 30 days of discovering that the unit no longer qualifies as an exempt unit pursuant to Section 217.386(b) or as a low usage unit pursuant to Section 217.388(c).

e) An owner or operator must:

1) Demonstrate compliance for both 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)~~, (c), or (d)~~ of this Section; the higher of the monitoring or test data determined pursuant to Section 217.394; and the actual hours of operation for the applicable control period;

2) Notify the Agency by October 31 following the ozone season, if compliance cannot be demonstrated for that ozone season; and

3) Submit to the Agency by January 31 following each calendar year, a compliance report containing the information required by Section 217.396(c)(4).

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:

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

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

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

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

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

$EM_{act(i)}$ = Total mass of actual NO_x emissions in lbs for a unit as determined in subsection (g)(1) or (h)(1) of this Section.

i = Subscript denoting an individual unit and fuel used.

n = Number of different units in the averaging plan.

g) For each unit in the averaging plan, and each fuel used by a unit, determine actual and allowable NO_X emissions using the following equations, except as provided for in subsection (h) of this Section:

1) Actual emissions must be determined as follows:

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

$$E_{act(i)} = \frac{\sum_{j=1}^{m} C_{d(act(j))} x F_d x \left(\frac{20.9}{20.9 - \%O_{2d(j)}} \right)}{m}$$

2) Allowable emissions must be determined as follows:

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

$$E_{all(i)} = \frac{\sum_{j=1}^{m} C_{d(all)} x F_d x \left(\frac{20.9}{20.9 - \%O_{2d(j)}} \right)}{m}$$

Where:

$EM_{act(i)}$= Total mass of actual NO_X emissions in lbs for a unit, except as provided for in subsections (g)(3) and (g)(5) of this Section.

$EM_{all(i)}$ = Total mass of allowable NO_X emissions in lbs for a unit, except as provided for in subsection (g)(3) of this Section.

E_{act} = Actual NO_X emission rate (lbs/mmBtu) calculated according to the above equation.

E_{all} = Allowable NO_X emission rate (lbs/mmBtu) calculated according to the above equation.

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

$C_{d(act)}$ = Actual concentration of NO_X in lb/dscf (ppmv x 1.194×10^{-7}) on a dry basis for the fuel used. Actual concentration is determined on each of the most recent test runs or monitoring passes performed pursuant to Section 217.394, whichever is higher.

$C_{d(all)}$ = Allowable concentration of NO_X in lb/dscf (allowable emission limit in ppmv specified in Section 217.388(a), except as provided for in subsection (g)(4), (g)(5), or (g)(6) of this Section, if applicable~~,~~ (multiplied by 1.194×10^{-7}) on a dry basis for the fuel used.

F_d = The ratio of the gas volume of the products of combustion to the heat content of the fuel (dscf/mmBtu) as given in the table of F Factors included in 40 CFR 60, ~~A~~appendix A, Method 19 or as determined using 40 CFR 60, ~~A~~appendix A, Method 19.

$\%O_{2d}$ = Concentration of oxygen in effluent gas stream measured

on a dry basis during each of the applicable tests or monitoring runs used for determining emissions, as represented by a whole number percent, e.g., for 18.7%O_{2d}, 18.7 would be used.

i = Subscript denoting an individual unit and the fuel used.

j = Subscript denoting each test run or monitoring pass for an affected unit for a given fuel.

m = The number of test runs or monitoring passes for an affected unit using a given fuel.

3) For a replacement unit that is electric-powered, the allowable NO_X emissions from the affected unit that was replaced should be used in the averaging calculations and the actual NO_X emissions for the electric-powered replacement unit ($EM_{(i)act\ elec(i)}$) are zero. Allowable NO_X emissions for the electric-powered replacement are calculated using the actual total bhp-hrs generated by the electric-powered replacement unit on an ozone season and on an annual basis multiplied by the allowable NO_X emission rate in lb/bhp-hr of the replaced unit. The allowable mass of NO_X emissions from an electric-powered replacement unit ($EM_{(i)all\ elec(i)}$) must be determined by multiplying the nameplate capacity of the unit by the hours operated during the ozone season or annually and the allowable NO_X emission rate of the replaced unit ($E_{all\ rep}$) in lb/mmBtu converted to lb/bhp-hr. For this calculation the following equation should be used:

$$EM_{all\ elec(i)} = bhp \times OP \times F \times E_{all\ rep(i)}$$

Where:

$EM_{all\ elec(i)}$ = Mass of allowable NO_X emissions from the electric-powered replacement unit in pounds per ozone season or calendar year.

bhp = Nameplate capacity of the electric-powered replacement unit in brake-horsepower.

OP = Operating hours during the ozone season or calendar year.

F = Conversion factor of 0.0077 mmBtu/bhp-hr.

$E_{all\ rep(i)}$ = Allowable NO_X emission rate (lbs/mmBtu) of the replaced unit.

i = Subscript denoting an individual electric unit and the fuel used.

4) For a replacement unit that is not electric, the allowable NO_x emissions rate used in the above equations set forth in subsection (g)(2) of this Section must be the higher of the actual NO_x emissions as determined by testing or monitoring data or the applicable uncontrolled NO_x emissions factor from Compilation of Air ~~p~~Pollutant ~~e~~Emission Factors: AP-42,

Volume I: Stationary Point and Area Sources, as incorporated by reference in Section 217.104 for the unit that was replaced.

5) For a unit that is replaced with purchased power, the allowable NO_x emissions rate used in the ~~above~~ equations set forth in subsection (g)(2) of this Section must be the emissions concentration ~~as~~ set forth in Section 217.388(a) or subsection (g)(6) of this Section, when applicable, for the type of unit that was replaced. For owners or operators replacing units with purchased power, the annual hours of operations that must be used are the calendar year hours of operation for the unit that was shutdown<u>shut down,</u> averaged over the three-year period prior to the shutdown. The actual NO_X emissions for the units replaced by purchased power ($EM_{(i)act}$) are zero. These units may be included in any emissions averaging plan for no more than five years beginning with the calendar year that the replaced unit is shut down.

6) For <u>units that have a later compliance date</u>~~non-Appendix G units used in an emissions averaging plan~~, allowable emissions rate used in the above equations set forth in subsection (g)(2) of this Section must be<u>:</u>

<u>A)</u> <u>Prior to the applicable compliance date pursuant to Section 217.392,</u> the higher of the actual NO_x emissions as determined by testing or monitoring data~~,~~ or the applicable uncontrolled NO_x emissions factor from Compilation of Air Pollutant Emission Factors: AP-42, Volume I: Stationary Point and Areas Sources, as incorporated by reference in Section 217.104~~)~~<u>; or</u>

<u>B)</u> <u>On and after the unit's applicable compliance date pursuant to section 217.392, the applicable emissions concentration for that type of unit pursuant to Section 217.388(a)</u>.

h) For units that use CEMS<u>,</u> the data must show that the total mass of actual NO_X emissions determined pursuant to subsection (h)(1) of this Section is less than or equal to the allowable NO_X emissions calculated in accordance with the equations in subsections (f) and (h)(2) of this Section for both the ozone season and calendar year. The equations in subsection (g) of this Section will not apply.

1) The total mass of actual NO_X emissions in lbs for a unit (EM_{act}) must be the sum of the total mass of actual NO_X emissions from each affected unit using CEMS data collected in accordance with 40 CFR 60 or 75, or alternate methodology that has been approved by the Agency or USEPA and included in a federally enforceable permit.

2) The allowable NO_x emissions must be determined as follows:

$$EM_{all_{(i)}} = \sum_{i=1}^{m} (Cd_i * flow_i * 1.194 x 10^{-7})$$

Where:

$EM_{all(i)}$ = Total mass of allowable NO_x emissions in lbs for a unit.
~~f~~Flow$_i$ = Stack flow (dscf/hr) for a given stack.
Cd_i = Allowable concentration of NO_x (ppmv) specified in Section 217.388(a) ~~of this subpart~~ for a given stack. (1.194×10^{-7}~~)~~ converts to lb/dscf).
j = subscript denoting each hour operation of a given unit.
m = Total number of hours of operation of a unit.
i = Subscript denoting an individual unit and the fuel used.

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

(Source: Amended at 32 Ill. Reg. _____, effective _____)

Section 217.392 Compliance

a) On and after January 1, 2008, an owner or operator of an affected engine listed in Appendix G may not operate the affected engine unless the requirements of this Subpart Q are met or the affected engine is exempt pursuant to Section 217.386(b).

b) On and after May 1, 2010, an owner or operator of a unit identified by Section 217.386(a)(2), and that is not listed in Appendix G, may not operate the affected unit unless the requirements of this Subpart Q are met or the affected unit is exempt pursuant to Section 217.386(b).

c) Owners and operators of an affected unit may use NO_x allowances to meet the compliance requirements in Section 217.388 as specified below. A NO_x allowance is defined as an allowance used to meet the requirements of a NO_x trading program administered by USEPA where one allowance is equal to one ton of NO_x emissions.

1) NO_x allowances may be used only under the following circumstances:

A) An anomalous or unforeseen operating scenario inconsistent with historical operations for a particular ozone season or calendar year that causes an exceedance of an emissions or operating hour limitation;

B) To achieve compliance for no more than two events in any rolling five-year period; and

C) For a unit that is not listed in Appendix G.

2) The owner or operator of the affected unit must surrender to the Agency a NO_x allowance for each ton or portion of a ton of NO_x by which actual emissions exceed allowed emissions. Where a low usage limitation under Section 217.388(c)(2) has been exceeded, the owner or operator of the affected unit must calculate the NO_x emissions resulting from the number of hours that exceeded the operating hour low usage limit and surrender to the Agency one NO_x allowance for each ton or portion of a ton of NO_x that was calculated. For noncompliance with a seasonal limit in Section 217.388(b), only a NO_x ozone season allowance must be used. For noncompliance with the emissions concentration limits in Section 217.388(a), low usage limitations in Section 217.388(c) or an annual limitation in an emissions averaging plan in Section 217.388(b), only a NO_x annual allowance may be used.

3) The owner operator must submit a report documenting the circumstances that required the use of NO_x allowances and identify what actions will be taken in subsequent years to address these circumstances and must transfer the NO_x allowances to the Agency's federal NO_x retirement account. The report and the transfer of allowances must be submitted by October 31 for exceedances during the ozone season and March 1 for exceedances of the emissions concentration limits, the annual emissions averaging plan limits, or low usage limitations. The report must contain the NATS serial numbers of the NO_x allowances.

(Source: Amended at 32 Ill. Reg. _____, effective _____)

Section 217.394 Testing and Monitoring

a) An owner or operator must conduct an initial performance test pursuant to subsection (c)(1) or (c)(2) of this Section as follows:

1) By January 1, 2008, for affected engines listed in Appendix G. Performance tests must be conducted on units listed in Appendix G, even if the unit is included in an emissions averaging plan pursuant to Section 217.388(b).

2) By the applicable compliance date as set forth in Section 217.392, or within~~Within~~ the first 876 hours of operation per calendar year, whichever is later:

A) ~~Performance tests must be conducted on~~ For affected units not listed in Appendix G that operate more than 876 hours per calendar year; and

B) For units that are not affected units that are included in an emissions averaging plan and operate more than 876 hours per calendar year.

3) Once within the five-year period after the applicable compliance date as set forth in Section 217.392:

A) For affected units that operate fewer than 876 hours per calendar year; and~~. Performance tests must be conducted on~~

B) For units that are not affected units that are included in an emissions averaging plan and that operate fewer than 876 hours per calendar year.

b) An owner or operator of an engine or turbine must conduct subsequent performance tests pursuant to subsection (~~e~~b)(1), ~~or~~ (~~e~~b)(2), and (b)(3) of this Section as follows:

1) For affected engines listed in Appendix G and all units included in an emissions averaging plan, once every five years. Testing must be performed in the calendar year by May 1 or within 60 days after starting operation, whichever is later;

2) If the monitored data shows that the unit is not in compliance with the applicable emissions concentration or emissions averaging plan, the owner or operator must report the deviation to the Agency in writing within 30 days and conduct a performance test pursuant to subsection (c) of this Section within 90 days of the determination of noncompliance; and

3) When, in the opinion of the Agency or USEPA, it is necessary to conduct testing to demonstrate compliance with Section 217.388, the owner or operator of a unit must, at his or her own expense, conduct the test in accordance with the applicable test methods and procedures specified in this Section within 90 days after receipt of a notice to test from the Agency or USEPA.

c) Testing Procedures:

1) For an engine: The owner or operator must conduct a performance test using Method 7 or 7E of 40 CFR 60, appendix A, as incorporated by reference in Section 217.104. Each compliance test must consist of three separate runs, each lasting a minimum of 60 minutes. NO_x emissions must be measured while the affected unit is operating at peak load. If the unit combusts more than one type of fuel (gaseous or liquid), including backup fuels, a separate performance test is required for each fuel.

2) For a turbine ~~included in an emissions averaging plan~~: The owner or operator must conduct a performance test using the applicable procedures and methods in 40 CFR 60.4400, as incorporated by reference in Section 217.104.

d) Monitoring: Except for those years in which a performance test is conducted pursuant to subsection (a) or (b) of this Section, the owner or operator of an affected unit or a unit included in an emissions averaging plan must monitor NO_x concentrations annually, once between January 1 and May 1 or within the first 876 hours of operation per calendar year, whichever is later. If annual operation is less than 876 hours per calendar year, each affected unit must be monitored at least once every five years. Monitoring must be performed as follows:

1) A portable NO_x monitor ~~utilizing~~and method ASTM D6522-00, as incorporated by reference in Section 217.104, or a method approved by the Agency must be used. If the engine or turbine combusts both liquid and gaseous fuels as primary or backup fuels, separate monitoring is required for each fuel.

2) NO_x and O_2 concentrations measurements must be taken three times for a duration of at least 20 minutes. Monitoring must be done at highest achievable load. The concentrations from the three monitoring runs must be averaged to determine whether the affected unit is in compliance with the applicable emissions concentration or emissions averaging plan, as specified in Section 217.388.

e) Instead of complying with the requirements of subsections (a), (b), (c) and (d) of this Section, an owner or operator may install and operate a CEMS on an affected unit that meets the applicable requirements of 40 CFR 60, subpart A, and appendix B, incorporated by reference in Section 217.104, and complies with the quality assurance procedures specified in 40 CFR 60, appendix F, or 40 CFR 75, as incorporated by reference in Section 217.104, or an alternate procedure as approved by the Agency or USEPA in a federally enforceable permit. The CEMS must be used to demonstrate compliance with the applicable emissions concentration or emissions averaging plan only on an ozone season and annual basis.

f) The testing and monitoring requirements of this Section do not apply to affected units in compliance with the requirements of the low usage limitations pursuant to Section 217.388(c) or low usage units using NO_x allowances to comply with the requirements of this Subpart pursuant to Section 217.392(c). Notwithstanding the above circumstances, when in the opinion of the Agency or USEPA, it is necessary to conduct testing to demonstrate compliance with Section 217.388, the owner or operator of a unit must, at his or her own expense, conduct the test in accordance with the applicable test methods and procedures specified in this

Section within 90 days after receipt of a notice to test from the Agency or USEPA.

(Source: Amended at 32 Ill. Reg. _____, effective _____)

Section 217.396 Recordkeeping and Reporting

a) Recordkeeping. The owner or operator of a unit included in an emissions averaging plan or an affected unit that is not exempt pursuant to Section 217.386(b) and is not subject to the low usage exemption of Section 217.388(c) ~~of an Appendix G unit or a unit included in an emissions averaging plan~~ must maintain records that demonstrate compliance with the requirements of this Subpart Q, which include, but are not limited to:

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

2) Calendar date of the record.

3) The number of hours the unit operated on a monthly basis~~,~~ and during each ozone season.

4) Type and quantity of the fuel used on a daily basis.

5) The results of all monitoring performed on the unit and reported deviations.

6) The results of all tests performed on the unit.

7) The plan for performing inspection and maintenance of the units, air pollution control equipment, and the applicable monitoring device pursuant to Section 217.388(d)~~(c)~~.

8) A log of inspections and maintenance performed on the unit's air emissions, monitoring device, and air pollution control device. These records must include, at a minimum, date, load levels and any manual adjustments, along with the reason for the adjustment (e.g., air to fuel ratio, timing or other settings).

9) If complying with the emissions averaging plan provisions of Sections 217.388(b) and 217.390, copies of the calculations used to demonstrate compliance with the ozone season and annual control period limits, noncompliance reports for the ozone season, and ozone and annual control period compliance reports submitted to the Agency.

10) Identification of time periods for which operating conditions and pollutant data were not obtained by either the CEMS or alternate monitoring

procedures, including the reasons for not obtaining sufficient data and a description of corrective actions taken.

11) Any NO_x allowance reconciliation reports submitted pursuant to Section 217.392(c)(3).

b) The owner or operator of an affected unit or unit included in an emissions averaging plan must maintain the records required by subsections~~subsection~~ (a) or (d) of this Section, as applicable, for a period of five- years at the source at which the unit is located. The records must be made available to the Agency and USEPA upon request.

c) Reporting Requirements

1) The owner or operator must notify the Agency in writing 30 days and five days prior to testing, pursuant to Section 217.394(a) and (b) and:

A) 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 performance test as scheduled, the owner or operator of the unit must notify the Agency as soon as possible of the delay in the original test date, either by providing at least seven days prior notice of the rescheduled date of the performance test~~,~~ or by arranging a new test date with the Agency by mutual agreement;

B) Provide a testing protocol to the Agency 60 days prior to testing; and

C) Not later than 30 days after the completion of the test, submit the results of the test to the Agency.

2) Pursuant to the requirements for monitoring in Section 217.394(d), the owner or operator of the unit must report to the Agency any monitored exceedances of the applicable NO_x concentration from Section 217.388(a) or (b) within 30 days after performing the monitoring.

3) Within 90 days after permanently shutting down an affected unit or a unit included in an emissions averaging plan, the owner or operator of the unit must withdraw or amend the applicable permit to reflect that the unit is no longer in service.

4) If demonstrating compliance through an emissions averaging plan:

A) By October 31 following the applicable ozone season, the owner or operator must notify the Agency if he or she cannot demonstrate compliance for that ozone season; and

B) By January 31~~30~~ following the applicable calendar year, the owner or operator must submit to the Agency a report that demonstrates the following:

i) 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;

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

iii) 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 Sections 217.390(f) and (g); and

iv) The information required to determine the total mass of actual NO_X emissions and the calculations performed in subsection (c~~d~~)(4)(B)(iii) of this Section.

5) If operating a CEMS, the owner or operator must submit an excess emissions and monitoring systems performance report in accordance with the requirements of 40 CFR 60.7(c) and 60.13~~,~~ or 40 CFR 75, incorporated by reference in Section 217.104, or an alternate procedure approved by the Agency or USEPA and included in a federally enforceable permit.

6) If using NO_x allowances to comply with the requirements of Section 217.388, reconciliation reports as required by Section 217.392(c)(3).

d) The owner or operator of an affected unit that is complying with the low usage provisions of Section 217.388(c) must:

1) For each unit complying with Section 217.388(c)(1), maintain a record of the NO_x emissions for each calendar year;

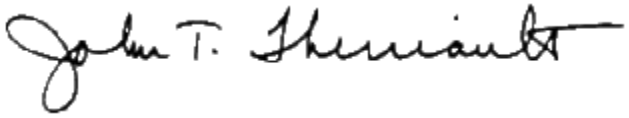
2) For each unit complying with Section 217.388(c)(2), maintain a record of bhp or MW hours operated each calendar year; and

3) For each unit utilizing NO_x allowances for compliance pursuant to Section 217.392(c)(3), maintain and submit any NO_x allowance reconciliation reports.

(Source: Amended at 32 Ill. Reg. _____, effective _____)

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 September 16, 2008, by a vote of 4-0.



John T. Therriault, Assistant Clerk
Illinois Pollution Control Board