

ILLINOIS POLLUTION CONTROL BOARD  
August 9, 2007

IN THE MATTER OF: )  
)  
FAST-TRACK RULES UNDER NITROGEN ) R07-18  
OXIDE (NO<sub>x</sub>) SIP CALL PHASE II: ) (Rulemaking - Air)  
AMENDMENTS TO 35 ILL. ADM. CODE )  
SECTION 201.146 AND PARTS 211 and 217 )

Proposed Rule. Second Notice.

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

Today the Board adopts for second notice rules intended to reduce interstate and intrastate transport of nitrogen oxides (NO<sub>x</sub>) emissions on ozone season and annual bases by reducing NO<sub>x</sub> emissions from stationary reciprocating internal combustion engines addressed in the NO<sub>x</sub> State Implementation Plan (SIP) Call Phase II. *See* 69 Fed. Reg. 21603 (April 21, 2004). This proposal will add a new Subpart Q to Part 217 of the Board's air regulations. The existing units subject to this rulemaking are specifically listed in Appendix G.

The Illinois Environmental Protection Agency (Agency) originally filed its rulemaking proposal in this docket on April 6, 2007 under the "fast-track" procedures of Section 28.5 of the Environmental Protection Act (Act) (415 ILCS 5/28.5 (2006)). In an order dated May 17, 2007, the Board concluded that the Agency's entire proposal is not "required to be adopted" by the Clean Air Act (CAA). Accordingly, the Board bifurcated the proposal by continuing to consider only the portion applicable to engines affected by the NO<sub>x</sub> SIP Call Phase II under fast-track procedures. In the same order, the Board directed publication of the remainder of the Agency's original proposal for first notice under Sections 27 and 28 of the Act in docket R 07-19 without commenting on the merits of the proposal. *See* 35 Ill. Reg. 7683, 7702.

In this opinion, the Board first provides the procedural history of this rulemaking and the federal regulatory background for the Agency's proposal. The opinion then summarizes the Agency's proposal in light of the Board's May 17, 2007 order before addressing technical and economic issues raised in hearings and in the post-hearing comments of the participants. The order following this opinion then sets forth the proposed amendments for second notice publication in the *Illinois Register*.

**PROCEDURAL HISTORY**

On April 6, 2007, the Agency filed with the Board a rulemaking proposal intended to reduce emissions of NO<sub>x</sub> from stationary reciprocating engines and turbines. The Agency's proposal included a technical support document (TSD). In its accompanying statement of reasons (Statement), the Agency invoked as statutory authorities for filing its proposal sections 9.9, 10, and 27 of the Act. Statement at 1, 7-8; *see* 415 ILCS 5/9.9, 10, 27 (2006)). The Agency also invoked Section 28.5 of the Act, which provides for "fast-track" proceedings applying

“solely to the adoption of rules proposed by the Agency and required to be adopted by the State under the Clean Air Act as amended by the Clean Air Act Amendments of 1990 (CAAA).” Statement at 8-11, citing 415 ILCS 5/28.5(a) (2004).

On April 16, 2007, ANR Pipeline Company, Natural Gas Pipeline Company, Trunkline Gas Company, and Panhandle Eastern Pipeline Company (collectively, the Pipeline Consortium) filed an “Objection to Use of Section 28.5 Fast Track Procedures for Consideration of Nitrogen Oxide Proposal as Filed.” On April 17, 2007, the Illinois Environmental Regulatory Group (IERG) filed an “Objection to Use of Section 28.5 ‘Fast-Track’ Rulemaking for the Illinois Environmental Protection Agency’s Proposed Rules.”

On April 19, 2007, the Board adopted an order accepting the Agency’s proposal for hearing without commenting on its merits and sending the proposed rule to first notice under the Illinois Administrative Procedure Act. *See* 31 Ill. Reg. 6559, 6578, 6597; 31 Ill. Reg. 7370-72 (correction of hearing date); *see also* 5 ILCS 100/1-1 *et seq.* (2006). In the same order, the Board noted that it had received objections to the Agency’s reliance on section 28.5 procedures both from the Pipeline Consortium and from IERG. The same order directed that any response to the two objections be filed by May 1, 2007, and allowed replies to the responses to be filed by May 8, 2007.

On May 1, 2007, the Agency filed a “Response to the Pipeline Consortium’s Objection to Use of Section 28.5 Fast Track Procedures for Consideration of Nitrogen Oxide Proposal,” accompanied by the affidavit of Robert Kaleel. Also on May 1, 2007, the Agency filed a “Response to the Illinois Environmental Regulatory Group’s Objection to Use of Section 28.5 Fast Track Procedures for Consideration of Nitrogen Oxide Proposal”, accompanied by an affidavit of Robert Kaleel.

On May 8, 2007, the Pipeline Consortium filed a “Reply to the Illinois Environmental Protection Agency’s Responses to Objections to the Use of Section 28.5 Fast-Track Rulemaking Procedures in this Matter.” Also on May 8, 2007, IERG filed a “Reply to Response to Objection to Use of Section 28.5 ‘Fast-Track’ Rulemaking for the Illinois Environmental Protection Agency’s Proposed Rules,” accompanied by an affidavit of Deirdre K. Hirner.

On May 14, 2007, the Pipeline Consortium filed in Sangamon County Circuit Court a complaint seeking declaratory and injunctive relief related to this proceeding. The Pipeline Consortium asserted that it filed its complaint “as a result of IPCB’s illegal rulemaking procedure and the IEPA’s illegal filing of a proposed rule with the IPCB.” ANR Pipeline Company, Natural Gas Pipeline Company, Trunkline Gas Company, and Panhandle Eastern Pipe Line Company v. Illinois Pollution Control Board and Illinois Environmental Protection Agency, No. 07MR190 (Sangamon County Circuit Court). Generally, plaintiffs alleged that Section 28.5 of the Act is unconstitutional and could not be used to adopt certain portions of IEPA’s original proposal. On June 14, 2007, the parties filed an agreed motion to continue.

In an order dated May 17, 2007, the Board concluded that the Agency’s entire proposal is not “required to be adopted” by the Clean Air Act (CAA). Accordingly, the Board bifurcated the

proposal by continuing to consider only the portion applicable to the 28 internal combustion engines affected by the NO<sub>x</sub> SIP Call Phase II under the fast-track procedures of Section 28.5 of the Act. In the same order, the Board directed publication of the remainder of the Agency's proposal for first notice under Sections 27 and 28 of the Act in docket R07-19 without commenting on the merits of the proposal.

In a letter dated May 2, 2007, the Board requested that the Department of Commerce and Economic Opportunity (DCEO) conduct an economic impact study of this rulemaking proposal. *See* 415 ILCS 5/27(b) (2006). On May 21, 2007, the Board received from DCEO a response stating that, based upon its review of the request and in light of its continued financial constraints, DCEO had determined not to conduct a study of the economic impact of the proposal.

On May 11, 2007, the Agency prefiled the testimony of Robert Kaleel, Yoginder Mahajan, Scott Leopold, and Michael Koerber. On May 18, 2007, the Agency filed a motion to withdraw testimony. Specifically, the Agency sought leave to withdraw the testimony of Scott Leopold and Michael Koerber in light of the Board's May 17, 2007 order bifurcating the Agency's original proposal. Also on May 18, 2007, the Agency filed a motion to amend testimony. Specifically, the Agency sought leave to amend the testimony of Robert Kaleel and Yoginder Mahajan in light of the Board's May 17, 2007 order bifurcating the Agency's original proposal.

The first hearing (Tr. 1) in this proceeding took place on May 21, 2007 in Springfield. At the beginning of that hearing, the hearing officer granted the Agency's motion to withdraw testimony, granted the Agency's motion to amend testimony, and accepted the amended testimony of Robert Kaleel (Kaleel Test.) and Yoginder Mahajan (Mahajan Test.). Tr. 1 at 4-5. Two exhibits, the amended testimony of Robert Kaleel (Exh. 1) and the amended testimony of Yoginder Mahajan (Exh. 2) were admitted into the record at the first hearing.

On June 8, 2007, James McCarthy prefiled testimony (McCarthy Test.). The second hearing (Tr. 2) in this proceeding took place on June 19, 2007 in Chicago. Seven exhibits were admitted into the record at the first hearing:

Testimony of James McCarthy (Exh. 3)

Hearing Officer Order of May 24, 2007 (Exh.4)

Appendix G: Existing Reciprocating Internal Combustion Engines Affected by NO<sub>x</sub> SIP Call (Exh. 5)

Interstate Ozone Transport: Response to Court Decisions on the NO<sub>x</sub> SIP Call, NO<sub>x</sub> SIP Call Technical Amendments, and Section 126 Rules; Final Rule (69 Fed.Reg. 21606-48) (Exh. 6)

Alternative Control Techniques Document – NO<sub>x</sub> Emissions from Stationary Reciprocating Internal Combustion Engines (USEPA) (Exh. 7)

Technical Support Document for Controlling NO<sub>x</sub> Emissions from Stationary Reciprocating Internal Combustion Engines and Turbines (AQPSTR 07-01) (Exh. 8)

Stationary Reciprocating Internal Combustion Engines Technical Support Document for NO<sub>x</sub> SIP CALL (October 2003) (Exh. 9)

On the record at the second hearing, the Agency indicated that it did not intend to introduce any additional material into the record and would have no objection if the Board cancelled the third hearing in this proceeding, which had been scheduled to begin on July 2, 2007. Tr. 2 at 44-45. A hearing officer order dated June 22, 2007 cancelled the third hearing and set the statutory 14-day comment period to run from June 21, 2007, to July 5, 2007. *See* 415 ILCS 5/28.5(l) (2006).

On June 25, 2007, the Agency filed a motion for reconsideration of the Board's May 17, 2007 order bifurcating the Agency's original proposal. On July 9, 2007, the Board received the Pipeline Consortium's response to the motion for reconsideration. Also on July 9, 2007, the Board received from IERG a motion to strike and a response to the motion for reconsideration. Also on July 9, 2007, the Agency filed a motion for leave to supplement and a supplement to its motion for reconsideration. Specifically, the Agency sought to add as an exhibit to its motion a document entitled *Report of the Attorney General's Task Force on Environmental Legal Resources (1992)*. On the same date, the Agency also filed a motion for waiver of the requirement that it file an original and nine copies of the supplemental exhibit.

On July 11, 2007, the Agency filed a motion for leave to file a reply by date certain, which committed to file a reply addressing both responses no later than July 18, 2007. In an order dated July 12, 2007, the Board granted the Agency leave to reply and directed the Agency to file that reply no later than July 18, 2007. On July 19, 2007, the Agency filed a motion for leave to file its consolidated reply *instanter*, accompanied by its consolidated reply. On July 23, 2007, the Agency filed a response to IERG's motion to strike.

In an order dated July 26, 2007, the Board granted the Agency's motion for leave to supplement, accepted the supplemental exhibit, and granted the Agency's motion for waiver of procedural requirements. Also in the July 26, 2007 order, the Board granted the Agency's motion to file *instanter*, denied IERG's motion to strike the Agency's motion to reconsider, and denied the Agency's motion for reconsideration of the Board's May 17, 2007 order.

On July 5, 2007, the Board received the Agency's post-hearing comments (PC 1). Also on July 5, 2007, the Board received the Pipeline Consortium's comments (PC 2).

## **BACKGROUND OF FEDERAL REQUIREMENTS**

The Agency states that the purpose of its proposed new Subpart Q, as modified by the Board's May 17, 2007 order, is the reduction of interstate and intrastate transport of NO<sub>x</sub> emissions on ozone season and annual bases by adopting rules reducing NO<sub>x</sub> emissions from stationary reciprocating internal combustion engines addressed in the NO<sub>x</sub> SIP Call Phase II. PC 1 at 1.

The Agency states that USEPA in 2004 promulgated a rule addressing interstate ozone transport. Statement at 6, citing 69 Fed. Reg. 21603 (April 21, 2004). The Agency further states that this rule responded to the court's ruling in Michigan v. EPA, 213 F.3d 663 (D.C. Cir. 2000). The Agency argues that, in its most important provision, the federal rule "sets the control limit for large natural gas-fired stationary internal combustion engines at 82 percent and for diesel and dual fuel stationary internal combustion engines at 90 percent." Statement at 7. The Agency states that the federal rule also provided that states required to address the NO<sub>x</sub> budget for stationary internal combustion engines were required to submit Phase II SIPs by April 1, 2005. *Id.*

The Agency claims that "[i]n November 2005, Illinois and other states received notification that USEPA had found a failure to submit a SIP addressing the Phase II requirements." *Id.*, citing Statement, Att. 7.b (letter from USEPA Regional Administrator to Agency Director). The Agency further claims that USEPA has "published the findings of failure to submit Phase II SIPs, but it had not yet published a federal implementation plan for Phase II or started a Section 179 sanctions clock." Statement at 7, citing 71 Fed. Reg. 6347 (Feb. 8, 2006): *see* Tr. 1 at 14-15.

The Pipeline Consortium argues that the NO<sub>x</sub> SIP Call Phase II merely obligates the state to reduce NO<sub>x</sub> emissions according to a budget and does not require the state to regulate emissions from units subject to the proposal. PC 2 at 1, citing 69 Fed. Reg. 21604-05 (April 21, 2004), 63 Fed. Reg. 57356, 57405 (Oct. 27, 1998), Tr. 1 at 15. While the Pipeline Consortium had objected on this basis to considering the proposal under Section 28.5 of the Act (415 ILCS 5.28.5 (2006)), the Pipeline Consortium set aside that objection because of the bifurcation of the rule. PC 2 at 1. The Pipeline Consortium notes that it participated with the Agency in developing the proposed rules and that it regards the proposal as consistent with the principles of the Phase II NO<sub>x</sub> SIP Call. *Id.* at 2. The Pipeline Consortium also notes that it "has been proactive in complying with the rule even prior to its adoption by the Board. *Id.*

## **SUMMARY AND DISCUSSION OF THE PROPOSAL**

### **Part 201: Permits and General Provisions**

#### **Exemptions from State Permit Requirements (Section 201.146)**

Section 201.146 exempts specified equipment and activities from the requirements of obtaining state construction or operating permits. 35 Ill. Adm. Code 201.146. The Agency originally proposed to amend subsection (i) of this Section, which addresses stationary internal combustion engines. The Agency's proposal clarified that the exemption applied to both engines

and turbines, and specified when a turbine or an internal combustion engine must obtain a permit.

In its post-hearing comments, however, the Agency noted that its original proposal and the accompanying TSD had addressed a “much broader range of engines.” PC 1 at 3. As noted above under “Procedural History,” the Board bifurcated the original proposal by continuing to consider in this docket only the portion of that proposal applicable to the 28 internal combustion engines affected by the NO<sub>x</sub> SIP Call Phase II. The Agency’s post-hearing comment further stated that “[a]mendments to Section 201.146(j)<sup>1</sup> and the broader range of engines will be addressed in R07-19.” PC 1 at 3. Furthermore, counsel for the Agency stated at the first hearing that “[t]he Agency is agreeable that the amendment to 35 Illinois Administrative Code 201.146 concerning a change in the permanent exemption for engines be moved to the docket in R07-19.” Tr. 1 at 9.

As the Agency has plainly indicated that it does not intend to address this proposed amendment to Section 201.146 in this docket, the Board will not include the proposed amendment to that section in its second notice order below. *See* 415 ILCS 5/28.5(m) (2006). Reflecting the Agency’s testimony at hearing and post-hearing comment, the Board finds that permit exemption changes to Section 201.146(i) must be addressed in docket R07-19.

### **Part 211: Definitions and General Provisions**

The Agency proposes to add new definitions to Part 211 and also to amend an existing definition under the same Part. The proposed amendments to Part 211 are briefly described below.

#### **Brakehorsepower (rated-bhp) (Section 211.740)**

The Agency proposes to add a definition of “brakehorsepower (rated – bhp) at Section 211.740. The term is used to specify which engines would be subject to the requirements of Subpart Q. Statement at 16. The Agency proposes to define the term as “the rated horsepower capacity of the engine as defined on the engine nameplate at standard conditions.” PC 1, Att. A at 21; *see also* Statement, Exh. 9.b.

#### **Diesel Engine (Section 211.1740)**

The Agency proposes to add a definition of “diesel engine” at Section 211.1740. “Diesel engine” is defined as, “for the purposes of 35 Ill. Adm. Code 217, Subpart Q, a compression ignited two- or four-stroke engine in which liquid fuel injected into the combustion chamber

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<sup>1</sup> The Board notes that Section 201.146(j) addresses “[r]est room facilities and associated cleanup operations, and stacks or vents used to prevent the escape of sewer gases through plumbing traps.” 35 Ill. Adm. Code 201.146(j). As the preceding subsection 210.146(i) addresses stationary internal combustion engines, and as the Agency included subsection 210.146(i) in its original rulemaking proposal, the Board regards the reference to subsection (j) as inadvertent and concludes that the Agency intends in the subsequent docket R07-19 to address Section 201.146(i).

ignites when the air charge is compressed to a temperature sufficiently high for auto-ignition.” PC 1, Att. A at 21; *see also* Statement, Exh. 9.b.

### **Emergency or Standby Unit (Section 211.1920)**

The Agency proposes to add language to the existing definition of “emergency or standby unit” at Section 211.1920. Statement at 16-17. Specifically, the proposed amendments clarify that a unit being used to supplement power capacity is not an emergency or standby unit. *Id.*; *see* PC 1, Att. A at 21. Further, the proposed changes clarify “that testing the unit or verifying the unit’s readiness for use does not disqualify the unit as an emergency or standby unit.” Statement at 17; *see* PC 1, Att. A at 21.

### **Lean-burn engine (Section 211.3300)**

The Agency proposes to add a definition of “lean-burn engine” at Section 211.3300, since that term is used to specify the control to which affected engines will be subject under the requirements of Subpart Q. Statement at 17. The Agency proposes to define the term as “any spark-ignited engine that is not a rich-burn engine.” PC 1, Att. A at 21; Statement, Exh. 9.b.

### **Rich-burn engine (Section 211.5640)**

The Agency’s proposal includes a definition of “rich-burn engine” at Section 211.5640 to specify the control to which affected engines will be subject under the requirements of Subpart Q. Statement at 17. The Agency’s proposal defines the term as “a spark-ignited engine where the oxygen content in the exhaust stream of the engine before any dilutions is 1 percent or less by volume measured on a dry basis.” PC 1, Att. A at 22; Statement, Exh. 9.b.

In its post-hearing comments, the Agency characterized the proposed definitions as “a necessary part of the proposal” and specifically requested that they “be included in the proposal for adoption.” PC 1 at 5; *see also* Tr. 1 at 9. The Board notes that it included these five definitions in its first notice opinion and order on April 19, 2007 (*see* 31 Ill. Reg. 6578; 31 Ill. Reg. 7371 (correction of hearing date)). Based on a review of the record, the Board finds that the amendment to Part 211 reflect the proposed intent and includes them in its order below for second notice.

## **Part 217: Nitrogen Oxides Emissions**

### **Measurement Methods (Section 217.101)**

Section 217.101 now provides three methods according to which NO<sub>x</sub> must be measured. 35 Ill. Adm. Code 217.101. The Agency proposes two types of amendments to this provision. First, the Agency proposes to strike references to the dates on which USEPA last updated the specified methods. Statement at 17; *see* PC 1, Att. A at 4. The Agency also proposes to add cross-references to Section 217.104, which incorporates these procedures by reference and provides specific dates for the incorporated procedures. Statement at 17; *see* PC 1, Att. A at 4.

Second, the Agency proposes to add a measurement method for monitoring NO<sub>x</sub> with portable monitors. Statement at 17; *see* PC 1, Att. A at 4. The Board notes that it included this section in its first notice opinion and order on April 19, 2007. *See* 31 Ill. Reg. 6597, 31 Ill. Reg. 7372.

The Agency characterizes this section as “a necessary part” of its proposal, as proposed Section 217.394 “makes extensive use of the measurement methods that are proposed for inclusion in Section 217.101.” PC 1 at 5; *see also* Tr. 1 at 9. The Agency specifically requested that this section “be included in the proposal for adoption.” PC 1 at 5. The Board agrees with the Agency’s characterization and includes the proposed amendments to Section 217.101 in its order below for second notice.

### **Abbreviations and Units (Section 217.102)**

Section 217.102 now provides abbreviations and conversion factors used in Part 217. *See* 35 Ill. Adm. Code 217.102. The Agency originally proposed “to add the abbreviations and conversion factors used in Subpart Q and to correct the alphabetical order of the existing list.” Statement at 17. The Board sent the proposed changes to first notice on April 19, 2007. *See* 31 Ill. Reg. 6597, 31 Ill. Reg. 7372.

The Agency in its final comments notes that the Pipeline Consortium recommended deleting the last three conversion factors listed in the Agency’s proposal at Section 217.102(b). PC 1 at 5; *see* Statement, Exh. 9.c. The Agency states that, on the basis of its own review, it “finds that these conversion factors are not necessary to other Subparts in Part 217 or for use in Subpart Q” and therefore proposes to delete them. *Id.* at 5-6; *id.*, Att. A at 4-5.

The Agency characterizes the remaining amendments to Section 217.102 as “a necessary part” of its proposal. PC 1 at 5; *see also* Tr. 1 at 9. The Agency specifically requested that this section “be included in the proposal for adoption.” PC 1 at 5. The Board agrees with the Agency’s characterization and includes the proposed amendments to Section 217.102, as amended in the Agency’s post-hearing comments, in its order below for second notice.

### **Incorporation by Reference (Section 217.104)**

Section 217.104 now incorporates specified materials by reference. *See* 35 Ill. Adm. Code 217.104. The Agency first proposes to update various incorporations by reference. Statement at 17; *see* PC 1, Att. A at 6. The Agency also proposes to incorporate an ASTM emissions testing method for portable monitors. Statement at 17; *see* PC 1, Att. A at 6. Finally, the Agency also proposes to incorporate “test methods for NO<sub>x</sub> emissions from engines and turbines.” Statement at 17; *see* PC 1, Att. A at 6. The Board sent the proposed changes to first notice on April 19, 2007. *See* 31 Ill. Reg. 6597, 31 Ill. Reg. 7372.

The Agency characterizes this section as “a necessary part” of its proposal, as proposed Section 217.394 “makes extensive use of the measurement methods that are proposed for inclusion in . . . Section 217.104.” PC 1 at 5; *see also* Tr. 1 at 9. The Agency specifically

requested that this section “be included in the proposal for adoption.” PC 1 at 5. The Board agrees and includes the proposed amendments to Section 217.104 in its order below for second notice.

### **Applicability (Section 217.386)**

In its original proposal, the Agency proposed for this new section criteria establishing whether a stationary reciprocating internal combustion engine or turbine is an affected unit subject to the requirements of the proposed Subpart Q. Statement at 18; Statement, Exh. 9.c. The Agency notes, however, that the Board’s May 17, 2007 order bifurcated the original proposal and narrowed the scope of this rulemaking. PC 1 at 1. The Agency now proposes revised language for this section, which in its entirety provides that “[a] stationary reciprocating internal combustion engine listed in Appendix G of this Part is subject to the requirements of this Subpart Q.” PC 1, Att. A at 6-7.

In his pre-filed testimony on behalf of the Pipeline Consortium for the second hearing in this proceeding, Mr. McCarthy notes that the Agency’s TSD “implies a 1500 horsepower (“hp”) size threshold for SIP Call engines,” but he states that “[l]arge NO<sub>x</sub> SIP Call engines are considerably larger than the TSD implies.” McCarthy Test. at 3-4, citing TSD at 17. In its post-hearing comments, the Agency addressed Mr. McCarthy’s claim by stating that “[t]he applicability of the NO<sub>x</sub> SIP Call to large engines is based on the quantity of NO<sub>x</sub> emissions (one ton) in 1995 summer day and is not based on the size of the engine in terms of rated brake horsepower.” PC 1 at 2-3. Mr. McCarthy’s pre-filed testimony states that, “[a]ssuming a typical uncontrolled NO<sub>x</sub> emission rate, for an internal combustion (IC) engine to be identified as a Large SIP Call Engine in the 1995 inventory, a 2400 hp unit would require full utilization throughout the ozone season to achieve a one ton per day average NO<sub>x</sub> emission rate.” McCarthy Test. at 4.

Responding to a question at the second hearing, Mr. McCarthy acknowledged that the proposed Appendix G lists no threshold for applicability of Subpart Q but “just lists the affected engines.” Tr. 2 at 11-12. The Agency emphasizes that “each of the 28 NO<sub>x</sub> SIP Call-affected engines is much larger than 1,500 bhp.” PC 1 at 3; *see* Tr. 2 at 11. The Agency further emphasizes that the TSD supported its original proposal covering a much broader range of engines and turbines and that that broader range is now addressed in R07-19. PC 1 at 3.

The Board finds that the changes proposed by the Agency to Section 217.386 are appropriate since the scope of the instant rulemaking is limited to the engines listed in Appendix G. Accordingly, the Board includes the proposed amendments to Section 217.386, as amended in the Agency’s post-hearing comments, in its order below for second notice.

### **Control and Maintenance Requirements (Section 217.388)**

In its original proposal, the Agency proposed for this new section new control and maintenance requirements on owners or operators of affected units. Statement at 18-19; Statement, Exh. 9.c. The Board sent the proposed changes to Section 217.388 to first notice on

April 19, 2007. *See* 31 Ill. Reg. 6597, 31 Ill. Reg. 7372. The Agency notes, however, that the Board's May 17, 2007 order bifurcated the original proposal and narrowed the scope of this rulemaking. PC 1 at 1. The Agency now proposes revised language for this section. PC 1, Att. A at 7-8. The revised language deletes the provision pertaining to low usage units at Section 217.388(c) and renumbers the inspection and maintenance provision at subsection (d) as subsection (c).

First, the Agency proposes under subsection (a)(1) and (a)(2) that an "owner or operator must limit the discharge from an affected unit into the atmosphere of any gases that contain NO<sub>x</sub>" to separate concentration limits for spark-ignited rich-burn engines and spark-ignited lean-burn engines. PC 1, Att. A at 7. The Agency proposes to delete emission limits for Worthington engines, diesel engines, and turbines initially proposed at subsection (a)(3) through (a)(6).

Second, the Agency proposes in subsection (b) that "owners and operators be allowed the option of complying with an emissions averaging plan instead of concentration limits." Statement at 18; *see* PC 1, Att. A at 7; Statement, Exh. 9.c. Emissions averaging plans are addressed below in proposed Section 217.390.

Third, the Agency deletes the provision pertaining to low usage units at Section 217.388(c) and renumbers the inspection and maintenance provision at subsection (d) as subsection (c). PC 1, Att. A at 7-8. For units not located at a natural gas transmission compressor station or storage facility, the inspection and maintenance according to a plan based in the manufacturer's recommendation. PC 1, Att. A at 7. In the event that the original equipment manual is not available or substantial modifications require an alternate plan, the Agency proposes that the inspection and maintenance be performed according to "what is customary for the type of air pollution control equipment, monitoring device, and affected unit." PC 1, Att. A at 7. For units located at a natural gas transmission compressor station or storage facility, owners and operators follow "the operator's maintenance procedures for the applicable air pollution control device, monitoring device, and affected unit." PC 1, Att. A at 7-8.

The Board finds that the proposed changes to Section 217.388 are appropriate in light of the narrowed scope of the instant rulemaking and includes Section 217.388, as amended in the Agency's post-hearing, in its order below for second notice.

### **Emissions Averaging Plan (Section 217.390)**

In its original proposal, the Agency proposed for this new section language regarding emissions averaging plans. Statement at 19-21; Statement, Exh. 9.c. Generally, the Agency proposes "that owners and operators may comply with an emissions averaging plan in lieu of meeting the specified concentration limit for each affected unit set forth in Section 217.388." Statement at 19. The Agency notes, however, that the Board's May 17, 2007 order bifurcated the original proposal and narrowed the scope of this rulemaking. PC 1 at 1. The Agency now proposes revised language for this section. PC 1, Att. A at 8-13.

First, the Agency proposes under subsection (a)(1) to describe units that commenced operation before January 1, 2002 that may be included in an emissions averaging plan. PC 1, Att. A at 8. Those include units located in Illinois so long as the units are owned by the same company or parent company and are not included in more than one emissions averaging plan. *Id.* Under subsection (a)(2), the Agency proposes to describe units that may not be included in an emissions averaging plan. *Id.* Ineligible units are “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.” *Id.* In its post-hearing comment, the Agency notes that a cross reference in subsection (a)(2) to Section 217.396(d)(3) must change to Section 217.396(c)(3) “due to more limited applicability of the proposal to only NO<sub>x</sub> SIP Call engines.” PC 1 at 6; PC 1, Att. A at 8. The Agency also deletes the provisions at Sections 217.390(a)(1)(B) and (a)(2)(B), as those provisions do not apply to the Appendix G units to which this docket applies as a result of the Board’s bifurcation of the Agency’s original proposal.

Second, the Agency proposes under subsection (b) to provide requirements for submitting an emissions averaging plan. PC 1, Att. at 8. An owner or operator must submit a plan by the applicable compliance date set forth in proposed Section 217.392 below. *Id.* That plan must list “affected units included in the plan by nit identification number and permit number.” *Id.* In addition, an owner or operator must demonstrate compliance through a sample calculation using the methodology provided in subsection (f). *Id.*

Third, the Agency proposes under subsection (c) to address amendment of emissions averaging plans. PC 1, Att. A at 8. That proposed provision provides that “[a]n owner or operator may amend an emissions averaging plan only once per calendar year.” *Id.* It further provides that, “[i]f an amendment for a calendar year is going to be submitted, it must be submitted no later than May 1 of the applicable year; otherwise, the plan from the previous year will be the applicable plan.” Statement at 20; *see* PC 1, Att. A at 8.

Fourth, the Agency proposes under subsection (d) to require that, “if an affected unit included in a plan is sold or taken out of service, the owner or operator, and the buyer, if applicable, must submit an updated emissions averaging plan within 60 days of the occurrence.” Statement at 20; *see* PC 1, Att. A at 8-9. The Agency deletes the provision at Section 217.390(d)(2), as that provision does not apply to the Appendix G units to which this docket applies as a result of the Board’s bifurcation of the Agency’s original proposal.

Fifth, the Agency proposed under subsection (e) to require an owner or operator to demonstrate compliance both for the ozone season and for the calendar year. PC 1, Att. A at 9. The Agency also proposes to require that owners and operators must “[n]otify the Agency by October 31 following the ozone season, if compliance cannot be demonstrated for that ozone season.” *Id.*; *see* Statement at 20-21. The Agency also proposes to require that owners and operators must submit a compliance report by January 31 following each calendar year. PC 1, Att. A at 9. In its post-hearing comment, the Agency notes that a cross reference subsections addressing emissions averaging plans was “incomplete.” PC 1 at 6. Accordingly, the Agency

proposes to add to the existing cross reference to subsection (b) cross references to subsection (c) and (d). PC 1 at 6; PC 1, Att. A at 9.

Sixth, the Agency proposes under subsection (f) to establish the formula for demonstrating compliance through an emissions averaging plan. PC 1, Att. A at 9-10. Under this provisions, “[t]he total mass of NO<sub>x</sub> emissions from the units listed in the emissions averaging plan must be equal to or less than the total mass of allowable NO<sub>x</sub> emissions for those units for both the ozone seasons and calendar year.” *Id.* at 9. In its post-hearing comment, the Agency notes that “the references to total mass of allowable emissions  $EM_{all(i)}$  and total mass of actual emissions  $EM_{act(i)}$  include in some cases redundant references and, in other, fail to include relevant references within this subsection.” PC 1 at 6-7. Specifically, with regard to the total mass of allowable NO<sub>x</sub> emissions, the Agency proposes to strike references to subsections (g)(3), (g)(4), and (g)(5) and to add a reference to subsection (h)(2). *Id.*; *id.*, Att. A at 9. With regard to the total mass of actual NO<sub>x</sub> emissions, the Agency proposes to strike references to subsection (g)(3) and (g)(5) and to amend a reference to subsection (h) to refer to subsection (h)(1). *Id.* at 7; *id.*, Att. A at 9.

Seventh, the Agency proposes under subsection (g)(1) the equation for determining affected units’ actual NO<sub>x</sub> emissions for each fuel used. PC 1, Att. A at 10. The Agency proposes under subsections (g)(2) the equation for determining affected units’ allowable NO<sub>x</sub> emissions for each fuel used. PC 1, Att. A at 10-11. In its post-hearing comment, the Agency states that, within this equation, “the references to total mass of allowable emissions  $EM_{all(i)}$ , total mass of actual emissions  $EM_{act(i)}$  and allowable concentration  $C_{d(all)}$  fail to include the relevant references within this subsection. PC 1 at 7. The Agency proposes to amend this provision to include specific reference within this subsection. *Id.*; *id.*, Att. A at 10.

In addition, the Agency proposes under subsection (g)(3) “a specific formula for electric replacement units” and under subsection (g)(4) “a formula for non-electric replacement units.” Statement at 21; *see* PC 1, Att. A at 11-12. In its post-hearing comment, the Agency states that subsection (g)(4) contains “language that no longer has an application and should be deleted.” PC 1 at 7; PC 1, Att. A at 12.

The Agency proposes under subsection (g)(5) “a formula for units that have been replaced through the purchase of power.” Statement at 21; *see* PC 1, Att. A at 12. This proposed subsection also proposes that “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.” PC 1, Att. A at 12. Finally, the Agency proposes under subsection (g)(6) a formula for units that are not listed in Appendix G but are used in an emissions averaging plan. *Id.*

Eighth, the Agency proposes under subsection (h) “conditions for units using C[ontinuous] E[missions] M[onitoring] S[ystem] in lieu of stack testing an portable monitoring.” Statement at 21; *see* PC 1, Att. A at 12-13. Subsection (h)(1) and (h)(2) address actual NO<sub>x</sub> emissions and allowable NO<sub>x</sub> emissions, respectively. PC 1, Att. A at 13. In its post-hearing comment, the Agency proposes a technical correction in the equation for determining allowable

NO<sub>x</sub> emissions. PC 1 at 8; PC 1, Att. A at 13. Specifically, the Agency states that “the subscript below the summation sign should be ‘j’ not ‘i.’” PC 1 at 8 (noting that Agency’s word processing program does not allow underlined indication of this proposed amendment); PC 1, Att. A at 13.

The Board finds that the proposed emissions averaging plan provides flexibility to sources in complying with the regulations. As determined by the Agency, most engines and turbines will be able to comply with the proposed NO<sub>x</sub> emission limits. However, the Board believes that the emissions averaging plan provides a mechanism for compliance for those engines and turbines that may experience difficulty in achieving the emission limits. The Board includes Section 217.390, as amended in the Agency’s post-hearing comments, in its order below for second notice.

### **Compliance (Section 217.392)**

The Agency’s initial filing on April 6, 2007 proposed a compliance date of May 1, 2007. Statement, Exh. 9.c. In its post-hearing comment, the Agency notes that “[t]he compliance date initially proposed by the Illinois EPA has passed. If the Board adopted that initially proposed date, it would result in a retroactive compliance date; hence, the Illinois EPA is recommending a new compliance date of January 1, 2008.” PC 1 at 8; PC 1, Att. A at 13; Kaleel Test. at 4. The Agency also proposes to strike language regarding exemption from the requirements of Subpart Q that the Board is no longer no longer considering in this docket. PC 1 at 8; PC 1, Att. A at 13. This proposed section provides that, 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.” PC 1, Att. A at 13. The Board agrees with the Agency that the compliance date needs to be moved forward in order to avoid retroactive application of the rules and adopts the new compliance date of January 1, 2008 for second notice.

### **Testing and Monitoring (Section 217.394)**

In its original proposal, the Agency proposed for this new section language regarding testing and monitoring. Statement at 22-23; Statement, Exh. 9.c. The Agency notes, however, that the Board’s May 17, 2007 order bifurcated the original proposal and narrowed the scope of this rulemaking. PC 1 at 1. The Agency now proposes minor revisions to Section 217.394 that reflect the change in scope of the rulemaking. PC 1, Att. A at 13-15.

Generally, proposed subsection (a) establishes requirements regarding initial performance testing. See PC 1, Att. A at 13-14. Proposed subsection (a)(1) requires that engines listed in Appendix G must undergo an initial performance test. *Id.* at 13. In its post-hearing comments, the Agency states that, in this proposed subsection (a), “language referring to units not included in Appendix G or an averaging plan, or compliance dates other than January 1, 2008, should be deleted.” PC 1 at 8; PC 1, Att. A at 13-14. The proposed subsection further provides that these “[p]erformance tests must be conducted on units listed in Appendix G, even if the unit is included in an emissions averaging plan.” *Id.*

Proposed subsection (a)(2) provides, with regard to units that are not affected units but are included in an emissions averaging plan and operate more than 876 hours per calendar year, that this testing must occur within the first 876 hours of operation per calendar year. *Id.* at 13-14. In its post-hearing comment, the Pipeline Consortium states that, in this subsection (a)(2), the first comma and the phrase “whichever is later” should be deleted “since multiple dates do not apply in this rulemaking.” PC 2 at 3; *see also* PC 1, Att. A at 14. This suggestion is incorporated in the Agency’s revisions.

Proposed subsection (a)(3) requires, with regard to “units that are not affected units that are included in an emissions averaging plan and that operate fewer than 876 hours per calendar year” must undergo testing once within the five-year period after the compliance date. *Id.* at 14. In revising this subsection of its original proposal, the Agency states that “language referring to units not included in Appendix G or an averaging plan, or compliance dates other than January 1, 2008, should be deleted.” PC 1 at 8; *see* PC 1, Att. A at 13-14.

Generally, proposed subsection (b) establishes requirements regarding subsequent testing. *See* PC 1, Att. A at 14. Proposed subsection (b)(1) provides, with regard to units either listed in Appendix G or included in an emissions averaging plan, that they must undergo testing once every five years. *Id.* The proposed subsection further provides that “[t]esting must be performed in the calendar year by May 1 or within 60 days of starting operation, whichever is later.” *Id.* Proposed subsection (b)(2) provides that an owner or operator must notify the Agency within 30 days if monitored data shows that the unit does not comply with the applicable emissions concentration limit or emissions averaging plan. *Id.* The proposed subsection also requires the owner or operator to conduct a performance test “within 90 days of the determination of noncompliance.” *Id.* Finally, proposed subsection (b)(3) provides that, when the Agency or USEPA form the opinion that testing is necessary to demonstrate compliance, the owner or operator must conduct that testing at his or her own expense within 90 days of receiving a notice to test from the Agency or USEPA. *Id.*

Generally, proposed subsection (c) establishes testing procedures. *See* PC 1, Att. A at 14. Proposed subsection (c)(1) provides that owners and operators of engines must conduct testing “using Method 7 or 7E of 40 C.F.R. 60, Appendix A, as incorporated by reference in Section 217.104.” *Id.* The proposed subsection further provides that tests must include three separate runs with a duration of at least 60 minutes each. *Id.* The proposed subsection further provides that “NO<sub>x</sub> emissions must be measured while the affected unit is operating at peak load.” *Id.* Finally, the proposed subsection provides, with regard to units that combust more than one type of fuel, that separate performance tests are required for each of those fuels. *Id.* Proposed subsection (c)(2) provides that owners and operators of turbines included in an emissions averaging plan must perform testing according to the provisions on 40 C.F.R. 60.4400, as proposed for incorporation by reference in Section 217.104. *Id.* at 14-15.

Generally, proposed subsection (d) establishes monitoring procedures. *See* PC 1, Att. A. at 15. The proposed subsection provides that owners and operators of affected units or units included in an emissions averaging plan must monitor NO<sub>x</sub> concentrations annually, except for years in which a performance test is conducted. *Id.* For units that operate less than 876 hours

per calendar year, the proposed subsection requires this monitoring at least once every five years. *Id.* Proposed subsection (d)(1) requires that this monitoring be performed method ASTM D6522-00, as proposed for incorporation by reference in Section 217.104, or a method approved by the Agency. *Id.* The proposed subsection further requires that, “[I]f the unit combusts both liquid or gaseous fuels as primary or backup fuels, separate monitoring is required for each fuel.” *Id.* Proposed subsection (d)(2) requires that “[m]easurements of NO<sub>x</sub> and O<sub>2</sub> concentrations must be taken three times for a duration of at least 20 minutes while the unit is operating at the highest achievable load.” Statement at 23; *see* PC 1, Att. A at 15.

Generally, proposed subsection (e) addresses a continuous emissions monitoring system (CEMS). The proposed subsection that units equipped with a CEMS meeting specified federal requirements or following alternate procedures approved by the Agency or USEPA in a federally enforceable permit are not required to meet the compliance testing and monitoring requirements of this section. PC 1, Att. A at 15. The proposed subsection requires compliance on ozone season and on an annual basis. *Id.*

The Board finds that the proposed provisions for performance testing of the affected engines provide for ongoing demonstration of compliance with the requirements of the proposed regulations. Further, the Board notes that the proposed regulations prescribe USEPA-approved methods for testing and monitoring of the performance of an affected engine. The Board includes Section 217.394, as amended in the Agency’s post-hearing comments, in its order below for second notice.

### **Recordkeeping and Reporting (Section 217.396)**

In its original proposal, the Agency proposed for this new section language regarding recordkeeping and reporting. Statement at 23-24; Statement, Exh. 9.c. The Agency notes, however, that the Board’s May 17, 2007 order bifurcated the original proposal and narrowed the scope of this rulemaking. PC 1 at 1. The Agency now proposes minor revisions to Section 217.396 that reflect the change in scope of this rulemaking. PC 1, Att. A at 15-18.

Proposed subsection (a) establishes requirements regarding recordkeeping. *See* PC 1, Att. A at 15-16. The owner or operator of a unit listed in Appendix G or included in an emissions averaging plan must maintain records that demonstrate compliance with the requirements of Subpart Q. *Id.* at 15. These records include, but are not limited to, data such as hours of operation, test results, and logs of inspections and maintenance. *Id.* at 16. In its post-hearing comment, the Agency notes that, “[i]n Section 217.396(a) the sentence pertaining to exempt units and low usage units should be struck as those provisions are no longer included in the proposal.” PC 1 at 8; PC 1, Att. A at 15. In the same comment, the Agency states that a cross reference in subsection (a)(7) to Section 217.388(d) must change to Section 217.388(c) “due to more limited applicability of the proposal to only NO<sub>x</sub> SIP Call engines.” PC 1 at 6; *see* PC 1, Att. A at 16.

Proposed subsection (b) provides that an owner or operator of an affected unit or a unit included in an emissions averaging plan must maintain the records required by proposed

subsection (a) for five years. PC 1, Att. A at 16. The proposed subsection also provides that “[t]he records must be made available to the Agency and USEPA upon request.” *Id.* In its post-hearing comment, the Agency states that this subsection contains an incorrect cross reference. PC 1 at 9. Specifically, the agency proposes to delete a cross reference to subsection (b). *Id.*; *id.*, Att. A at 16.

Proposed subsection (c) provides deadlines by which an owner or operator must provide to the Agency notification of testing, a testing protocol, test results, monitored exceedences of the applicable NO<sub>x</sub> concentration, and permanent shutdowns. PC 1, Att. A at 16-17. The proposed subsection also provides deadlines by which an owner or operator must provide notification that he or she cannot demonstrate compliance for the ozone season and submit a compliance plan containing specified data. *Id.* at 17-18. The proposed subsection also provides that, in an owner or operator operates a CEMS, he or she is required to submit an excess emissions and monitoring systems performance report according to federal requirements. *Id.* at 18. In its post-hearing comment, the Agency states that this subsection contains an incorrect cross reference. PC 1 at 9. Specifically, the agency proposes to add a cross reference to subsection (b). *Id.*; *id.*, Att. A at 16.

The Board finds that the proposed recordkeeping and reporting requirements are adequate for ensuring the Agency’s oversight. The Board includes Section 217.396, as amended in the Agency’s post-hearing comments, in its order below for second notice.

### **Appendix G**

The Agency states that, “[i]n Appendix G, Illinois EPA is proposing to add a list of the NO<sub>x</sub> SIP Call engines based on how the unit is listed in the most recent permit issued or construction permit application submitted.” Statement at 24; *see* PC 1, Att. A at 19-20.

The Agency characterizes this Appendix G as “a necessary part” of its proposal. PC 1 at 5. The Agency specifically requested that this appendix “be included in the proposal for adoption.” *Id.* The Board notes that it included this section in its first notice opinion and order on April 19, 2007 (*see* 31 Ill. Reg. 6597; 31 Ill. Reg. 7372 (correction of hearing date)), and the Board includes the proposed Appendix G in its order below for second notice.

### **TECHNICAL AND ECONOMIC CONSIDERATIONS**

The Agency addressed the technical feasibility and economic reasonableness of the proposed regulations in the TSD and its testimony. The Agency relied upon documents published by USEPA and the State and Territorial Air Pollution Program Administrators/Association of Local Air Pollution Control Officials for their information on control technology and economic impacts. In testimony pre-filed for the second hearing, the Pipeline Consortium raised items relating generally to the technical feasibility and economic reasonableness of the Agency’s proposal. *See* 415 ILCS 5/27(a) (2006). The Board below addresses those items, including the response of the Agency as the proponent of this proposal.

### **Annual Compliance**

In his pre-filed testimony on behalf of the consortium, Mr. McCarthy notes that, while USEPA's Phase II rules addresses only the ozone season, "[t]he IEPA proposal includes both ozone season and annual requirements, with associated reporting and recordkeeping." McCarthy Test. at 7. Mr. McCarthy characterizes these annual requirements as "an additional compliance burden." *Id.*

Addressing this issue, Mr. McCarthy notes that "the control strategies employed by the natural gas companies are operational whenever the unit operates, and so emissions reduction will not be limited to the ozone season." McCarthy Test. at 7. Referring specifically to the strategy of low-emission combustion (LEC), Mr. McCarthy stated that it becomes inherent to the engine once it is installed and cannot be turned on and off. Tr. 2 at 16. Although the Pipeline Consortium notes that its engines typically work most heavily during the winter months outside the ozone season (Tr. 2 at 41), and that the proposed annual compliance poses a higher possibility for noncompliance, "none of the companies comprising the Pipeline Consortium anticipate compliance difficulties." PC 2 at 2. Furthermore, counsel for the consortium stated at hearing that it had no objection to the annual applicability of the rule. Tr. 2 at 18, 21.

### **Application of Selective Catalytic Reduction (SCR)**

In his pre-filed testimony for the consortium, Mr. McCarthy notes that the Agency's TSD includes SCR as an emissions control technology applicable to internal combustion engines. McCarthy Test. at 7. He further claims that, "to date, SCR has not been successfully applied to gas transmission units, and USEPA has acknowledged this limitation." *Id.* at 7-8, citing 67 Fed. Reg. 8395, 8411 (Feb. 22, 2002). Mr. McCarthy also opines that the Agency's TSD lists NO<sub>x</sub> control technologies such as ignition timing retard and prestratified charge, which may apply only questionably to natural gas-fired internal combustion engines. McCarthy Test. at 8.

In response, the Agency notes USEPA's acknowledgement that SCR has not yet been widely demonstrated in the United States on lean-burn internal combustion engines in variable load operation. PC 1 at 3, citing Statement, Att. 11.g at 14-15 (TSD for NO<sub>x</sub> SIP Call); *see* Tr. 2 at 26. The Agency states, however, that "SCR technology is very effective and provides 90 percent NO<sub>x</sub> emission reductions from all other engines, such as lean-burn engines operating at constant load, diesel engines and dual fuel-fired engines." PC 1 at 2, citing Statement, Att. 11.c at 5-55 (USEPA Alternative Control Techniques Document). The Agency nonetheless emphasizes that its proposal "does not require installation of SCR or any other particular technology to comply with the proposal" and that "[o]wners and operators have the discretion to choose the most cost-effective technology or compliance option." PC 1 at 4; *see* Tr. 1 at 28, Tr. 2 at 28-29.

### **Cost-Effectiveness**

In his pre-filed testimony for the Pipeline Consortium, Mr. McCarthy states that, with regard to the cost and cost-effectiveness of NO<sub>x</sub> emission controls, "[t]he TSD indicates that a

\$5000 per ton basis is used for IC engines under the NO<sub>x</sub> SIP Call.” McCarthy Test. at 8, citing TSD at 40. Mr. McCarthy argues that this is not consistent with the 1998 SIP Call Rule or with the 2004 Phase II Rule. *Id.*, citing 63 Fed. Reg. 21604, 21618 (April 21, 2004). Mr. McCarthy further argues that USEPA in the Phase II Rule “determined that an average of approximately \$2,000 per ton removed is highly cost effective.” McCarthy Test. at 8, citing 69 Fed. Reg. 21604, 21618 (April 21, 2004). Mr. McCarthy characterizes the difference between the Agency’s figure and the SIP Call as “significant.” McCarthy Test. at 8.

In response, the Agency characterizes Mr. McCarthy’s testimony that a \$5,000 per ton rate is used as internal combustion engines under the NO<sub>x</sub> SIP Call as incorrect. PC 1 at 4. The Agency first notes that Mr. McCarthy refers to information obtained from a USEPA regulatory impact analysis. PC 1 at 4, citing Statement, Att. 11.f. The Agency claims that USEPA evaluated the cost effectiveness of control at per ton cost ceilings of \$1,500, \$2,000, \$3,000, \$4,000, and \$5,000 under the NO<sub>x</sub> SIP Call Phase I. PC 1 at 4. The Agency argues that “USEPA selected the \$5,000 alternative when it evaluated a 90 percent reduction from the 2007 NO<sub>x</sub> emissions baseline.” *Id.* When USEPA adopted an 82 percent reduction from that 2007 baseline, it obtained a cost effectiveness of approximately \$542 per ton. *Id.* at 4-5, citing Statement, Att. 11.g at 34; *see* TR. 2 at 39.

### **Agency Testimony**

In his testimony on behalf of the Agency, Mr. Mahajan relied on sources published by USEPA and the State and Territorial Air Pollution Program Administrators/Association of Local Air Pollution Control Officials for their information on the costs and economic impacts of this proposal. Mahajan Test. at 2-3, citing Statement, Exhs. 11.c, 11.e, 11.f, 11.g. Mr. Mahajan stated that a review of these sources led the Agency to conclude “that there are cost effective NO<sub>x</sub> control techniques available to reduce NO<sub>x</sub> emissions” from reciprocating internal combustion engines. *Id.* at 3. Specifically, Mr. Mahajan stated that review of updated USEPA data led the Agency to conclude that the cost of controlling engines affected by the NO<sub>x</sub> SIP Call during the ozone season “would be \$552 (1990 dollars) per ton of NO<sub>x</sub> reduced.” *Id.* at 4, citing Statement, Att. 11.g at 34. He further stated that the cost of controlling those engines would be lower on an annual basis. Mahajan Test. at 4.

### **Pipeline Consortium Testimony**

In his pre-filed testimony on behalf of the Pipeline Consortium, Mr. McCarthy stated that the natural gas industry’s trade association took part in USEPA’s adoption of the Phase II rule and the development of a model rule to assist states in developing SIPs. McCarthy Test. at 6. The Pipeline Consortium has also cooperated with the Agency “since 2005 to integrate provisions consistent with federal guidance and the model rule into the IEPA proposal.” *Id.*; *see* PC 2 at 2, Statement at 15. Mr. McCarthy states that, with knowledge of federal requirements, the eight natural gas facilities that operate NO<sub>x</sub> SIP Call engines in Illinois have “initiated projects to install emission controls and reduce NO<sub>x</sub> in conformance with the federal program intent.” McCarthy Test. at 6. Specifically, “the affected natural gas companies have proactively initiated reduction programs and compliance plans for the units in Appendix G of the proposal.”

*Id.* The Pipeline Consortium states in its post-hearing comment that it “has been proactive in complying with the rule even prior to its adoption by the Board.” PC 2 at 2, citing McCarthy Test. at 6. Consequently, Mr. McCarthy testified that “the Pipeline Group does not object to the Subpart Q proposal under consideration.” McCarthy Test. at 7; Tr. 2 at 41. The Pipeline Consortium reiterated this position in its post-hearing comment. PC 2 at 3. In addition, Mr. McCarthy testified that “[t]his proactive approach by natural gas companies has culminated in a workable proposal and will assist IEPA in addressing federal obligations under the NO<sub>x</sub> SIP Call Phase II Rule.” McCarthy Test. at 9.

### **Board Finding**

The Board finds the proposed regulations are technically feasible and economically reasonable. The Board notes that both combustion and post-combustion controls are available for reducing NO<sub>x</sub> emissions from reciprocating internal combustion engines. Further, the Board finds that the affected sources can comply with the proposed NO<sub>x</sub> emission reductions at a reasonable cost. The record indicates that some of the affected sources have already initiated projects to install emission controls to reduce NO<sub>x</sub> emissions. Lastly, the Board notes that the rules provide compliance flexibility by allowing emissions averaging and the discretion to choose the most effective control technology.

### **CONCLUSION**

The Board finds that, as now modified according to the Board’s May 17, 2007 order and the testimony and comments of the proponent and participants in the record of this proceeding, the Agency’s proposal for the control of NO<sub>x</sub> emissions from stationary internal combustion engines affected by the NO<sub>x</sub> SIP Call Phase II and the program for implementing it are technologically feasible and economically reasonable. The Board has also made a limited number of technical changes that do not merit substantive discussion. Accordingly, the Board adopts for second notice the following order.

### **ORDER**

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

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

PART 211  
 DEFINITIONS AND GENERAL PROVISIONS

## SUBPART A: GENERAL PROVISIONS

Section	
211.101	Incorporations by Reference
211.102	Abbreviations and Conversion Factors

## SUBPART B: DEFINITIONS

Section	
211.121	Other Definitions
211.122	Definitions (Repealed)
211.130	Accelacota
211.150	Accumulator
211.170	Acid Gases
211.210	Actual Heat Input
211.230	Adhesive
211.240	Adhesion Promoter
211.250	Aeration
211.270	Aerosol Can Filling Line
211.290	Afterburner
211.310	Air Contaminant
211.330	Air Dried Coatings
211.350	Air Oxidation Process
211.370	Air Pollutant
211.390	Air Pollution
211.410	Air Pollution Control Equipment
211.430	Air Suspension Coater/Dryer
211.450	Airless Spray
211.470	Air Assisted Airless Spray
211.474	Alcohol
211.479	Allowance
211.484	Animal
211.485	Animal Pathological Waste
211.490	Annual Grain Through-Put
211.495	Anti-Glare/Safety Coating
211.510	Application Area
211.530	Architectural Coating
211.550	As Applied
211.560	As-Applied Fountain Solution
211.570	Asphalt
211.590	Asphalt Prime Coat
211.610	Automobile
211.630	Automobile or Light-Duty Truck Assembly Source or Automobile or Light-Duty Truck Manufacturing Plant
211.650	Automobile or Light-Duty Truck Refinishing
211.660	Automotive/Transportation Plastic Parts

211.670	Baked Coatings
211.680	Bakery Oven
211.685	Basecoat/Clearcoat System
211.690	Batch Loading
211.695	Batch Operation
211.696	Batch Process Train
211.710	Bead-Dipping
211.730	Binders
<u>211.740</u>	<u>Brakehorsepower (rated-bhp)</u>
211.750	British Thermal Unit
211.770	Brush or Wipe Coating
211.790	Bulk Gasoline Plant
211.810	Bulk Gasoline Terminal
211.820	Business Machine Plastic Parts
211.830	Can
211.850	Can Coating
211.870	Can Coating Line
211.890	Capture
211.910	Capture Device
211.930	Capture Efficiency
211.950	Capture System
211.953	Carbon Adsorber
211.955	Cement
211.960	Cement Kiln
211.970	Certified Investigation
211.980	Chemical Manufacturing Process Unit
211.990	Choke Loading
211.1010	Clean Air Act
211.1050	Cleaning and Separating Operation
211.1070	Cleaning Materials
211.1090	Clear Coating
211.1110	Clear Topcoat
211.1120	Clinker
211.1130	Closed Purge System
211.1150	Closed Vent System
211.1170	Coal Refuse
211.1190	Coating
211.1210	Coating Applicator
211.1230	Coating Line
211.1250	Coating Plant
211.1270	Coil Coating
211.1290	Coil Coating Line
211.1310	Cold Cleaning
211.1312	Combined Cycle System
211.1316	Combustion Turbine

211.1320	Commence Commercial	Operation
211.1324	Commence Operation	
211.1328	Common Stack	
211.1330	Complete Combustion	
211.1350	Component	
211.1370	Concrete Curing Compounds	
211.1390	Concentrated Nitric Acid Manufacturing Process	
211.1410	Condensate	
211.1430	Condensable PM-10	
211.1465	Continuous Automatic Stoking	
211.1467	Continuous Coater	
211.1470	Continuous Process	
211.1490	Control Device	
211.1510	Control Device Efficiency	
211.1515	Control Period	
211.1520	Conventional Air Spray	
211.1530	Conventional Soybean Crushing Source	
211.1550	Conveyorized Degreasing	
211.1570	Crude Oil	
211.1590	Crude Oil Gathering	
211.1610	Crushing	
211.1630	Custody Transfer	
211.1650	Cutback Asphalt	
211.1670	Daily-Weighted Average VOM Content	
211.1690	Day	
211.1710	Degreaser	
211.1730	Delivery Vessel	
<u>211.1740</u>	<u>Diesel Engine</u>	
211.1750	Dip Coating	
211.1770	Distillate Fuel Oil	
211.1780	Distillation Unit	
211.1790	Drum	
211.1810	Dry Cleaning Operation or Dry Cleaning Facility	
211.1830	Dump-Pit Area	
211.1850	Effective Grate Area	
211.1870	Effluent Water Separator	
211.1875	Elastomeric Materials	
211.1880	Electromagnetic Interference/Radio Frequency Interference (EMI/RFI) Shielding Coatings	
211.1885	Electronic Component	
211.1890	Electrostatic Bell or Disc Spray	
211.1900	Electrostatic Prep Coat	
211.1910	Electrostatic Spray	
211.1920	Emergency or Standby Unit	
211.1930	Emission Rate	

211.1950	Emission Unit
211.1970	Enamel
211.1990	Enclose
211.2010	End Sealing Compound Coat
211.2030	Enhanced Under-the-Cup Fill
211.2050	Ethanol Blend Gasoline
211.2070	Excess Air
211.2080	Excess Emissions
211.2090	Excessive Release
211.2110	Existing Grain-Drying Operation (Repealed)
211.2130	Existing Grain-Handling Operation (Repealed)
211.2150	Exterior Base Coat
211.2170	Exterior End Coat
211.2190	External Floating Roof
211.2210	Extreme Performance Coating
211.2230	Fabric Coating
211.2250	Fabric Coating Line
211.2270	Federally Enforceable Limitations and Conditions
211.2285	Feed Mill
211.2290	Fermentation Time
211.2300	Fill
211.2310	Final Repair Coat
211.2330	Firebox
211.2350	Fixed-Roof Tank
211.2360	Flexible Coating
211.2365	Flexible Operation Unit
211.2370	Flexographic Printing
211.2390	Flexographic Printing Line
211.2410	Floating Roof
211.2420	Fossil Fuel
211.2425	Fossil Fuel-Fired
211.2430	Fountain Solution
211.2450	Freeboard Height
211.2470	Fuel Combustion Emission Unit or Fuel Combustion Emission Source
211.2490	Fugitive Particulate Matter
211.2510	Full Operating Flowrate
211.2530	Gas Service
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211.APPENDIX A                      Rule into Section Table

211.APPENDIX B                      Section into Rule Table

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. \_\_\_\_\_, effective \_\_\_\_\_.

#### SUBPART B: DEFINITIONS

##### Section 211.740 Brakehorsepower (rated-bhp)

“Brakehorsepower” or “bhp” means the rated horsepower capacity of the engine as defined on the engine nameplate at standard conditions.

(Source: Added at 31 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

##### Section 211.1740 Diesel Engine

“Diesel engine” means for the purposes of 35 Ill. Adm. Code 217, Subpart Q, a compression ignited two- or four-stroke engine in which liquid fuel injected into the combustion chamber ignites when the air charge is compressed to a temperature sufficiently high for auto-ignition.

(Source: Added at 31 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

##### 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 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 standby use.

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 31 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

Section 211.3300 Lean-Burn Engine

“Lean-burn engine” means any spark-ignited engine that is not a rich-burn engine.

(Source: Added at 31 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

Section 211.5640 Rich-Burn Engine

“Rich-burn engine” means a spark-ignited engine where the oxygen content in the exhaust stream of the engine before any dilutions is 1 percent or less by volume measured on a dry basis.

(Source: Added at 31 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

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217.141 Existing Emission Sources in Major Metropolitan Areas

SUBPART K: PROCESS EMISSION SOURCES

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217.301 Industrial Processes

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217.381 Nitric Acid Manufacturing Processes

SUBPART Q: STATIONARY RECIPROCATING INTERNAL COMBUSTION  
ENGINES AND TURBINES

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SUBPART T: CEMENT KILNS

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SUBPART U: NO<sub>x</sub> CONTROL AND TRADING PROGRAM FOR  
SPECIFIED NO<sub>x</sub> GENERATING UNITS

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217.452 Severability  
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217.458	Permitting Requirements
217.460	Subpart U NO <sub>x</sub> Trading Budget
217.462	Methodology for Obtaining NO <sub>x</sub> Allocations
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217.476	Opt-In Process
217.478	Opt-In Budget Units: Withdrawal from NO <sub>x</sub> Trading Program
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217.482	Allowance Allocations to Opt-In Budget Units

#### SUBPART V: ELECTRIC POWER GENERATION

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217.521	Lake of Egypt Power Plant
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217.702	Severability
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217.750	Purpose
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217.756	Compliance Requirements
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217.762	Methodology for Calculating NO <sub>x</sub> Allocations for Budget Electrical Generating Units (EGUs)
217.764	NO <sub>x</sub> Allocations for Budget EGUs
217.768	New Source Set-Asides for “New” Budget EGUs
217.770	Early Reduction Credits for Budget EGUs
217.774	Opt-In Units
217.776	Opt-In Process
217.778	Budget Opt-In Units: Withdrawal from NO <sub>x</sub> Trading Program

- 217.780 Opt-In Units: Change in Regulatory Status
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SUBPART X: VOLUNTARY NO<sub>x</sub> EMISSIONS REDUCTION PROGRAM

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- 217.800 Purpose
- 217.805 Emission Unit Eligibility
- 217.810 Participation Requirements
- 217.815 NO<sub>x</sub> Emission Reductions and the Subpart X NO<sub>x</sub> Trading Budget
- 217.820 Baseline Emissions Determination
- 217.825 Calculation of Creditable NO<sub>x</sub> Emission Reductions
- 217.830 Limitations on NO<sub>x</sub> Emission Reductions
- 217.835 NO<sub>x</sub> Emission Reduction Proposal
- 217.840 Agency Action
- 217.845 Emissions Determination Methods
- 217.850 Emissions Monitoring
- 217.855 Reporting
- 217.860 Recordkeeping
- 217.865 Enforcement

APPENDIX A Rule into Section Table

APPENDIX B Section into Rule Table

APPENDIX C Compliance Dates

APPENDIX D Non-Electrical Generating Units

APPENDIX E Large Non-Electrical Generating Units

APPENDIX F Allowances for Electrical Generating Units

APPENDIX G Existing Reciprocating Internal Combustion Engines Affected by the NO<sub>x</sub> SIP Call

Authority: Implementing Sections 9.9 and 10 and authorized by Sections 27 and 28.5 of the Environmental Protection Act [415 ILCS 5/9.9, 10, 27 and 28.5 (2004)].

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. \_\_\_\_\_, effective \_\_\_\_\_.

SUBPART A: GENERAL PROVISIONS

Section 217.101 Measurement Methods

Measurement of nitrogen oxides must be according to:

- a) The phenol disulfonic acid ~~procedures~~method, 40 CFR 60, Appendix A, Method 7, as incorporated by reference in Section 217.104(1999);
- b) Continuous emissions monitoring pursuant to 40 CFR 75, as incorporated by reference in Section 217.104(1999); and
- c) Determination of Nitrogen Oxides Emissions from Stationary Sources (Instrumental Analyzer Procedure), 40 CFR 60, Appendix A, Method 7E, as incorporated by reference in Section 217.104;(1999).
- d) Monitoring with portable monitors pursuant to ASTM D6522-00, as incorporated by reference in Section 217.104; and
- e) How do I conduct the initial and subsequent performance tests (for turbines), regarding NO<sub>x</sub> pursuant to 40 CFR 60.4400, as incorporated by reference in Section 217.104.

(Source: Amended at 31 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

Section 217.102      Abbreviations and Units

- a) The following abbreviations are used in this Part:

<u>ASTM</u>	American Society for Testing and Materials
<u>Bbtu</u>	British thermal unit (60°F)
<u>bhp</u>	brake horsepower
<u>CEMS</u>	<u>continuous emissions monitoring system</u>
<u>EGU</u>	Electrical Generating Unit
<u>dscf</u>	<u>dry standard cubic feet</u>
<u>g/bhp-hr</u>	<u>grams per brake horsepower-hour</u>
<u>kg</u>	kilogram
<u>kg/MW-hr</u>	<u>kilograms per megawatt-hour, usually used as an hourly emission rate</u>
<u>lb</u>	pound
<u>NO<sub>x</sub></u>	<u>Nitrogen Oxides</u>
<u>lbs/mmBbtu</u>	<u>pounds per million Bbtu, usually used as an hourly emission rate</u>
<u>Mg</u>	megagram or metric tonne
<u>mm</u>	<u>million</u>
<u>mmBbtu</u>	million British thermal units
<u>mmBbtu/hr</u>	million British thermal units per hour
<u>MWe</u>	megawatt of electricity
<u>MW</u>	megawatt; one million watts
<u>MW-hr</u>	megawatt-hour
<u>NATS</u>	<u>NO<sub>x</sub> Allowance Tracking System</u>

<u>NO<sub>2</sub></u>	<u>nitrogen dioxide</u>
<u>NO<sub>x</sub></u>	<u>nitrogen oxides</u>
<u>O<sub>2</sub></u>	<u>oxygen</u>
<u>psia</u>	<u>pounds per square inch absolute</u>
peoc	potential electrical output capacity
<u>PTE</u>	<u>potential to emit</u>
ppm	parts per million
ppmv	parts per million by volume
T	English ton
<u>TPY</u>	<u>tons per year</u>

b) The following conversion factors have been used in this Part:

English	Metric
2.205 lb	1 kg
1 T	0.907 Mg
1 lb/T	0.500 kg/Mg
<del>Mmbtu/hr</del>	<del>0.293 MW</del>
<del>1 lb/mmBbtu</del>	<del>1.548 kg/MW-hr</del>
<del>1 mmBtu/hr</del>	<del>0.293 MW</del>
<del>1 mmBtu/hr</del>	<del>393 bhp</del>

(Source: Amended at 31 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

Section 217.104 Incorporations by Reference

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

- a) The phenol disulfonic acid ~~procedures~~method, as published in 40 CFR 60, Appendix A, Method 7 (2000)(1999);
- b) 40 CFR 96, subparts B, D, G, and H (1999);
- c) 40 CFR §§ 96.1 through 96.3, 96.5 through 96.7, 96.50 through 96.54, 96.55 (a) & (b), 96.56 and 96.57 (1999);
- d) 40 CFR ~~60, 72, 75 & 76~~ (2006)(1999);
- e) Alternative Control Techniques Document---- NO<sub>x</sub> Emissions from Cement Manufacturing, EPA-453/R-94-004, U. S. Environmental Protection Agency-Office of Air Quality Planning and Standards, Research Triangle Park, N.C. 27711, March 1994;

- f) Section 11.6, Portland Cement Manufacturing, AP-42 Compilation of Air Emission Factors, Volume 1: Stationary Point and Area Sources, U.S. Environmental Protection Agency-Office of Air Quality Planning and Standards, Research Triangle Park, N. C. 27711, revised January 1995;
- g) 40 CFR § 60.13 (2001)~~(1999)~~; and
- h) 40 CFR 60, Appendix A, Methods 3A, 7, 7A, 7C, 7D, and 7E, 19, and 20 ~~(2000)~~~~(1999)~~;
- i) ASTM D6522-00, Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers (2000);
- k) Standards of Performance for Stationary Combustion Turbines, 40 CFR 60, Subpart KKKK, 60.4400 (2006); and
- l) Compilation of Air Pollutant Emission Factors: AP-42, Volume I: Stationary Point and Area Sources (2000), USEPA.

(Source: Amended at 31 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

#### SUBPART Q: STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES AND TURBINES

##### Section 217.386 Applicability

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

(Source: Added at 31 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 (d) of this Section and comply with 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 limit the discharge from an affected unit into the

atmosphere of any gases that contain NO<sub>x</sub> to no more than:

- 1) 150 ppmv (corrected to 15 percent O<sub>2</sub> on a dry basis) for spark-ignited rich-burn engines;
  - 2) 210 ppmv (corrected to 15 percent O<sub>2</sub> 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<sub>2</sub> 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<sub>2</sub> on a dry basis) for diesel engines;
  - 5) 42 ppmv (corrected to 15 percent O<sub>2</sub> on a dry basis) for gaseous fuel fired turbines; and
  - 6) 96 ppmv (corrected to 15 percent O<sub>2</sub> on a dry basis) for liquid fuel fired turbines.
- b) The owner or operator must comply with the requirements of the applicable emissions averaging plan as set forth in Section 217.390.
- c) The owner or operator must operate 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 (c). Only one of the following exemptions may be utilized at a particular source:
- 1) The potential to emit (PTE) is no more than 100 TPY NO<sub>x</sub> 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<sub>x</sub> PTE limit is contained in a federally enforceable permit; or
  - 2) The aggregate bhp hr/MW hr 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 not located at a natural gas transmission compressor station or storage facility that drive a natural gas compressor station, the operation limits of subsections (c)(2)(A) and (B) of this Section must be contained in a federally enforceable permit.

~~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 inspect and perform 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: Added at 31 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 an emissions averaging plan as follows:~~

~~A) Units 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.~~

~~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 exempt. For as long as such a unit is included in an emissions averaging plan, it will be treated as an affected unit and subject to the applicable 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(dc)(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 a low usage unit pursuant to Section 217.388(e).~~

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. The plan must include, but is not limited to:

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

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

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

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

- 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(e).~~
- 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(dc)(4).
- f) The total mass of actual NO<sub>x</sub> emissions from the units listed in the emissions averaging plan must be equal to or less than the total mass of allowable NO<sub>x</sub> 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:

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

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

N<sub>act</sub> = Total sum of the actual NO<sub>x</sub> mass emissions from units included in the averaging plan for each fuel used (lbs per ozone season and calendar year).

N<sub>all</sub> = Total sum of the allowable NO<sub>x</sub> mass emissions from units included in the averaging plan for each fuel used (lbs per ozone season and calendar year).

$EM_{all(i)} = \frac{\text{Total mass of allowable NO}_x \text{ emissions in lbs for a unit as}}{\text{determined in subsection (g)(2), (g)(3), (g)(4), (g)(5), or (g)(6) or (h)(2) of this Section.}}$

$EM_{act(i)} = \frac{\text{Total mass of actual NO}_x \text{ emissions in lbs for a unit as}}{\text{determined in subsection (g)(1), (g)(3), (g)(5) or (h)(1) of this Section.}}$

$i$  = 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<sub>x</sub> emissions using the following equations, except as provided for in subsection (h) of this Section:

1) Actual emissions must be determined as follows:

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

2) Allowable emissions must be determined as follows:

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

Where:

$EM_{act(i)}$  = Total mass of actual NO<sub>x</sub> 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<sub>x</sub> emissions in lbs for a unit, except as provided for in subsection (g)(3) of this Section.

$E_{act}$  = Actual NO<sub>x</sub> emission rate (lbs/mmBtu) calculated according to the above equation.

$E_{all}$  = Allowable NO<sub>x</sub> 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.
- $C_{d(\text{act})}$  = Actual concentration of  $\text{NO}_x$  in lb/dscf (ppmv x  $1.194 \times 10^{-7}$ ) on a dry basis for the fuel used. Actual concentration is determined on each of the most recent test run or monitoring pass performed pursuant to Section 217.394, whichever is higher.
- $C_{d(\text{all})}$  = Allowable concentration of  $\text{NO}_x$  in lb/dscf (allowable emission limit in ppmv specified in Section 217.388(a), except as provided for in subsections (g)(4), (g)(5), or (g)(6) of this Section, if applicable, multiplied by  $1.194 \times 10^{-7}$ ) 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, Appendix A, Method 19 or as determined using 40 CFR 60, Appendix A, Method 19.
- $\%O_{2d}$  = Concentration of oxygen in effluent gas stream measured on a dry basis during each of the applicable test 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  $\text{NO}_x$  emissions from the affected unit that was replaced should be used in the averaging calculations and the actual  $\text{NO}_x$  emissions for the electric-powered replacement unit ( $EM_{(i)\text{act elec}(i)}$ ) are zero. Allowable  $\text{NO}_x$  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  $\text{NO}_x$  emission rate in lb/bhp-hr of the replaced unit.

The allowable mass of  $\text{NO}_x$  emissions from an electric-powered replacement unit ( $EM_{(i)\text{all elec}(i)}$ ) must be determined by multiplying the nameplate capacity of the unit by the hours operated during the ozone season or annually and the allowable  $\text{NO}_x$  emission rate of the replaced unit ( $E_{\text{all rep}}$ ) in lb/mmBtu converted to lb/bhp-hr. For this calculation the following equation should be used:

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

Where:

$EM_{\text{all elec}(i)}$  = Mass of allowable NO<sub>x</sub> 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.

$E_{\text{all rep}(i)}$  = Allowable NO<sub>x</sub> 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<sub>x</sub> emissions rate used in the above equations set forth in subsection (g)(2) of this Section must be either:
- A) Prior to the applicable compliance date for the replaced unit pursuant to Section 217.392, the higher of the actual NO<sub>x</sub> emissions as determined by testing or monitoring data or the applicable uncontrolled NO<sub>x</sub> emissions factor from Compilation of Air pollutant 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; or
- B) On and after the applicable compliance date for the replaced unit pursuant to Section 217.392, the applicable emissions concentration for the type of unit that replaced pursuant to Section 217.388(a).
- 5) For a unit that is replaced with purchased power, the allowable NO<sub>x</sub> 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 averaged over the three-year period prior to the shutdown. The actual NO<sub>x</sub> 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 units that have a later compliance date, For 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:

A) Prior to the applicable compliance date pursuant to Section 217.392, the higher of the actual NO<sub>x</sub> emissions as determined by testing or monitoring data, or the applicable uncontrolled NO<sub>x</sub> 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; and

B) On and after the units applicable compliance date pursuant to Section 217.392, the applicable emissions concentration for that type of unit pursuant to Section 217.388(a).

h) For units that use CEMS the data must show that the total mass of actual NO<sub>x</sub> emissions determined pursuant to subsection (h)(1) of this Section is less than or equal to the allowable NO<sub>x</sub> 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<sub>x</sub> emissions in lbs for a unit (EM<sub>act</sub>) must be the sum of the total mass of actual NO<sub>x</sub> 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<sub>x</sub> emissions must be determined as follows:

$$EM_{(all)} = \sum_{j=1}^m (Cd_i * Flow_i * 1.194 \times 10^{-7})$$

Where:

EM<sub>all(i)</sub> = Total mass of allowable NO<sub>x</sub> emissions in lbs for a unit.

Flow<sub>i</sub> = Stack flow (dscf/hr) for a given stack.

Cd<sub>i</sub> = Allowable concentration of NO<sub>x</sub> (ppmv) specified in Section 217.388(a) of this subpart for a given stack. (1.194 x 10<sup>-7</sup>) 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: Added at 31 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.)

Section 217.392 Compliance

- ~~a) An owner or operator of an affected unit may not operate that unit unless it meets the applicable concentration limit in Section 217.388(a), or is included in an emissions averaging plan pursuant to Section 217.388(b), or meets the low usage requirements pursuant to Section 217.388(c), and complies with all other applicable requirements of this Subpart Q by the earliest applicable date listed below:~~
- ~~1) On and after ~~May 1, 2007~~ 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);~~
  - ~~2) On and after January 1, 2009, an owner or operator of an affected unit and that is located in Cook, DuPage, Aux Sable Township and Goose Lake Township in Grundy, Kane, Oswego Township in Kendall, Lake, McHenry, Will, Jersey, Madison, Monroe, Randolph Township in Randolph, or St. Clair County, and 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);~~
  - ~~3) On and after January 1, 2011, an owner or operator of an affected engine with a nameplate capacity rated at 1500 bhp or more, and affected turbines rated at 5 MW (6,702 bhp) or more that is not subject to subsection (a)(1) or (a)(2) of this Section, 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); or~~
  - ~~4) On and after January 1, 2012, an owner or operator of an affected engine with a nameplate capacity rated at less than 1500 bhp or an affected turbine rated at less than 5 MW (6,702 bhp) that is not subject to subsection (a)(1), (a)(2) or (a)(3) of this Section, may not operate the affected engine or turbine unless the requirements of this Subpart Q are met or the affected unit is exempt pursuant to Section 217.386(b).~~
- ~~b) Owners and operators of an affected unit may use NO<sub>x</sub> allowances to meet the compliance requirements in Section 217.388 as specified below. A NO<sub>x</sub> allowance is defined as an allowance used to meet the requirements of a NO<sub>x</sub> trading program administered by USEPA where one allowance is equal to one ton of NO<sub>x</sub> emissions.~~

- ~~1) NO<sub>x</sub> allowances may only be used 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 emissions exceedance.~~
- ~~B) To achieve compliance no more than twice in any rolling five-year period.~~
- ~~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 one NO<sub>x</sub> allowance for each ton or portion of a ton of NO<sub>x</sub> by which actual emissions exceed allowed emissions. For noncompliance with a seasonal limit, a NO<sub>x</sub> ozone season allowance must be used. For noncompliance with the emissions concentration limits in Section 217.388(a) or an annual limitation in an emissions averaging plan, only a NO<sub>x</sub> annual allowance may be used.~~
- ~~3) The owner or operator must submit a report documenting the circumstances that required the use of NO<sub>x</sub> allowances and identify what actions will be taken in subsequent years to address these circumstances and must transfer the NO<sub>x</sub> allowances to the Agency's federal NO<sub>x</sub> 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 or the annual emission averaging plan limits. The report must contain the NATS serial numbers of the NO<sub>x</sub> allowances.~~

(Source: Added at 31 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.)

Section 217.394 Testing and Monitoring

- ~~a) An owner or operator of an engine or turbine must conduct an initial performance test pursuant to subsection (c)(1) or (c)(2) of this Section as follows:~~
- ~~1) By May 1, 2007/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 wWithin the first 876 hours of operation per calendar year, whichever is~~

later:

- A) For affected units not listed in Appendix G that operate more than 876 hours per calendar year; and
  - B) For 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
  - B) For 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 (c)(1) or (c)(2) 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<sub>x</sub> 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<sub>x</sub> 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<sub>x</sub> monitor utilizing 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<sub>x</sub> and O<sub>2</sub> 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.

(Source: Added at 31 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.)

Section 217.396 Recordkeeping and Reporting

- a) Recordkeeping. The owner or operator of an Appendix G unit or 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(e) 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(dc).
  - 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<sub>x</sub> allowance reconciliation reports submitted pursuant to Section 217.392(e).~~

~~b) The owner or operator of an affected unit that is complying with the low usage provisions of Section 217.388(e), must:~~

~~1) For each unit complying with Section 217.388(e)(1), maintain a record of the NO<sub>x</sub> emissions for each calendar year; or~~

~~2) For each unit complying with Section 217.388(e)(2), maintain a record of bhp or MW hours operated each calendar year.~~

~~e) The owner or operator of an affected unit or unit included in an emissions averaging plan must maintain the records required by subsections (a) and (b) of this Section 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.~~

~~cd) Reporting requirements:~~

~~1) The owner or operator must notify the Agency in writing 30 days and five days prior to testing pursuant to Section-subsections 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<sub>x</sub> 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 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<sub>x</sub> emissions for the ozone season and for the annual control period;
- ii) The total mass of actual NO<sub>x</sub> 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<sub>x</sub> emissions are less than the total mass of allowable NO<sub>x</sub> emissions using equations in Sections 217.390(f) and (g); and
- iv) The information required to determine the total mass of actual NO<sub>x</sub> emissions and the calculations performed in subsection (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<sub>x</sub> allowances to comply with the requirements of Section 217.388, reconciliation reports as required by Section 217.392(b)(3).~~

(Source: Added at 31 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.)

Section 217.APPENDIX G: Existing Reciprocating Internal Combustion Engines Affected by the NO<sub>x</sub> SIP Call

<u>Plant ID</u>	<u>Point ID</u>	<u>Segment</u>
<b><u>ANR Pipeline Co. – Sandwich</u></b>		
<u>093802AAF</u>	<u>E-108</u>	<u>1</u>
<b><u>Natural Gas Pipeline Co. of America 8310</u></b>		
<u>027807AAC</u>	<u>730103540041</u>	<u>1</u>
<b><u>Natural Gas Pipeline Co. of America Sta 110</u></b>		
<u>073816AAA</u>	<u>851000140011</u>	<u>1</u>
<u>073816AAA</u>	<u>851000140012</u>	<u>2</u>
<u>073816AAA</u>	<u>851000140013</u>	<u>3</u>
<u>073816AAA</u>	<u>851000140014</u>	<u>4</u>
<u>073816AAA</u>	<u>851000140041</u>	<u>1</u>
<u>073816AAA</u>	<u>851000140051</u>	<u>1</u>
<b><u>Northern Illinois Gas Co. - Stor Stat 359</u></b>		
<u>113817AAA</u>	<u>730105440021</u>	<u>1</u>
<u>113817AAA</u>	<u>730105440031</u>	<u>1</u>
<u>113821AAA</u>	<u>730105430021</u>	<u>1</u>
<u>113821AAA</u>	<u>730105430051</u>	<u>1</u>
<b><u>Panhandle Eastern Pipe Line Co.-Glenarm</u></b>		
<u>167801AAA</u>	<u>87090038002</u>	<u>1</u>
<u>167801AAA</u>	<u>87090038004</u>	<u>1</u>
<u>167801AAA</u>	<u>87090038005</u>	<u>1</u>
<b><u>Panhandle Eastern Pipeline - Tuscola St</u></b>		
<u>041804AAC</u>	<u>73010573009</u>	<u>9</u>
<u>041804AAC</u>	<u>73010573010</u>	<u>10</u>
<u>041804AAC</u>	<u>73010573011</u>	<u>11</u>
<u>041804AAC</u>	<u>73010573012</u>	<u>12</u>
<u>041804AAC</u>	<u>73010573013</u>	<u>13</u>
<b><u>Panhandle Eastern Pipeline Co.</u></b>		
<u>149820AAB</u>	<u>7301057199G</u>	<u>3</u>
<u>149820AAB</u>	<u>7301057199I</u>	<u>1</u>
<u>149820AAB</u>	<u>7301057199J</u>	<u>1</u>
<u>149820AAB</u>	<u>7301057199K</u>	<u>1</u>
<b><u>Panhandle Eastern Pipeline Co.-Glenarm</u></b>		

<u>167801AAA</u>	<u>87090038001</u>	<u>1</u>
<b>Phoenix Chemical Co.</b>		
<u>085809AAA</u>	<u>730700330101</u>	<u>1</u>
<u>085809AAA</u>	<u>730700330102</u>	<u>2</u>
<u>085809AAA</u>	<u>730700330103</u>	<u>3</u>

(Source: Added at 31 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 order on August 9, 2007, by a vote of 4-0.




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John T. Therriault, Assistant Clerk  
Illinois Pollution Control Board