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May 15, 2009

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MAY 19 2009

STATE OF ILLINOIS
Pollution Control Board

POLLUTION CONTROL BOARD
JOHN THERRIAULT ASSISTANT CLERK
100 W RANDOLPH ST, STE 11-500
CHICAGO, IL 60601

Dear JOHN THERRIAULT ASSISTANT CLERK

Your rules Listed below met our codification standards and have been published in Volume 33, Issue 21 of the Illinois Register, dated 5/22/2009.

PROPOSED RULES

Definitions and General Provisions

35 Ill. Adm. Code 211

6896

Point of Contact: Nancy Miller

Nitrogen Oxides Emissions

35 Ill. Adm. Code 217

6921

Point of Contact: Nancy Miller

If you have any questions, you may contact the Administrative Code Division at (217) 782 - 7017.

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- 1) Heading of the Part: Definitions and General Procedures
- 2) Code Citation: 35 Ill. Adm. Code 211
- 3)

<u>Section Numbers:</u>	<u>Proposed Action:</u>
211.665	New Section
211.995	New Section
211.1315	New Section
211.1435	New Section
211.2355	New Section
211.2357	New Section
211.2625	New Section
211.3100	New Section
211.3355	New Section
211.3475	New Section
211.4280	New Section
211.5195	New Section
- 4) Statutory Authority: Implementing Section 10 and authorized by Sections 27 and 28 of the Environmental Protection Act [415 ILCS 5/10, 27, and 28].
- 5) A Complete Description of the Subjects and Issues Involved:

The Board's May 7, 2009 opinion and order (Amendments to 35 Ill. Adm. Code 217, Nitrogen Oxides Emissions, and 35 Ill. Adm. Code 211, R08-19, slip op. at 21-27 (summarizing twelve proposed new definitions)) describes the twelve new sections of Part 211 proposed in this rulemaking.

This rulemaking is based on a proposal filed with the Board by the Illinois Environmental Protection Agency (Agency) on May 9, 2008. The Agency proposes to amend Parts 211 and 217 of the Board's air pollution regulations (35 Ill. Adm. Code 211, 217) to control nitrogen oxides (NO_x) emissions from major stationary sources in the nonattainment areas and from emission units including industrial boilers, process heaters, glass melting furnaces, cement kilns, lime kilns, furnaces used in steelmaking and aluminum melting, and fossil fuel-fired stationary boilers at such sources. In Part 211, the Agency proposes to add twelve new definitions of terms employed in proposed new sections of Part 217.

On April 2, 2009, the Board granted the Agency's motion to expedite review of this proposal in order to meet federal deadlines for submission of State Implementation Plans for NO_x. In its May 7, 2009, opinion and order, the Board stated that, having granted the

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motion for expedited review, it is highly unlikely to grant any motion for an extension of the first-notice comment period. The Board strongly encouraged participants who wish to file a public comment to do so within the statutory 45-day period.

6) Published studies or reports, and sources of underlying data, used to compose this rulemaking:

The Agency stated that it relied on the following 68 sources in preparing its proposal to the Board:

1. The Clean Air Act, as amended in 1990 (42 U.S.C. § 7401 *et seq.*);
2. Illinois Environmental Protection Act (415 ILCS 5/1 *et seq.*);
3. Energy & Environmental Analysis, Inc., "Characterization of the U.S. Boiler Industrial Commercial Boiler Population," submitted to Oak Ridge National Laboratory, May 2005;
4. [http://commons.wikimedia.org/wiki/Image:Water tube boiler schematic.png](http://commons.wikimedia.org/wiki/Image:Water_tube_boiler_schematic.png);
5. [http://en.wikipedia.org/wiki/Image:Locomotive fire tube boiler schematic.png](http://en.wikipedia.org/wiki/Image:Locomotive_fire_tube_boiler_schematic.png);
6. Babcock & Wilcox Company; Steam, Its Generation and Use, 40th Edition, 1992;
7. Neil Johnson, "Fundamentals of Stoker Fired Boiler Design and Operation," presented at CIBO Emission Controls Technology Conference, July 15-17, 2002;
8. Letter to Mr. Regulator, New Hampshire Division of Environmental Services, from Daniel J. Willems, Product Development, Cleaver Brooks, dated May 19, 2006;
9. http://www1.eere.energy.gov/industry/bestpractices/pdfs/steam4_boiler_efficiency.pdf;
10. http://www.energysolutionscenter.org/boilerburner/Eff_Improve/Efficiency/Oxygen_Control.asp;
11. <http://files.asme.org/asmeorg/Codes/CertifAccred/Personnel/2971.pdf>;
12. http://www.coen.com/i_html/white_lowcostnoxpm.html;

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13. Rajani Varagani (n.d.), "A Cost Effective Low NO_x Retrofit Technology for Industrial Boilers," cited within CIBO Industrial Emissions Control Technology III, August 1-3, 2005;
14. Email from Jim Staudt, Andover Technology, to R. Gifford Broderick, Combustion Components Associates, Based on estimate for a 4-burner project, dated October 16, 2003;
15. http://www.johnzink.com/products/burners/html_todd/burn_todd_cs_104.htm;
16. Sacramento General Services Heating Plant Case Study: COEN web site: <http://www.coen.com/mrktli/ibrochures/pdf/qla.pdf>;
17. Zink, John (2003) "U.S. Borax TODD Ultra Low Emissions Burner Installment;"
18. Zink, John (2003) "TODD Ultra Low Emissions Burner Installment;"
19. Coen Company, "Ultra Low NO_x Gas-Fired Burner with Air Preheat," Final Report, prepared for California Air Resources Board, November 23, 2000;
20. Memorandum from Jim Staudt, Andover Technology Partners, to Sikander Khan, United States Environmental Protection Agency, providing comments in response to September 10, 2003 email, dated October 24, 2003;
21. Memorandum from Chad Whiteman, Institute of Clean Air Companies to Christopher Recchia, Ozone Transport Commission, regarding Selective Non-Catalytic Reduction Technology Costs for Industrial Sources, dated October 6, 2006;
22. Northeast States for Coordinated Air Use Management (NESCAUM), "Status Report on NO_x: Control Technologies and Cost Effectiveness for Utility Boilers," prepared by Jim Staudt, Andover Technology Partners, June 1998;
23. Northeast States for Coordinated Air Use Management (NESCAUM), "Status Report on NO_x Controls, " prepared by Jim Staudt, Andover Technology Partners, December 2000. ("NESCAUM 2000 report");
24. Institute to Clean Air Companies, Inc., "White Paper: Selective Catalytic Reduction (SCR) Control of NO_x Emissions," November 1997;
25. <http://www.cormetech.com/experience.htm>;

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26. "Economic Indicators," Chemical Engineering, p. 102, September 2006;
27. Vatatuck, William M., "Updating the CE Plant Cost Index," Chemical Engineering, p. 69, January 2002;
28. State and Territorial Air Pollution (STAPPA) and Association of Local Air Pollution Control Offices (ALAPCO), "Controlling Fine Particulate Matter Under the Clean Air Act: A Menu of Options," March 2006;
29. Erickson, C., and Staudt, J., "Selective Catalytic Reduction System Performance and Reliability Review," presented at the EPRI-EPA-DOE-AWMA Combined Utility Air Pollution Control Conference, the Mega Conference, Baltimore, August 28-31, 2006;
30. Cichanowicz, E.J., "Current Capital Cost and Cost-Effectiveness of Power Plant Emissions Control Technologies," prepared for Utility Air Regulatory Group, June 2007.
31. <http://www.mobotecusa.com/projects/vermillion-sellsheet.pdf>;
32. <http://www.mobotecusa.com/projects/capefear6-sellsheet.pdf>;
33. STAPPA/ALAPCO, "Controlling Nitrogen Oxides under the Clean Air Act: A Menu of Options," July 1994;
34. Khan, Sikander, United States Environmental Protection Agency, "Methodology, Assumptions, and References Preliminary NO_x Controls Cost Estimates for Industrial Boilers," October-November 2003;
35. MACTEC Federal Programs/MACTEC Engineering and Consulting, Inc., "Midwest Regional Planning Organization (RPO): Petroleum Refinery Best Available Retrofit Technology (BART)," Engineering Analysis, prepared for The Lake Michigan Air Directors Consortium (LADCO), March 30, 2005. ("LADCO 2005");
36. http://www.epa.gov/air/ozonepollution/SIPToolkit/documents/stationary_nox_list.pdf;
37. http://www.callidus.com/pages/next_gen.htm;

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38. Heat Input Affects NO_x Emissions from Internal Flue Gas Re-Circulation Burners
<http://texasiof.ces.utexas.edu/texasshowcase/pdfs/presentations/c1/dbishop.pdf>;
39. http://www.andovertechnology.com/HGA_Market_Report_secure.pdf;
40. <http://vwww.valleyair.org/rules/curnrules/r4304.pdf>;
41. www.perf.org/ppt/Bishop.ppt;
42. State of New Jersey Department of Environmental Protection, State of the Art Manual for Boilers and Process Heaters, July 1997 (revised February 22, 2004).
www.state.nj.us/dep/aqpp/downloads/sota/sota12.pdf;
43. Partha Ganguli, Workgroup Recommendations and Other Potential Control Measures Stationary Combustion Sources Workgroup, May 11, 2006.
http://www.nj.gov/dep/airworkgroups/docs/wps/SCS004A_fin.pdf;
44. Sun, W.H., Bisnett, M.J., et al., "Reduction of NO_x Emissions from Cement Kiln/Calcliner through the Use of the NO_xOUT Process," International Specialty Conference on Waste Combustion in Boilers and Industrial Furnaces, April 21, 1994;
45. <http://www.cadencerecycling.com/pdf/6-PageComplete.pdf>;
46. Hansen, E., Cadence Environmental Energy Inc., "Staged Combustion for NO_x Reduction Using High Pressure Air Injection," undated.
<http://www.cadencerecycling.com/pdf/IEEE2002.pdf>;
47. Sabo, E., MACTEC Federal Programs, Inc., "Candidate Control Measures for Cement Plants", LADCO/MRPO, Regional Air Quality Workshop, June 28, 2005;
48. United States Environmental Protection Agency, Office of Air Quality, Planning and Standards, Technical Bulletin: Nitrogen Oxides (NO_x), Why and How They Are Controlled, EPA-456/F-99-006R, November 1999.
<http://www.epa.gov/ttn/catc/dir1/fnoxdoc.pdf>;
49. Finding of Significant Contribution and Rulemaking for Certain States in the Ozone Transport Assessment Group Region for Purposes of Reducing Regional Transport of Ozone, Rule, 63 *Fed. Reg.* 57356, October 27, 1998;
50. State of Michigan v. USEPA, 213 F.3d 663 (D.C. Cir. 2000);

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51. Federal Implementation Plans to Reduce the Regional Transport of Ozone; Proposed Rule, 63 Fed. Reg. 56394, October 21, 1998;
52. United States Environmental Protection Agency, Office of Air and Radiation, Regulatory Impact Analysis for the NO_x SIP Call, FIP, and Section 126 Petitions, Volume 1: Costs and Economic Impacts, September 1998;
53. Waible, R., Price, D., Tish, P., Halpern, M., "Advanced Burner Technology for Stringent NO_x Regulations," presented at the American Petroleum Institute Midyear Refining Meeting, Orlando, FL, May 8, 1990;
54. Nguyen, Quang, Koppang, Richard, Energy and Environmental Research Corporation, Advanced Steel Reheat Furnaces Research and Development, Final Report, prepared for U.S. Department of Energy, January 14, 1999;
55. Rowlan, Steven J. and Sun, William H., "NO_x Control on Preheat and Radiant Furnaces at Nucor Steel Mills through Urea SNCR, SCR, and Hybrid Processes," presented at ICAC Forum, Houston, TX, February 12-13, 2002.
<http://www.icac.com/Files/Rowlan.pdf>;
56. Kobayashi, H., "Advances in Oxy-Fuel Fired Glass Melting Technology," presented at XX International Congress on Glass (ICG), Kyoto, Japan, September 26- October 1, 2004;
57. <http://www1.eere.energy.gov/industry/glass/pdfs/airstaging.pdf>;
58. http://www.gastechnology.org/webroot/app/xn/xd.aspx?it=enweb&xd=4reportspubs%5C4_8focus%5Ccoxygenenrichedairstaging.xml;
59. http://www.osti.gov/energycitations/product.biblio.jsp?osti_id=616314;
60. Midwest RPO Candidate Control Measures, Interim White Paper, Source Category: Glass Manufacturing, December 2, 2005;
61. Energetics, Inc., Energy and Environmental Profile of the U.S. Aluminum Industry, prepared for U.S. Department of Energy, July 1997;
62. <http://www1.eere.energy.gov/industry/aluminum/pdfs/aluminum.pdf>;

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63. Schalles, David G., The Next Generation of Combustion Technology for Aluminum Melting, undated. <http://www.bloomeng.com/tmspaper-FINAL.doc>;
 64. <http://www.bloomeng.com/11501umiflame.pdf>;
 65. <http://www.eere.energy.gov/industry/combustion/pdfs/oscllcomb.pdf>;
 66. California South Coast Rule 2002, Allocations for oxides of Nitrogen (NO_x) and oxides of Sulfur (SO_x), amended January 7, 2005;
 67. <http://www.epa.gov/ttn/emc/cem.html>; and
 68. Alternative Control Techniques Document--NO_x Emissions from Cement Manufacturing, EPA-453/R-94-004, U. S. Environmental Protection Agency, Office of Air and Radiation, Office of Air Quality Planning and Standards, Research Triangle Park, N. C. 27711, March 1994.
- 7) Will this proposed rule replace an emergency rule currently in effect? No.
 - 8) Does this rulemaking contain an automatic repeal date? No.
 - 9) Does this proposed rule contain incorporations by reference? Yes.
 - 10) Are there any other proposed rules pending on this Part?

<u>Section Numbers:</u>	<u>Proposed Action:</u>	<u>Illinois Register Citation:</u>
211.1920	Amend	32 Ill. Reg. 17055 (Oct. 31, 2008)
 - 11) Statement of Statewide Policy Objectives: This proposed rule does not create or enlarge a State mandate, as defined in Section 3(b) of the State Mandates Act. [30 ILCS 805/3(b) (2006)].
 - 12) Time, Place, and Manner in which interested persons may comment on this proposed rulemaking:

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The Board will accept written public comment on this proposal for 45 days after the date of publication in the *Illinois Register*. Comments should reference Docket R08-19 and be addressed to:

Clerk's Office
Illinois Pollution Control Board
100 W. Randolph St., Suite 11-500
Chicago, IL 60601

Interested persons may request copies of the Board's opinion and order by calling the Clerk's office at 312-814-3620, or download from the Board's Web site at www.ipcb.state.il.us.

For more information contact Tim Fox at 312/814-6085 or email at foxt@ipcb.state.il.us.

13) Initial Regulatory Flexibility Analysis:

In Part 211, the Agency proposes to add twelve new definitions of terms employed in the proposed new sections of Part 217.

- A) Types of small businesses, small municipalities and not for profit corporations affected: None expected.
- B) Reporting, bookkeeping or other procedures required for compliance: The proposed rulemaking requires the owner or operator of an affected source to perform emissions monitoring, complete required tests, and maintain records and make reports as required.
- C) Types of Professional skills necessary for compliance: No professional skills beyond those currently required by the existing state and federal air pollution control regulations applicable to affected sources will be required.

14) Regulatory Agenda on which this rulemaking was summarized: July 2006 (30 Ill. Reg. 11906-08).

The full text of the Proposed Amendments begin on the next page:

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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

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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
<u>211.665</u>	<u>Auxiliary Boiler</u>
211.670	Baked Coatings
211.680	Bakery Oven
211.685	Basecoat/Clearcoat System
211.690	Batch Loading
211.695	Batch Operation
211.696	Batch Process Train
211.710	Bead-Dipping
211.730	Binders
211.740	Brakehorsepower (rated-bhp)
211.750	British Thermal Unit
211.770	Brush or Wipe Coating
211.790	Bulk Gasoline Plant
211.810	Bulk Gasoline Terminal
211.820	Business Machine Plastic Parts
211.830	Can
211.850	Can Coating
211.870	Can Coating Line
211.890	Capture
211.910	Capture Device
211.930	Capture Efficiency
211.950	Capture System
211.953	Carbon Adsorber
211.955	Cement
211.960	Cement Kiln
211.970	Certified Investigation

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211.980	Chemical Manufacturing Process Unit
211.990	Choke Loading
<u>211.995</u>	<u>Circulating Fluidized Bed Combustor</u>
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
<u>211.1315</u>	<u>Combustion Tuning</u>
211.1316	Combustion Turbine
211.1320	Commence Commercial Operation
211.1324	Commence Operation
211.1328	Common Stack
211.1330	Complete Combustion
211.1350	Component
211.1370	Concrete Curing Compounds
211.1390	Concentrated Nitric Acid Manufacturing Process
211.1410	Condensate
211.1430	Condensible PM-10
<u>211.1435</u>	<u>Container Glass</u>
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

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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
211.1740	Diesel Engine
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

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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
<u>211.2355</u>	<u>Flare</u>
<u>211.2357</u>	<u>Flat Glass</u>
211.2360	Flexible Coating
211.2365	Flexible Operation Unit
211.2370	Flexographic Printing
211.2390	Flexographic Printing Line
211.2410	Floating Roof
211.2420	Fossil Fuel
211.2425	Fossil Fuel-Fired
211.2430	Fountain Solution
211.2450	Freeboard Height
211.2470	Fuel Combustion Emission Unit or Fuel Combustion Emission Source
211.2490	Fugitive Particulate Matter
211.2510	Full Operating Flowrate
211.2530	Gas Service
211.2550	Gas/Gas Method
211.2570	Gasoline
211.2590	Gasoline Dispensing Operation or Gasoline Dispensing Facility
211.2610	Gel Coat
211.2620	Generator
<u>211.2625</u>	<u>Glass Melting Furnace</u>
211.2630	Gloss Reducers
211.2650	Grain
211.2670	Grain-Drying Operation
211.2690	Grain-Handling and Conditioning Operation
211.2710	Grain-Handling Operation
211.2730	Green-Tire Spraying
211.2750	Green Tires

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211.2770	Gross Heating Value
211.2790	Gross Vehicle Weight Rating
211.2810	Heated Airless Spray
211.2815	Heat Input
211.2820	Heat Input Rate
211.2830	Heatset
211.2850	Heatset Web Offset Lithographic Printing Line
211.2870	Heavy Liquid
211.2890	Heavy Metals
211.2910	Heavy Off-Highway Vehicle Products
211.2930	Heavy Off-Highway Vehicle Products Coating
211.2950	Heavy Off-Highway Vehicle Products Coating Line
211.2970	High Temperature Aluminum Coating
211.2990	High Volume Low Pressure (HVL) Spray
211.3010	Hood
211.3030	Hot Well
211.3050	Housekeeping Practices
211.3070	Incinerator
211.3090	Indirect Heat Transfer
<u>211.3100</u>	<u>Industrial Boiler</u>
211.3110	Ink
211.3130	In-Process Tank
211.3150	In-Situ Sampling Systems
211.3170	Interior Body Spray Coat
211.3190	Internal-Floating Roof
211.3210	Internal Transferring Area
211.3230	Lacquers
211.3250	Large Appliance
211.3270	Large Appliance Coating
211.3290	Large Appliance Coating Line
211.3300	Lean-Burn Engine
211.3310	Light Liquid
211.3330	Light-Duty Truck
211.3350	Light Oil
<u>211.3355</u>	<u>Lime Kiln</u>
211.3370	Liquid/Gas Method
211.3390	Liquid-Mounted Seal
211.3410	Liquid Service
211.3430	Liquids Dripping
211.3450	Lithographic Printing Line

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211.3470	Load-Out Area
<u>211.3475</u>	<u>Load Shaving Unit</u>
211.3480	Loading Event
211.3483	Long Dry Kiln
211.3485	Long Wet Kiln
211.3487	Low-NO _x Burner
211.3490	Low Solvent Coating
211.3500	Lubricating Oil
211.3510	Magnet Wire
211.3530	Magnet Wire Coating
211.3550	Magnet Wire Coating Line
211.3570	Major Dump Pit
211.3590	Major Metropolitan Area (MMA)
211.3610	Major Population Area (MPA)
211.3620	Manually Operated Equipment
211.3630	Manufacturing Process
211.3650	Marine Terminal
211.3660	Marine Vessel
211.3670	Material Recovery Section
211.3690	Maximum Theoretical Emissions
211.3695	Maximum True Vapor Pressure
211.3710	Metal Furniture
211.3730	Metal Furniture Coating
211.3750	Metal Furniture Coating Line
211.3770	Metallic Shoe-Type Seal
211.3780	Mid-Kiln Firing
211.3790	Miscellaneous Fabricated Product Manufacturing Process
211.3810	Miscellaneous Formulation Manufacturing Process
211.3830	Miscellaneous Metal Parts and Products
211.3850	Miscellaneous Metal Parts and Products Coating
211.3870	Miscellaneous Metal Parts or Products Coating Line
211.3890	Miscellaneous Organic Chemical Manufacturing Process
211.3910	Mixing Operation
211.3915	Mobile Equipment
211.3930	Monitor
211.3950	Monomer
211.3960	Motor Vehicles
211.3965	Motor Vehicle Refinishing
211.3970	Multiple Package Coating
211.3980	Nameplate Capacity

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211.3990	New Grain-Drying Operation (Repealed)
211.4010	New Grain-Handling Operation (Repealed)
211.4030	No Detectable Volatile Organic Material Emissions
211.4050	Non-Contact Process Water Cooling Tower
211.4055	Non-Flexible Coating
211.4065	Non-Heatset
211.4067	NO _x Trading Program
211.4070	Offset
211.4090	One Hundred Percent Acid
211.4110	One-Turn Storage Space
211.4130	Opacity
211.4150	Opaque Stains
211.4170	Open Top Vapor Degreasing
211.4190	Open-Ended Valve
211.4210	Operator of a Gasoline Dispensing Operation or Operator of a Gasoline Dispensing Facility
211.4230	Organic Compound
211.4250	Organic Material and Organic Materials
211.4260	Organic Solvent
211.4270	Organic Vapor
<u>211.4280</u>	<u>Other Glass</u>
211.4290	Oven
211.4310	Overall Control
211.4330	Overvarnish
211.4350	Owner of a Gasoline Dispensing Operation or Owner of a Gasoline Dispensing Facility
211.4370	Owner or Operator
211.4390	Packaging Rotogravure Printing
211.4410	Packaging Rotogravure Printing Line
211.4430	Pail
211.4450	Paint Manufacturing Source or Paint Manufacturing Plant
211.4470	Paper Coating
211.4490	Paper Coating Line
211.4510	Particulate Matter
211.4530	Parts Per Million (Volume) or PPM (Vol)
211.4550	Person
211.4590	Petroleum
211.4610	Petroleum Liquid
211.4630	Petroleum Refinery
211.4650	Pharmaceutical

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211.4670	Pharmaceutical Coating Operation
211.4690	Photochemically Reactive Material
211.4710	Pigmented Coatings
211.4730	Plant
211.4740	Plastic Part
211.4750	Plasticizers
211.4770	PM-10
211.4790	Pneumatic Rubber Tire Manufacture
211.4810	Polybasic Organic Acid Partial Oxidation Manufacturing Process
211.4830	Polyester Resin Material(s)
211.4850	Polyester Resin Products Manufacturing Process
211.4870	Polystyrene Plant
211.4890	Polystyrene Resin
211.4910	Portable Grain-Handling Equipment
211.4930	Portland Cement Manufacturing Process Emission Source
211.4950	Portland Cement Process or Portland Cement Manufacturing Plant
211.4960	Potential Electrical Output Capacity
211.4970	Potential to Emit
211.4990	Power Driven Fastener Coating
211.5010	Precoat
211.5015	Preheater Kiln
211.5020	Preheater/Precalciner Kiln
211.5030	Pressure Release
211.5050	Pressure Tank
211.5060	Pressure/Vacuum Relief Valve
211.5061	Pretreatment Wash Primer
211.5065	Primary Product
211.5070	Prime Coat
211.5080	Primer Sealer
211.5090	Primer Surfacer Coat
211.5110	Primer Surfacer Operation
211.5130	Primers
211.5150	Printing
211.5170	Printing Line
211.5185	Process Emission Source
211.5190	Process Emission Unit
<u>211.5195</u>	<u>Process Heater</u>
211.5210	Process Unit
211.5230	Process Unit Shutdown
211.5245	Process Vent

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211.5250	Process Weight Rate
211.5270	Production Equipment Exhaust System
211.5310	Publication Rotogravure Printing Line
211.5330	Purged Process Fluid
211.5340	Rated Heat Input Capacity
211.5350	Reactor
211.5370	Reasonably Available Control Technology (RACT)
211.5390	Reclamation System
211.5410	Refiner
211.5430	Refinery Fuel Gas
211.5450	Refinery Fuel Gas System
211.5470	Refinery Unit or Refinery Process Unit
211.5480	Reflective Argent Coating
211.5490	Refrigerated Condenser
211.5500	Regulated Air Pollutant
211.5510	Reid Vapor Pressure
211.5530	Repair
211.5550	Repair Coat
211.5570	Repaired
211.5580	Repowering
211.5590	Residual Fuel Oil
211.5600	Resist Coat
211.5610	Restricted Area
211.5630	Retail Outlet
211.5640	Rich-Burn Engine
211.5650	Ringelmann Chart
211.5670	Roadway
211.5690	Roll Coater
211.5710	Roll Coating
211.5730	Roll Printer
211.5750	Roll Printing
211.5770	Rotogravure Printing
211.5790	Rotogravure Printing Line
211.5810	Safety Relief Valve
211.5830	Sandblasting
211.5850	Sanding Sealers
211.5870	Screening
211.5880	Screen Printing on Paper
211.5890	Sealer
211.5910	Semi-Transparent Stains

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

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

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211.7200	Washoff Operations
211.7210	Wastewater (Oil/Water) Separator
211.7230	Weak Nitric Acid Manufacturing Process
211.7250	Web
211.7270	Wholesale Purchase - Consumer
211.7290	Wood Furniture
211.7310	Wood Furniture Coating
211.7330	Wood Furniture Coating Line
211.7350	Woodworking
211.7400	Yeast Percentage

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 of the Environmental Protection Act [415 ILCS 5/9, 9.1, 9.9, 10, 27 and 28].

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

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amended in R95-2 at 19 Ill. Reg. 11066, effective July 12, 1995; amended in R95-16 at 19 Ill. Reg. 15176, effective October 19, 1995; amended in R96-5 at 20 Ill. Reg. 7590, effective May 22, 1996; amended in R96-16 at 21 Ill. Reg. 2641, effective February 7, 1997; amended in R97-17 at 21 Ill. Reg. 6489, effective May 16, 1997; amended in R97-24 at 21 Ill. Reg. 7695, effective June 9, 1997; amended in R96-17 at 21 Ill. Reg. 7856, effective June 17, 1997; amended in R97-31 at 22 Ill. Reg. 3497, effective February 2, 1998; amended in R98-17 at 22 Ill. Reg. 11405, effective June 22, 1998; amended in R01-9 at 25 Ill. Reg. 128, effective December 26, 2000; amended in R01-11 at 25 Ill. Reg. 4597, effective March 15, 2001; amended in R01-17 at 25 Ill. Reg. 5900, effective April 17, 2001; amended in R05-16 at 29 Ill. Reg. 8181, effective May 23, 2005; amended in R05-11 at 29 Ill. Reg. 8892, effective June 13, 2005; amended in R04-12/20 at 30 Ill. Reg. 9654, effective May 15, 2006; amended in R07-18 at 31 Ill. Reg. 14254, effective September 25, 2007; amended in R08-06 at 32 Ill. Reg. 1387, effective January 16, 2008; amended in R08-19 at 33 Ill. Reg. ____, effective _____.

Section 211.665 Auxiliary Boiler

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

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

Section 211.995 Circulating Fluidized Bed Combustor

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

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

Section 211.1315 Combustion Tuning

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

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

Section 211.1435 Container Glass

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

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

Section 211.2355 Flare

“Flare” means an open combustor without enclosure or shroud.

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

Section 211.2357 Flat Glass

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

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

Section 211.2625 Glass Melting Furnace

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

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

Section 211.3100 Industrial Boiler

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

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

Section 211.3355 Lime Kiln

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

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

Section 211.3475 Load Shaving Unit

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

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

Section 211.4280 Other Glass

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

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

Section 211.5195 Process Heater

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

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

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1) Heading of the Part: Nitrogen Oxides Emissions

2) Code Citation: 35 Ill. Adm. Code 217

<u>Section Numbers:</u>	<u>Proposed Action:</u>
217.100	Amended
217.104	Amended
217.121	Repealed
217.141	Amended
217.150	New Section
217.152	New Section
217.154	New Section
217.155	New Section
217.156	New Section
217.157	New Section
217.158	New Section
217.160	New Section
217.162	New Section
217.164	New Section
217.165	New Section
217.166	New Section
217.180	New Section
217.182	New Section
217.184	New Section
217.185	New Section
217.186	New Section
217.200	New Section
217.202	New Section
217.204	New Section
217.220	New Section
217.222	New Section
217.224	New Section
217.240	New Section
217.242	New Section
217.244	New Section
217.340	New Section
217.342	New Section
217.344	New Section
217.345	New Section
217.Appendix H	New Section

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- 4) Statutory Authority: Implementing Section 10 and authorized by Sections 27 and 28 of the Environmental Protection Act [415 ILCS 5/10, 27, and 28]

- 5) A Complete Description of the Subjects and Issues Involved:

The Board's May 7, 2009 opinion and order (Amendments to 35 Ill. Adm. Code 217, Nitrogen Oxides Emissions, and 35 Ill. Adm. Code 211, R08-19, slip op. at 27-58 (summarizing twelve proposed new definitions)) discusses in details the amendments to Part 217 proposed in this rulemaking.

This rulemaking is based on a proposal filed with the Board by the Illinois Environmental Protection Agency (Agency) on May 9, 2008. The Agency proposes to amend Parts 211 and 217 of the Board's air pollution regulations (35 Ill. Adm. Code 211, 217) to control nitrogen oxides (NO_x) emissions from major stationary sources in the nonattainment areas and from emission units including industrial boilers, process heaters, glass melting furnaces, cement kilns, lime kilns, furnaces used in steelmaking and aluminum melting, and fossil fuel-fired stationary boilers at such sources.

On April 2, 2009, the Board granted the Agency's motion to expedite review of this proposal in order to meet federal deadlines for submission of State Implementation Plans for NO_x. In its May 7, 2009, opinion and order, the Board stated that, having granted the motion for expedited review, it is highly unlikely to grant any motion for an extension of the first-notice comment period. The Board strongly encouraged participants who wish to file a public comment to do so within the statutory 45-day period.

- 6) Published studies or reports, and sources of underlying data, used to compose this rulemaking:

The Agency stated that it relied on the following 68 sources in preparing its proposal to the Board:

1. The Clean Air Act, as amended in 1990 (42 U.S.C. § 7401 *et seq.*);
2. Illinois Environmental Protection Act (415 ILCS 5/1 *et seq.*);
3. Energy & Environmental Analysis, Inc., "Characterization of the U.S. Boiler Industrial Commercial Boiler Population," submitted to Oak Ridge National Laboratory, May 2005;
4. [http://commons.wikimedia.org/wiki/Image:Water tube boiler schematic.png](http://commons.wikimedia.org/wiki/Image:Water_tube_boiler_schematic.png);

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5. [http://en.wikipedia.org/wiki/Image:Locomotive fire tube boiler schematic.png](http://en.wikipedia.org/wiki/Image:Locomotive_fire_tube_boiler_schematic.png);
6. Babcock & Wilcox Company; Steam, It's Generation and Use, 40th Edition, 1992;
7. Neil Johnson, "Fundamentals of Stoker Fired Boiler Design and Operation," presented at CIBO Emission Controls Technology Conference, July 15-17, 2002;
8. Letter to Mr. Regulator, New Hampshire Division of Environmental Services, from Daniel J. Willems, Product Development, Cleaver Brooks, dated May 19, 2006;
9. http://www1.eere.energy.gov/industry/bestpractices/pdfs/steam4_boiler_efficiency.pdf;
10. http://www.energysolutionscenter.org/boilerburner/Eff_Improve/Efficiency/Oxygen_Control.asp;
11. <http://files.asme.org/asmeorg/Codes/CertifAccred/Personnel/2971.pdf>;
12. http://www.coen.com/i_html/white_lowcostnoxpm.html;
13. Rajani Varagani (n.d.), "A Cost Effective Low NOx Retrofit Technology for Industrial Boilers," cited within CIBO Industrial Emissions Control Technology III, August 1-3, 2005;
14. Email from Jim Staudt, Andover Technology, to R. Gifford Broderick, Combustion Components Associates, Based on estimate for a 4-burner project, dated October 16, 2003;
15. http://www.johnzink.com/products/burners/html_todd/burn_todd_cs_104.htm;
16. Sacramento General Services Heating Plant Case Study: COEN web site: <http://www.coen.com/mrktli/ibrochures/pdf/qla.pdf>;
17. Zink, John (2003) "U.S. Borax TODD Ultra Low Emissions Burner Installment;"
18. Zink, John (2003) "TODD Ultra Low Emissions Burner Installment;"
19. Coen Company, "Ultra Low NOx Gas-Fired Burner with Air Preheat," Final Report, prepared for California Air Resources Board, November 23, 2000;

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20. Memorandum from Jim Staudt, Andover Technology Partners, to Sikander Khan, United States Environmental Protection Agency, providing comments in response to September 10, 2003 email, dated October 24, 2003;
21. Memorandum from Chad Whiteman, Institute of Clean Air Companies to Christopher Recchia, Ozone Transport Commission, regarding Selective Non-Catalytic Reduction Technology Costs for Industrial Sources, dated October 6, 2006;
22. Northeast States for Coordinated Air Use Management (NESCAUM), "Status Report on NO_x: Control Technologies and Cost Effectiveness for Utility Boilers," prepared by Jim Staudt, Andover Technology Partners, June 1998;
23. Northeast States for Coordinated Air Use Management (NESCAUM), "Status Report on NO_x Controls, " prepared by Jim Staudt, Andover Technology Partners, December 2000. ("NESCAUM 2000 report");
24. Institute to Clean Air Companies, Inc., "White Paper: Selective Catalytic Reduction (SCR) Control of NO_x Emissions," November 1997;
25. <http://www.cormetech.com/experience.htm>;
26. "Economic Indicators," Chemical Engineering, p. 102, September 2006;
27. Vatatuck, William M., "Updating the CE Plant Cost Index," Chemical Engineering, p. 69, January 2002;
28. State and Territorial Air Pollution (STAPPA) and Association of Local Air Pollution Control Offices (ALAPCO), "Controlling Fine Particulate Matter Under the Clean Air Act: A Menu of Options," March 2006;
29. Erickson, C., and Staudt, J., "Selective Catalytic Reduction System Performance and Reliability Review," presented at the EPRI-EPA-DOE-AWMA Combined Utility Air Pollution Control Conference, the Mega Conference, Baltimore, August 28-31, 2006;
30. Cichanowicz, E.J., "Current Capital Cost and Cost-Effectiveness of Power Plant Emissions Control Technologies," prepared for Utility Air Regulatory Group, June 2007.

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32. <http://www.mobotecusa.com/projects/capefear6-sellsheet.pdf>;
33. STAPPA/ALAPCO, "Controlling Nitrogen Oxides under the Clean Air Act: A Menu of Options," July 1994;
34. Khan, Sikander, United States Environmental Protection Agency, "Methodology, Assumptions, and References Preliminary NO_x Controls Cost Estimates for Industrial Boilers," October-November 2003;
35. MACTEC Federal Programs/MACTEC Engineering and Consulting, Inc., "Midwest Regional Planning Organization (RPO): Petroleum Refinery Best Available Retrofit Technology (BART)," Engineering Analysis, prepared for The Lake Michigan Air Directors Consortium (LADCO), March 30, 2005. ("LADCO 2005");
36. http://www.epa.gov/air/ozonepollution/SIPToolkit/documents/stationary_nox_list.pdf;
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38. Heat Input Affects NO_x Emissions from Internal Flue Gas Re-Circulation Burners <http://texasiof.ces.utexas.edu/texasshowcase/pdfs/presentations/c1/dbishop.pdf>;
39. http://www.andovertechnology.com/HGA_Market_Report_secure.pdf;
40. <http://vwww.valleyair.org/rules/currntrules/r4304.pdf>;
41. www.perf.org/ppt/Bishop.ppt;
42. State of New Jersey Department of Environmental Protection, State of the Art Manual for Boilers and Process Heaters, July 1997 (revised February 22, 2004). www.state.nj.us/dep/aqpp/downloads/sota/sota12.pdf;
43. Partha Ganguli, Workgroup Recommendations and Other Potential Control Measures Stationary Combustion Sources Workgroup, May 11, 2006. http://www.nj.gov/dep/airworkgroups/docs/wps/SCS004A_fin.pdf;
44. Sun, W.H., Bisnett, M.J., et al., "Reduction of NO_x Emissions from Cement Kiln/Calcliner through the Use of the NO_xOUT Process," International Specialty

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<http://www.cadencerecycling.com/pdf/IEEE2002.pdf>;
47. Sabo, E., MACTEC Federal Programs, Inc., "Candidate Control Measures for Cement Plants", LADCO/MRPO, Regional Air Quality Workshop, June 28, 2005;
48. United States Environmental Protection Agency, Office of Air Quality, Planning and Standards, Technical Bulletin: Nitrogen Oxides (NO_x), Why and How They Are Controlled, EPA-456/F-99-006R, November 1999.
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49. Finding of Significant Contribution and Rulemaking for Certain States in the Ozone Transport Assessment Group Region for Purposes of Reducing Regional Transport of Ozone, Rule, 63 *Fed. Reg.* 57356, October 27, 1998;
50. State of Michigan v. USEPA, 213 F.3d 663 (D.C. Cir. 2000);
51. Federal Implementation Plans to Reduce the Regional Transport of Ozone; Proposed Rule, 63 *Fed. Reg.* 56394, October 21, 1998;
52. United States Environmental Protection Agency, Office of Air and Radiation, Regulatory Impact Analysis for the NO_x SIP Call, FIP, and Section 126 Petitions, Volume 1: Costs and Economic Impacts, September 1998;
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55. Rowlan, Steven J. and Sun, William H., "NO_x Control on Preheat and Radiant Furnaces at Nucor Steel Mills through Urea SNCR, SCR, and Hybrid Processes," presented at ICAC Forum, Houston, TX, February 12-13, 2002.

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 60. Midwest RPO Candidate Control Measures, Interim White Paper, Source Category: Glass Manufacturing, December 2, 2005;
 61. Energetics, Inc., Energy and Environmental Profile of the U.S. Aluminum Industry, prepared for U.S. Department of Energy, July 1997;
 62. <http://www1.eere.energy.gov/industry/aluminum/pdfs/aluminum.pdf>;
 63. Schalles, David G., The Next Generation of Combustion Technology for Aluminum Melting, undated. <http://www.bloomeng.com/tmspaper-FINAL.doc>;
 64. <http://www.bloomeng.com/11501umiflame.pdf>;
 65. <http://www.eere.energy.gov/industry/combustion/pdfs/osclcomb.pdf>;
 66. California South Coast Rule 2002, Allocations for oxides of Nitrogen (NO_x) and oxides of Sulfur (SO_x), amended January 7, 2005;
 67. <http://www.epa.gov/ttn/emc/cem.html>; and
 68. Alternative Control Techniques Document--NO_x Emissions from Cement Manufacturing, EPA-453/R-94-004, U. S. Environmental Protection Agency, Office of Air and Radiation, Office of Air Quality Planning and Standards, Research Triangle Park, N. C. 27711, March 1994.
- 7) Will this proposed rule replace an emergency rule currently in effect? No.
- 8) Does this rulemaking contain an automatic repeal date? No.

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- 9) Does this proposed rule contain incorporations by reference? Yes. See 35 Ill. Adm. Code 217.104 (incorporating 11 sources).

- 1) 40 CFR 60, Appendix A, Methods 1, 2, 3, and 4 (2007);
- 2) Alternative Control Techniques Document--NO_x Emissions from Industrial/Commercial/Institutional (ICI) Boilers, EPA-453/R-94-022, U. S. Environmental Protection Agency, Office of Air and Radiation, Office of Air Quality Planning and Standards, Research Triangle Park, N. C. 27711, March 1994;
- 3) Alternative Control Techniques Document--NO_x Emissions from Process Heaters (Revised), EPA-453/R-93-034, U. S. Environmental Protection Agency, Office of Air and Radiation, Office of Air Quality Planning and Standards, Research Triangle Park, N. C. 27711, September 1993;
- 4) Alternative Control Techniques Document--NO_x Emissions from Glass Manufacturing, EPA-453/R-94-037, U. S. Environmental Protection Agency, Office of Air and Radiation, Office of Air Quality Planning and Standards, Research Triangle Park, N. C. 27711, June 1994; and
- 5) Alternative Control Techniques Document--NO_x Emissions from Iron and Steel Mills, EPA-453/R-94-065, U. S. Environmental Protection Agency, Office of Air and Radiation, Office of Air Quality Planning and Standards, Research Triangle Park, N. C. 27711, September 1994.

- 10) Are there any other proposed rules pending on this Part? Yes

<u>Section Numbers:</u>	<u>Proposed Action:</u>	<u>Illinois Register Citation:</u>
217.386	Amend	32 Ill. Reg. 17075 (Oct. 31, 2008)
217.392	Amend	32 Ill. Reg. 17075 (Oct. 31, 2008)
217.396	Amend	32 Ill. Reg. 17075 (Oct. 31, 2008)

- 11) Statement of Statewide Policy Objectives: This proposed rule does not create or enlarge a State mandate, as defined in Section 3(b) of the State Mandates Act. [30 ILCS 805/3(b) (2004)].
- 12) Time, Place, and Manner in which interested persons may comment on this proposed rulemaking:

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The Board will accept written public comment on this proposal for 45 days after the date of publication in the *Illinois Register*. Comments should reference Docket R08-19 and be addressed to:

Clerk's Office
Illinois Pollution Control Board
100 W. Randolph St., Suite 11-500
Chicago, IL 60601

Interested persons may request copies of the Board's opinion and order by calling the Clerk's office at 312-814-3620, or download from the Board's Web site at www.ipcb.state.il.us.

For more information, contact Tim Fox at 312/814-6085 or email at foxt@ipcb.state.il.us.

13) Initial Regulatory Flexibility Analysis:

- A) Types of small businesses, small municipalities and not for profit corporations affected: None expected.
- B) Reporting, bookkeeping or other procedures required for compliance: The proposed rulemaking requires the owner or operator of an affected source to perform emissions monitoring, complete required tests, and maintain records and make reports as required.
- C) Types of Professional skills necessary for compliance: No professional skills beyond those currently required by the existing state and federal air pollution control regulations applicable to affected sources will be required.

14) Regulatory Agenda on which this rulemaking was summarized: July 2006 (30 Ill. Reg. 11906-08).

The full text of the Proposed Amendments begin on the next page:

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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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217.100	Scope and Organization
217.101	Measurement Methods
217.102	Abbreviations and Units
217.103	Definitions
217.104	Incorporations by Reference

SUBPART B: NEW FUEL COMBUSTION EMISSION SOURCES (Repealed)

Section	
217.121	New Emission Sources <u>(Repealed)</u>

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

Section	
217.141	Existing Emission <u>Units</u> Sources in Major Metropolitan Areas

SUBPART C: NO_x GENERAL REQUIREMENTS

<u>Section</u>	
<u>217.150</u>	<u>Applicability</u>
<u>217.152</u>	<u>Compliance Date</u>
<u>217.154</u>	<u>Performance Testing</u>
<u>217.155</u>	<u>Initial Compliance Certification</u>
<u>217.156</u>	<u>Recordkeeping and Reporting</u>
<u>217.157</u>	<u>Testing and Monitoring</u>
<u>217.158</u>	<u>Emissions Averaging Plans</u>

SUBPART D: INDUSTRIAL BOILERS

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Section

<u>217.160</u>	<u>Applicability</u>
<u>217.162</u>	<u>Exemptions</u>
<u>217.164</u>	<u>Emissions Limitations</u>
<u>217.165</u>	<u>Combination of Fuels</u>
<u>217.166</u>	<u>Methods and Procedures for Combustion Tuning</u>

SUBPART E: PROCESS HEATERS

Section

<u>217.180</u>	<u>Applicability</u>
<u>217.182</u>	<u>Exemptions</u>
<u>217.184</u>	<u>Emissions Limitations</u>
<u>217.185</u>	<u>Combination of Fuels</u>
<u>217.186</u>	<u>Methods and Procedures for Combustion Tuning</u>

SUBPART F: GLASS MELTING FURNANCES

Section

<u>217.200</u>	<u>Applicability</u>
<u>217.202</u>	<u>Exemptions</u>
<u>217.204</u>	<u>Emissions Limitations</u>

SUBPART G: CEMENT AND LIME KILNS

Section

<u>217.220</u>	<u>Applicability</u>
<u>217.222</u>	<u>Exemptions</u>
<u>217.224</u>	<u>Emissions Limitations</u>

SUBPART H: IRON AND STEEL AND ALUMINUM MANUFACTURING

Section

<u>217.240</u>	<u>Applicability</u>
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SUBPART K: PROCESS EMISSION SOURCES

Section

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217.301 Industrial Processes

SUBPART M: ELECTRICAL GENERATING UNITS

Section

<u>217.340</u>	<u>Applicability</u>
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<u>217.345</u>	<u>Combination of Fuels</u>

SUBPART O: CHEMICAL MANUFACTURE

Section

217.381	Nitric Acid Manufacturing Processes
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SUBPART Q: STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES AND TURBINES

Section

217.386	Applicability
217.388	Control and Maintenance Requirements
217.390	Emissions Averaging Plans
217.392	Compliance
217.394	Testing and Monitoring
217.396	Recordkeeping and Reporting

SUBPART T: CEMENT KILNS

Section

217.400	Applicability
217.402	Control Requirements
217.404	Testing
217.406	Monitoring
217.408	Reporting
217.410	Recordkeeping

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

Section

217.450	Purpose
217.452	Severability

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217.454	Applicability
217.456	Compliance Requirements
217.458	Permitting Requirements
217.460	Subpart U NO _x Trading Budget
217.462	Methodology for Obtaining NO _x Allocations
217.464	Methodology for Determining NO _x Allowances from the New Source Set-Aside
217.466	NO _x Allocations Procedure for Subpart U Budget Units
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217.472	Low-Emitter Requirements
217.474	Opt-In Units
217.476	Opt-In Process
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217.480	Opt-In Units: Change in Regulatory Status
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SUBPART V: ELECTRIC POWER GENERATION

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217.521	Lake of Egypt Power Plant
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217.706	Emission Limitations
217.708	NO _x Averaging
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SUBPART W: NO_x TRADING PROGRAM FOR ELECTRICAL GENERATING UNITS

Section	
217.750	Purpose
217.752	Severability
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217.760	NO _x Trading Budget
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	Generating Units (EGUs)
217.764	NO _x Allocations for Budget EGUs
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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 _x Trading Program
217.780	Opt-In Units: Change in Regulatory Status
217.782	Allowance Allocations to Budget Opt-In Units

SUBPART X: VOLUNTARY NO_x EMISSIONS REDUCTION PROGRAM

Section	
217.800	Purpose
217.805	Emission Unit Eligibility
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217.815	NO _x Emission Reductions and the Subpart X NO _x Trading Budget
217.820	Baseline Emissions Determination
217.825	Calculation of Creditable NO _x Emission Reductions
217.830	Limitations on NO _x Emission Reductions
217.835	NO _x Emission Reduction Proposal
217.840	Agency Action
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217.865	Enforcement
217.APPENDIX A	Rule into Section Table
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217.APPENDIX C	Compliance Dates
217.APPENDIX D	Non-Electrical Generating Units
217.APPENDIX E	Large Non-Electrical Generating Units
217.APPENDIX F	Allowances for Electrical Generating Units
217.APPENDIX G	Existing Reciprocating Internal Combustion Engines Affected by the NO _x SIP Call
<u>217.APPENDIX H</u>	<u>Compliance Dates for Certain Emissions Units at Petroleum Refineries</u>

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

SOURCE: Adopted as Chapter 2: Air Pollution, Rule 207: Nitrogen Oxides Emissions, R71-23, 4 PCB 191, April 13, 1972, filed and effective April 14, 1972; amended at 2 Ill. Reg. 17, p. 101, effective April 13, 1978; codified at 7 Ill. Reg. 13609; amended in R01-9 at 25 Ill. Reg. 128, effective December 26, 2000; amended in R01-11 at 25 Ill. Reg. 4597, effective March 15, 2001; amended in R01-16 and R01-17 at 25 Ill. Reg. 5914, effective April 17, 2001; amended in R07-18 at 31 Ill. Reg. 14271, effective September 25, 2007; amended in R08-19 at 33 Ill. Reg. ____, effective ____.

SUBPART A: GENERAL PROVISIONS

Section 217.100 Scope and Organization

- a) This Part sets standards and limitations for emission of oxides of nitrogen from stationary sources.
- b) Permits for sources subject to this Part may be required pursuant to 35 Ill. Adm. Code 201 or Section 39.5 of the Act.
- c) Notwithstanding the provisions of this Part the air quality standards contained in 35 Ill. Adm. Code 243 may not be violated.
- d) These rules have been grouped for convenience of the public; the scope of each is determined by its language and history.

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

Section 217.104 Incorporations by Reference

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

- a) The phenol disulfonic acid procedures, as published in 40 CFR 60, Appendix A, Method 7 (2000);
- b) 40 CFR 96, subparts B, D, G, and H (1999);

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- c) 40 CFR 96.1 through 96.3, 96.5 through 96.7, 96.50 through 96.54, 96.55 (a) & (b), 96.56 and 96.57 (1999);
- d) 40 CFR 60, 72, 75 & 76 (2006);
- e) Alternative Control Techniques Document -- NO_x Emissions from Cement Manufacturing, EPA-453/R-94-004, U. S. Environmental Protection Agency-Office of Air Quality Planning and Standards, Research Triangle Park, N. C. 27711, March 1994;
- f) Section 11.6, Portland Cement Manufacturing, AP-42 Compilation of Air Emission Factors, Volume 1: Stationary Point and Area Sources, U.S. Environmental Protection Agency-Office of Air Quality Planning and Standards, Research Triangle Park, N. C. 27711, revised January 1995;
- g) 40 CFR 60.13 (2001);
- h) 40 CFR 60, Appendix A, Methods 3A, 7, 7A, 7C, 7D, 7E, 19, and 20 (2000);
- i) ASTM D6522-00, Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers (2000);
- j) Standards of Performance for Stationary Combustion Turbines, 40 CFR 60, Subpart KKKK, 60.4400 (2006); and
- k) Compilation of Air Pollutant Emission Factors: AP-42, Volume I: Stationary Point and Area Sources (2000), USEPA;
- l) 40 CFR 60, Appendix A, Methods 1, 2, 3, and 4 (2007);
- m) Alternative Control Techniques Document--NO_x Emissions from Industrial/Commercial/Institutional (ICI) Boilers, EPA-453/R-94-022, U. S. Environmental Protection Agency, Office of Air and Radiation, Office of Air Quality Planning and Standards, Research Triangle Park, N. C. 27711, March 1994;
- n) Alternative Control Techniques Document--NO_x Emissions from Process Heaters (Revised), EPA-453/R-93-034, U. S. Environmental Protection Agency, Office of

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Air and Radiation, Office of Air Quality Planning and Standards, Research Triangle Park, N. C. 27711, September 1993;

- o) Alternative Control Techniques Document--NO_x Emissions from Glass Manufacturing, EPA-453/R-94-037, U. S. Environmental Protection Agency, Office of Air and Radiation, Office of Air Quality Planning and Standards, Research Triangle Park, N. C. 27711, June 1994; and
- p) Alternative Control Techniques Document--NO_x Emissions from Iron and Steel Mills, EPA-453/R-94-065, U. S. Environmental Protection Agency, Office of Air and Radiation, Office of Air Quality Planning and Standards, Research Triangle Park, N. C. 27711, September 1994.

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

SUBPART B: NEW FUEL COMBUSTION EMISSION SOURCES (Repealed)

Section 217.121 New Emission Sources (Repealed)

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

- ~~a) — For gaseous fossil fuel firing, 0.310 kg/MW hr (0.20 lbs/mmbtu) of actual heat input;~~
- ~~b) — For liquid fossil fuel firing, 0.464 kg/MW hr (0.30 lbs/mmbtu) of actual heat input;~~
- ~~c) — For dual gaseous and liquid fossil fuel firing, 0.464 kg/MW hr (0.30 lbs/mmbtu) of actual heat input;~~
- ~~d) — For solid fossil fuel firing, 1.08 kg/MW hr (0.7 lbs./mmbtu) of actual heat input;~~
- ~~e) — For fuel combustion emission sources burning simultaneously any combination of solid, liquid and gaseous fossil fuels, an allowable emission rate shall be determined by the following equation:~~

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

Where:

~~E = Allowable nitrogen oxides emissions rate~~

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

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

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

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

$$G + L + S = 100.0$$

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

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

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

SUBPART B C: EXISTING FUEL COMBUSTION EMISSION UNITS SOURCES

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

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

- For gaseous and/or liquid fossil fuel firing, 0.46 kg/MW-hr (0.3 lbs/mmmbtu) of actual heat input;
- For solid fossil fuel firing, 1.39 kg/MW-hr (0.9 lbs/mmmbtu) of actual heat input;
- For fuel combustion emission units sources burning simultaneously any combination of solid, liquid and gaseous fuel, the allowable emission rate shall be determined by the following equation:

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

Where:

E = allowable nitrogen oxides emissions

Q = actual heat input

G = percent of actual heat input derived from gaseous fossil fuel

L = percent of actual heat input derived from liquid fossil fuel

S = percent of actual heat input derived from solid fossil fuel

$G + L + S = 100.0$

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

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

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

- 1) Existing existing fuel combustion units sources which are either cyclone fired boilers burning solid or liquid fuel, or horizontally opposed fired boilers burning solid fuel ; or.
- 2) Emission units that are subject to the emissions limitations of Subpart D, E, F, G, H, M, or Q of this Part.

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

SUBPART C: NO_x GENERAL REQUIREMENTS

Section 217.150 Applicability

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

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- 1) All sources that are located in either one of the following areas and that emit or have the potential to emit NO_x in an amount equal to or greater than 100 tons per year:
 - A) The area composed of the Chicago area counties of Cook, DuPage, Kane, Lake, McHenry, and Will, the Townships of Aux Sable and Goose Lake in Grundy County, and the Township of Oswego in Kendall County; or
 - B) The area composed of the Metro East area counties of Jersey, Madison, Monroe, and St. Clair, and the Township of Baldwin in Randolph County; and
- 2) Any industrial boiler, process heater, glass melting furnace, cement kiln, lime kiln, iron and steel reheater, annealing, or galvanizing furnace, aluminum reverberatory or crucible furnace, or fossil fuel-fired stationary boiler at such sources described in subsection (a)(1) of this Section that emits NO_x in an amount equal to or greater than 15 tons per year and equal to or greater than five tons per ozone season.
- 3) For purposes of this Section, "potential to emit" means the quantity of NO_x that potentially could be emitted by a stationary source before add-on controls based on the design capacity or maximum production capacity of the source and 8,760 hours per year or the quantity of NO_x that potentially could be emitted by a stationary source as established in a federally enforceable permit.
- b) If a source ceases to fulfill the emissions criteria of subsection (a) of this Section, the requirements of this Subpart and Subpart D, E, F, G, H, or M of this Part continue to apply to any emission unit that was ever subject to the provisions of Subpart D, E, F, G, H, or M of this Part.
- c) The provisions of this Subpart do not apply to afterburners, flares, and incinerators.
- d) Where a construction permit, for which the application was submitted to the Agency prior to the adoption of this Subpart, is issued that relies on decreases in emissions of NO_x from existing emission units for purposes of netting or emission offsets, such NO_x decreases remain creditable notwithstanding any requirements

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that may apply to the existing emission units pursuant to this Subpart and Subpart D, E, F, G, H, or M of this Part .

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

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

Section 217.152 Compliance Date

- a) Compliance with the requirements of Subparts D, E, F, G, H, and M by an owner or operator of an emission unit that is subject to Subpart D, E, F, G, H, or M is required beginning January 1, 2012.
- b) Notwithstanding subsection (a) of this Section, compliance with the requirements of Subpart F of this Part by an owner or operator of an emission unit subject to Subpart F of this Part shall be extended until December 31, 2014, if such units are required to meet emissions limitations for NO_x, as measured using a continuous emissions monitoring system, and included within a legally enforceable order on or before December 31, 2009, whereby such emissions limitations are less than 30 percent of the emissions limitations set forth under Section 217.204 of Subpart F of this Part.
- c) Notwithstanding subsection (a) of this Section, the owner or operator of emission units subject to Subpart D or E of this Part and located at a petroleum refinery must comply with the requirements of this Subpart and Subpart D or E of this Part, as applicable, for those emission units beginning January 1, 2012, except that the owner or operator of emission units listed in Appendix H must comply with the requirements of this Subpart, including the option of demonstrating compliance with the applicable Subpart through an emissions averaging plan under Section 217.158 of this Subpart, and Subpart D or E of this Part, as applicable, for the listed emission units beginning on the dates set forth in Appendix H. With Agency approval, the owner or operator of emission units listed in Appendix H may elect to comply with the requirements of this Subpart and Subpart D or E of this Part, as applicable, by reducing the emissions of emission units other than those listed in Appendix H, provided that the emissions limitations of such other emission units are equal to or more stringent than the applicable emissions limitations set forth in Subpart D or E of this Part, as applicable, by the dates set forth in Appendix H.

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

Section 217.154 Performance Testing

- a) Performance testing of NO_x emissions for emission units constructed on or before July 1, 2011, and subject to Subpart D, E, F, G, or H of this Part must be conducted in accordance with Section 217.157 of this Subpart. This subsection does not apply to owners and operators of emission units demonstrating compliance through a continuous emissions monitoring system.
- b) Performance testing of NO_x emissions for emission units for which construction or modification occurs after July 1, 2011, and that are subject to Subpart D, E, F, G, or H of this Part must be conducted within 60 days of achieving maximum operating rate but no later than 180 days after initial startup of the new or modified emission unit, in accordance with Section 217.157 of this Subpart. This subsection does not apply to owners and operators of emission units demonstrating compliance through a continuous emissions monitoring system.
- c) Notification of the initial startup of an emission unit subject to subsection (b) of this Section must be provided to the Agency no later than 30 days after initial startup.
- d) The owner or operator of an emission unit subject to subsection (a) or (b) of this Section must notify the Agency of the scheduled date for the performance testing at least 30 days in writing before such date and five days before such date.
- e) If demonstrating compliance through an emissions averaging plan, at least 30 days before changing the method of compliance, the owner or operator of an emission unit must submit a written notification to the Agency describing the new method of compliance, the reason for the change in the method of compliance, and the scheduled date for performance testing, if required. Upon changing the method of compliance, the owner or operator of an emission unit must submit to the Agency a revised compliance certification that meets the requirements of Section 217.155 of this Subpart.

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

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Section 217.155 Initial Compliance Certification

- a) By the applicable compliance date set forth under Section 217.152 of this Subpart, an owner or operator of an emission unit subject to Subpart D, E, F, G, or H of this Part who is not demonstrating compliance through the use of a continuous emissions monitoring system must certify to the Agency that the emission unit will be in compliance with the applicable emissions limitation of Subpart D, E, F, G, or H of this Part beginning on such applicable compliance date. The performance testing certification must include the results of the performance testing performed in accordance with Sections 217.154(a) and (b) of this Subpart and the calculations necessary to demonstrate that the subject emission unit will be in initial compliance.
- b) By the applicable compliance date set forth under Section 217.152 of this Subpart, an owner or operator of an emission unit subject to Subpart D, E, F, G, H, or M of this Part who is demonstrating compliance through the use of a continuous emissions monitoring system must certify to the Agency that the affected emission units will be in compliance with the applicable emissions limitation of Subpart D, E, F, G, H, or M of this Part beginning on such applicable compliance date. The compliance certification must include a certification of the installation and operation of a continuous emissions monitoring system required under Section 217.157 of this Subpart and the monitoring data necessary to demonstrate that the subject emission unit will be in initial compliance.

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

Section 217.156 Recordkeeping and Reporting

- a) The owner or operator of an emission unit subject to Subpart D, E, F, G, H, or M of this Part must keep and maintain all records used to demonstrate initial compliance and ongoing compliance with the requirements of those Subparts.
 - 1) Except as otherwise provided under this Subpart or Subpart D, E, F, G, H, or M of this Part, copies of such records must be submitted by the owner or operator of the source to the Agency within 30 days after receipt of a written request by the Agency.

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- 2) Such records must be kept at the source and maintained for at least five years and must be available for immediate inspection and copying by the Agency.
- b) The owner or operator of an emission unit subject to Subpart D, E, F, G, H, or M of this Part must maintain records that demonstrate compliance with the requirements of Subpart D, E, F, G, H, or M, as applicable, that include the following:
 - 1) Identification, type (e.g., gas-fired), and location of each unit.
 - 2) Calendar date of the record.
 - 3) Monthly, seasonal, and annual operating hours.
 - 4) Type and quantity of each fuel used monthly, seasonally, and annually.
 - 5) Product and material throughput, as applicable.
 - 6) Reports for all applicable emissions tests for NO_x conducted on the unit, including results.
 - 7) The date, time, and duration of any startup, shutdown, or malfunction in the operation of any emission unit subject to Subpart D, E, F, G, H, or M of this Part or any emissions monitoring equipment. The records must include a description of the malfunction and corrective maintenance activity.
 - 8) A log of all maintenance and inspections related to the unit's air pollution control equipment for NO_x that is performed on the unit.
 - 9) A log for the NO_x monitoring device, if present, including periods when not in service and maintenance and inspection activities that are performed on the device.
 - 10) Identification of time periods for which operating conditions and pollutant data were not obtained by the continuous emissions monitoring system including the reasons for not obtaining sufficient data and a description of corrective actions taken.

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- 11) If complying with the emissions averaging plan provisions of Section 217.158 of this Subpart, copies of the calculations used to demonstrate compliance with the ozone season and annual control period limitations, noncompliance reports for the ozone season, and ozone and annual control period compliance reports submitted to the Agency.
- c) The owner or operator of an industrial boiler subject to Subpart D of this Part must maintain records in order to demonstrate compliance with the combustion tuning requirements under Section 217.166 of this Part.
- d) The owner or operator of a process heater subject to Subpart E of this Part must maintain records in order to demonstrate compliance with the combustion tuning requirements under Section 217.186 of this Part.
- e) The owner or operator of an emission unit subject to Subpart D, E, F, G, H, or M of this Part must maintain records in order to demonstrate compliance with the testing and monitoring requirements under Section 217.157 of this Subpart.
- f) The owner or operator of an emission unit subject to Subpart D, E, F, G, or H of this Part must provide the following information with respect to performance testing pursuant to Section 217.157:
 - 1) Submit a testing protocol to the Agency at least 60 days prior to testing;
 - 2) Notify the Agency at least 30 days in writing prior to conducting performance testing for NO_x emissions and five days prior to such testing;
 - 3) Not later than 60 days after the completion of the test, submit the results of the test to the Agency; and
 - 4) If, after the 30-days' notice for an initially scheduled test is sent, there is a delay (e.g., due to operational problems) in conducting the test as scheduled, the owner or operator of the unit must notify the Agency as soon as practicable of the delay in the original test date, either by providing at least seven days' prior notice of the rescheduled date of the test or by arranging a new test date with the Agency by mutual agreement.

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- g) The owner or operator of an emission unit subject to Subpart D, E, F, G, H, or M of this Part must notify the Agency of any exceedances of an applicable emissions limitation of Subpart D, E, F, G, H, or M of this Part by sending the applicable report with an explanation of the causes of such exceedances to the Agency within 30 days following the end of the applicable compliance period in which the emissions limitation was not met.
- h) Within 30 days of the receipt of a written request by the Agency, the owner or operator of an emission unit that is exempt from the requirements of Subpart D, E, F, G, H, or M of this Part must submit records that document that the emission unit is exempt from those requirements to the Agency.
- i) If demonstrating compliance through an emissions averaging plan, by March 1 following the applicable calendar year, the owner or operator must submit to the Agency a report that demonstrates the following:
 - 1) For all units that are part of the emissions averaging plan, the total mass of allowable NO_x emissions for the ozone season and for the annual control period;
 - 2) The total mass of actual NO_x emissions for the ozone season and annual control period for each unit included in the averaging plan;
 - 3) The calculations that demonstrate that the total mass of actual NO_x emissions are less than the total mass of allowable NO_x emissions using equations in Section 217.158(f) of this Subpart; and
 - 4) The information required to determine the total mass of actual NO_x emissions.
- j) The owner or operator of an emission unit subject to the requirements of Section 217.157 of this Subpart and demonstrating compliance through the use of a continuous emissions monitoring system must submit to the Agency a report within 30 days after the end of each calendar quarter. This report must include the following:
 - 1) Information identifying and explaining the times and dates when continuous emissions monitoring for NO_x was not in operation, other than

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for purposes of calibrating or performing quality assurance or quality control activities for the monitoring equipment; and

- 2) An excess emissions and monitoring systems performance report in accordance with the requirements of 40 CFR 60.7(c) and (d) and 60.13, or 40 CFR Part 75, or an alternate procedure approved by the Agency and USEPA.
- k) The owner or operator of an emission unit subject to Subpart M of this Part must comply with the compliance certification and recordkeeping and reporting requirements in accordance with 40 CFR Part 96, or an alternate procedure approved by the Agency and USEPA.

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

Section 217.157 Testing and Monitoring

- a) Industrial Boilers and Process Heaters
 - 1) The owner or operator of an industrial boiler subject to Subpart D of this Part with a rated heat input capacity greater than 250 mmBtu/hr must install, calibrate, maintain, and operate a continuous emissions monitoring system on the emission unit for the measurement of NO_x emissions discharged into the atmosphere in accordance with 40 CFR Part 75, as incorporated by reference in Section 217.104 of this Part.
 - 2) The owner or operator of an industrial boiler subject to Subpart D of this Part with a rated heat input capacity greater than 100 mmBtu/hr but less than or equal to 250 mmBtu/hr must install, calibrate, maintain, and operate a continuous emissions monitoring system on such emission unit for the measurement of NO_x emissions discharged into the atmosphere in accordance with 40 CFR Part 60, Subpart A, and Appendix B, Performance Specifications 2 and 3, and Appendix F, Quality Assurance Procedures, as incorporated by reference in Section 217.104 of this Part.
 - 3) The owner or operator of a process heater subject to Subpart E of this Part with a rated heat input capacity greater than 100 mmBtu/hr must install, calibrate, maintain, and operate a continuous emissions monitoring system on the emission unit for the measurement of NO_x emissions discharged

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into the atmosphere must monitor emissions of NO_x discharged into the atmosphere in accordance with 40 CFR Part 60, Subpart A, and Appendix B, Performance Specifications 2 and 3, and Appendix F, Quality Assurance Procedures, as incorporated by reference in Section 217.104 of this Part.

- 4) If demonstrating compliance through an emissions averaging plan, the owner or operator of an industrial boiler subject to Subpart D of this Part, or a process heater subject to Subpart E of this Part, with a rated heat input capacity less than or equal to 100 mmBtu/hr and not demonstrating compliance through a continuous emissions monitoring system must have an initial performance test conducted pursuant to subsection (a)(4)(B) of this Section and Section 217.154 of this Subpart.
- A) An owner or operator of an industrial boiler or process heater must have subsequent performance tests conducted pursuant to subsection (a)(4)(B) of this Section at least once every five years. When in the opinion of the Agency or USEPA, it is necessary to conduct testing to demonstrate compliance with Section 217.164 or 217.184, as applicable, of this Part, the owner or operator of an industrial boiler or process heater must, at his or her own expense, have such test conducted in accordance with the applicable test methods and procedures specified in this Section within 90 days of receipt of a notice to test from the Agency or USEPA.
- B) The owner or operator of an industrial boiler or process heater must have a performance test conducted using 40 CFR Part 60, Subpart A, and Appendix A, Method 1, 2, 3, 4, 7E, or 19, as incorporated by reference in Section 217.104 of this Part, or other alternative USEPA methods approved by the Agency. Each performance test must consist of three separate runs, each lasting a minimum of 60 minutes. NO_x emissions must be measured while the industrial boiler is operating at maximum operating capacity or while the process heater is operating at normal maximum load. If the industrial boiler or process heater has combusted more than one type of fuel in the prior year, a separate performance test is required for each fuel. If a combination of fuels is typically used, a performance test may be conducted with Agency approval on such combination of fuels typically used. Except as provided under

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subsection (e) of this Section, this subsection (a)(4)(B) of this Section does not apply if such owner or operator is demonstrating compliance with an emissions limitation through a continuous emissions monitoring system under subsection (a)(1), (a)(2), (a)(3), or (a)(5) of this Section.

- 5) Instead of complying with the requirements of subsections (a)(4), (a)(4)(A), and (a)(4)(B) of this Section, an owner or operator of an industrial boiler subject to Subpart D of this Part, or a process heater subject to Subpart E of this Part, with a rated heat input capacity less than or equal to 100 mmBtu/hr may install and operate a continuous emissions monitoring system on such emission unit in accordance with the applicable requirements of 40 CFR Part 60, Subpart A, and Appendix B, Performance Specifications 2 and 3, and Appendix F, Quality Assurance Procedures, as incorporated by reference in Section 217.104 of this Part. The continuous emissions monitoring system must be used to demonstrate compliance with the applicable emissions limitation or emissions averaging plan on an ozone season and annual basis.
- 6) Notwithstanding subsection (a)(2) of this Section, the owner or operator of an auxiliary boiler subject to Subpart D of this Part with a rated heat input capacity less than or equal to 250 mmBtu/hr and a capacity factor of less than or equal to 20% is not required to install, calibrate, maintain, and operate a continuous emissions monitoring system on such boiler for the measurement of NO_x emissions discharged into the atmosphere, but must comply with the performance test requirements under subsections (a)(4), (a)(4)(A), and (a)(4)(B) of this Section.
- b) Glass Melting Furnaces; Cement Kilns; Lime Kilns; Iron and Steel Reheat, Annealing, and Galvanizing Furnaces; and Aluminum Reverberatory and Crucible Furnaces
 - 1) An owner or operator of a glass melting furnace subject to Subpart F of this Part, cement kiln or lime kiln subject to Subpart G of this Part, iron and steel reheat, annealing, or galvanizing furnace subject to Subpart H of this Part, or aluminum reverberatory or crucible furnace subject to Subpart H of this Part that has the potential to emit NO_x in an amount equal to or greater than one ton per day must install, calibrate, maintain, and operate a continuous emissions monitoring system on such emission unit for the

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

- 2) An owner or operator of a glass melting furnace subject to Subpart F of this Part, cement kiln or lime kiln subject to Subpart G of this Part, iron and steel reheat, annealing, or galvanizing furnace subject to Subpart H of this Part, or aluminum reverberatory or crucible furnace subject to Subpart H of this Part that has the potential to emit NO_x in an amount less than one ton per day must have an initial performance test conducted pursuant to subsection (b)(4) of this Section and Section 217.154 of this Subpart.
- 3) An owner or operator of a glass melting furnace subject to Subpart F of this Part, cement kiln or lime kiln subject to Subpart G of this Part, iron and steel reheat, annealing, galvanizing furnace subject to Subpart H of this Part, or aluminum reverberatory or crucible furnace subject to Subpart H of this Part that has the potential to emit NO_x in an amount less than one ton per day must have subsequent performance tests conducted pursuant to subsection (b)(4) of this Section as follows:
 - A) For all glass melting furnaces subject to Subpart F of this Part, cement kilns or lime kilns subject to Subpart G of this Part, iron and steel reheat, annealing, or galvanizing furnace subject to Subpart H of this Part, or aluminum reverberatory or crucible furnaces subject to Subpart H of this Part, including all such units included in an emissions averaging plan, at least once every five years; and
 - B) When in the opinion of the Agency or USEPA, it is necessary to conduct testing to demonstrate compliance with Section 217.204, 217.224, or 217.244, of this Part, as applicable, the owner or operator of a glass melting furnace, cement kiln, lime kiln, iron and steel reheat, annealing, or galvanizing furnace, or aluminum reverberatory or crucible furnace must, at his or her own expense, have such test conducted in accordance with the applicable test methods and procedures specified in this Section within 90 days of receipt of a notice to test from the Agency or USEPA.

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- 4) The owner or operator of a glass melting furnace, cement kiln, or lime kiln must have a performance test conducted using 40 CFR Part 60, Subpart A, and Appendix A, Methods 1, 2, 3, 4, and 7E, as incorporated by reference in Section 217.104 of this Part, or other alternative USEPA methods approved by the Agency. The owner or operator of an iron and steel reheat, annealing, or galvanizing furnace, or aluminum reverberatory or crucible furnace must have a performance test conducted using 40 CFR Part 60, Subpart A, and Appendix A, Method 1, 2, 3, 4, 7E, or 19, as incorporated by reference in Section 217.104 of this Part, or other alternative USEPA methods approved by the Agency. Each performance test must consist of three separate runs, each lasting a minimum of 60 minutes. NO_x emissions must be measured while the glass melting furnace, cement kiln, lime kiln, iron and steel reheat, annealing, or galvanizing furnace, or aluminum reverberatory or crucible furnace is operating at maximum operating capacity. If the glass melting furnace, cement kiln, lime kiln, iron and steel reheat, annealing, or galvanizing furnace, or aluminum reverberatory or crucible furnace has combusted more than one type of fuel in the prior year, a separate performance test is required for each fuel. Except as provided under subsection (e) of this Section, this subsection (b)(4) of this Section does not apply if such owner or operator is demonstrating compliance with an emissions limitation through a continuous emissions monitoring system under subsection (b)(1) or (b)(5) of this Section.
- 5) Instead of complying with the requirements of subsections (b)(2), (b)(3), and (b)(4) of this Section, an owner or operator of a glass melting furnace subject to Subpart F of this Part, cement kiln or lime kiln subject to Subpart G of this Part, iron and steel reheat, annealing, or galvanizing furnace subject to Subpart H of this Part, or aluminum reverberatory or crucible furnace subject to Subpart H of this Part that has the potential to emit NO_x in an amount less than one ton per day may install and operate a continuous emissions monitoring system on such emission unit in accordance with the applicable requirements of 40 CFR Part 60, Subpart A, and Appendix B, Performance Specifications 2 and 3, and Appendix F, Quality Assurance Procedures, as incorporated by reference in Section 217.104 of this Part. The continuous emissions monitoring system must be used to demonstrate compliance with the applicable emissions limitation or emissions averaging plan on an ozone season and annual basis.

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- c) Fossil Fuel-Fired Stationary Boilers. The owner or operator of a fossil fuel-fired stationary boiler subject to Subpart M of this Part must install, calibrate, maintain, and operate a continuous emissions monitoring system on such emission unit for the measurement of NO_x emissions discharged into the atmosphere in accordance with 40 CFR Part 96, Subpart H.
- d) Common Stacks. If two or more emission units subject to Subpart D, E, F, G, H, M, or Q of this Part are served by a common stack and the owner or operator of such emission units is operating a continuous emissions monitoring system, the owner or operator may, with written approval from the Agency, utilize a single continuous emissions monitoring system for the combination of emission units subject to Subpart D, E, F, G, H, M, or Q of this Part that share the common stack, provided such emission units are subject to an emissions averaging plan under this Part.
- e) Compliance with the continuous emissions monitoring system (CEMS) requirements by an owner or operator of an emission unit who is required to install, calibrate, maintain, and operate a CEMS on the emission unit under subsection (a)(1), (a)(2), (a)(3), or (b)(1) of this Section, or who has elected to comply with the CEMS requirements under subsection (a)(5) or (b)(5) of this Section, or who has elected to comply with the predictive emission monitoring system (PEMS) requirements under subsection (f) of this Section, is required by the following dates:
 - 1) For the owner or operator of an emission unit that is subject to a compliance date in calendar year 2012 under Section 217.152 of this Subpart, compliance with the CEMS or PEMS requirements, as applicable, under this Section for such emission unit is required by December 31, 2012, provided that during the time between the compliance date and December 31, 2012, the owner or operator must comply with the applicable performance test requirements under this Section and the applicable recordkeeping and reporting requirements under this Subpart. For the owner or operator of an emission unit that is in compliance with the CEMS or PEMS requirements, as applicable, under this Section on January 1, 2012, such owner or operator is not required to comply with the performance test requirements under this Section.

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- 2) For the owner or operator of an emission unit that is subject to a compliance date in a calendar year other than calendar year 2012 under Section 217.152 of this Subpart, compliance with the CEMS or PEMS requirements, as applicable, under this Section for such emission unit is required by the applicable compliance date, and such owner or operator is not required to comply with the performance test requirements under this Section.
- f) As an alternative to complying with the requirements of this Section, other than the requirements under subsections (a)(1) and (c) of this Section, the owner or operator of an emission unit who is not otherwise required by any another statute, regulation, or enforceable order to install, calibrate, maintain, and operate a CEMS on the emission unit may comply with the specifications and test procedures for a predictive emission monitoring system (PEMS) on the emission unit for the measurement of NO_x emissions discharged into the atmosphere in accordance with the requirements of 40 CFR Part 60, Subpart A, and Appendix B, Performance Specification 16. The PEMS must be used to demonstrate compliance with the applicable emissions limitation or emissions averaging plan on an ozone season and annual basis.

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

Section 217.158 Emissions Averaging Plans

- a) Notwithstanding any other emissions averaging plan provisions under this Part, an owner or operator of a source with certain emission units subject to Subpart D, E, F, G, H, or M of this Part, or subject to Subpart Q of this Part that are located in either one of the areas set forth under Section 217.150(a)(1)(A) or (B) of this Subpart, may demonstrate compliance with the applicable Subpart through an emissions averaging plan. An emissions averaging plan can only address emission units that are located at one source and each unit may only be covered by one emissions averaging plan. Such emission units at the source are affected units and are subject to the requirements of this Section.
- 1) The following units may be included in an emissions averaging plan:
- A) Units that commenced operation on or before January 1, 2002.

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- B) Units that the owner or operator may claim as exempt pursuant to Section 217.162, 217.182, 217.202, 217.222, 217.242, or 217.342, of this Part, as applicable, but does not claim exempt. For as long as such a unit is included in an emissions averaging plan, it will be treated as an affected unit and subject to the applicable emissions limitations, and testing, monitoring, recordkeeping and reporting requirements.
 - C) Units that commence operation after January 1, 2002, if the unit replaces a unit that commenced operation on or before January 1, 2002, or it replaces a unit that replaced a unit that commenced operation on or before January 1, 2002. The new unit must be used for the same purpose and have substantially equivalent or less process capacity or be permitted for less NO_x emissions on an annual basis than the actual NO_x emissions of the unit or units that are replaced. Within 90 days after permanently shutting down a unit that is replaced, the owner or operator of such unit must submit a written request to withdraw or amend the applicable permit to reflect that the unit is no longer in service before the replacement unit may be included in an emissions averaging plan.
- 2) The following types of units may not be included in an emissions averaging plan:
- A) Units that commence operation after January 1, 2002, except as provided by subsection (a)(1)(C) of this Section.
 - B) Units that the owner or operator is claiming are exempt pursuant to Section 217.162, 217.182, 217.202, 217.222, 217.242, or 217.342, of this Part, as applicable.
 - C) Units that are required to meet emission limits or control requirements for NO_x as provided for in an enforceable order, unless such order allows for emissions averaging.
- b) An owner or operator must submit an emissions averaging plan to the Agency by January 1, 2012. The plan must include, but is not limited to, the following:

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- 1) The list of affected units included in the plan by unit identification number; and
 - 2) A sample calculation demonstrating compliance using the methodology provided in subsection (f) of this Section for the ozone season (May 1 through September 30) and calendar year (January 1 through December 31).
- c) An owner or operator may amend an emissions averaging plan only once per calendar year. Such an amended plan must be submitted to the Agency by January 1 of the applicable calendar year. If an amended plan is not received by the Agency by January 1 of the applicable calendar year, the previous year's plan will be the applicable emissions averaging plan.
- d) Notwithstanding subsection (c) of this Section:
- 1) If a unit that is listed in an emissions averaging plan is taken out of service, the owner or operator must submit to the Agency, within 30 days of such occurrence, an updated emissions averaging plan; or
 - 2) If a unit that was exempt from the requirements of Subpart D, E, F, G, H, or M of this Part pursuant to Section 217.162, 217.182, 217.202, 217.222, 217.242, or 217.342, of this Part, as applicable, no longer qualifies for an exemption, the owner or operator may amend its existing averaging plan to include such unit within 30 days of the unit no longer qualifying for the exemption.
- e) An owner or operator must:
- 1) Demonstrate compliance for the ozone season (May 1 through September 30) and the calendar year (January 1 through December 31) by using the methodology and the units listed in the most recent emissions averaging plan submitted to the Agency pursuant to subsection (b) of this Section, the monitoring data or test data determined pursuant to Section 217.157 of this Subpart, and the actual hours of operation for the applicable averaging plan period; and

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2) Submit to the Agency by March 1 following each calendar year, a compliance report containing the information required by Section 217.156(i) of this Subpart.

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

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

Where:

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

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

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

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

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

i = Subscript denoting an individual unit.

j = Subscript denoting the fuel type used.

k = Number of different fuel types.

n = Number of different units in the averaging plan.

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

For each unit in the averaging plan, and each fuel used by such unit, determine actual and allowable NO_x emissions using the following equations:

1) Actual emissions must be determined as follows:

When emission limits are prescribed in lb/mmBtu,

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

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

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

2) Allowable emissions must be determined as follows:

When emission limits are prescribed in lb/mmBtu,

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

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

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

Where:

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

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

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

$\underline{E_{all}}$ = Allowable NO_x emission rate (lbs/mmBtu or lbs/ton of product) as provided in Section 217.164, 217.184, 217.204, 217.224, 217.244, or 217.344, as applicable, of this Part. For an affected industrial boiler subject to Subpart D of this Part, or process heater subject to Subpart E of this Part, with a rated heat input capacity less than or equal to 100 mmBtu/hr demonstrating compliance through an emissions averaging plan, the allowable NO_x emission rate is to be determined from a performance test after such boiler or heater has undergone combustion tuning. For all other units in

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an emissions averaging plan, an uncontrolled NOx emission rate from USEPA's AP-42, as incorporated by reference in Section 217.104 of this Part, or an uncontrolled NOx emission rate as determined by an alternative method approved by the Agency will be used.

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

P = weight in tons of processed product.

- g) An owner or operator of an emission unit subject to Subpart Q of this Part that is located in either one of the areas set forth under Section 217.150(a)(1)(A) or (B) that is complying through an emissions averaging plan under this Section must comply with the applicable provisions for determining actual and allowable emissions under Section 217.390 of Subpart Q of this Part, the testing and monitoring requirements under Section 217.394 of Subpart Q of this Part, and the recordkeeping and reporting requirements under Section 217.396 of Subpart Q of this Part.
- h) The owner or operator of an emission unit located at a petroleum refinery who is demonstrating compliance with an applicable Subpart through an emissions averaging plan under this Section may exclude from the calculation demonstrating compliance those time periods when an emission unit included in the emissions averaging plan is shut down for a maintenance turnaround, provided that such owner or operator notify the Agency in writing at least 30 days in advance of the shutdown of the emission unit for the maintenance turnaround and the shutdown of the emission unit does not exceed 45 days per ozone season or calendar year and NO_x pollution control equipment, if any, continues to operate on all other emission units operating during the maintenance turnaround.
- i) The owner or operator of an emission unit that combusts a combination of coke oven gas and other gaseous fuels and located at a source that manufactures iron and steel who is demonstrating compliance with an applicable Subpart through an emissions averaging plan under this Section may exclude from the calculation demonstrating compliance those time periods when the coke oven gas desulfurization unit included in the emissions averaging plan is shut down for

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maintenance, provided that such owner or operator notify the Agency in writing at least 30 days in advance of the shutdown of the coke oven gas desulfurization unit for maintenance and such shutdown does not exceed 35 days per ozone season or calendar year and NO_x pollution control equipment, if any, continues to operate on all other emission units operating during the maintenance period..

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

SUBPART D: INDUSTRIAL BOILERS

Section 217.160 Applicability

- a) The provisions of Subpart C of this Part and this Subpart apply to all industrial boilers located at sources subject to this Subpart pursuant to Section 217.150 of this Part, except as provided in subsections (b) and (c) of this Section.
- b) The provisions of this Subpart do not apply to boilers serving a generator that has a nameplate capacity greater than 25 MWe and produces electricity for sale, and cogeneration units, as that term is defined in Section 225.130 of Part 225, if such boilers or cogeneration units are subject to the CAIR NO_x Trading Programs under Subpart D or E of Part 225.
- c) The provisions of this Subpart do not apply to fluidized catalytic cracking units, their regenerator and associated CO boiler or boilers and CO furnace or furnaces where present, if such units are located at a petroleum refinery and such units are required to meet emission limits or control requirements for NO_x as provided for in an enforceable order.

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

Section 217.162 Exemptions

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

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

Section 217.164 Emissions Limitations

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

<u>Fuel</u>		<u>Emission Unit Type and Rated Heat Input Capacity (mmBtu/hr)</u>		<u>NO_x Emissions Limitation (lb/mmBtu) or Requirement</u>
<u>a)</u>	<u>Natural Gas or Other Gaseous Fuels</u>	<u>1)</u>	<u>Industrial boiler greater than 100</u>	<u>0.08</u>
		<u>2)</u>	<u>Industrial boiler less than or equal to 100</u>	<u>Combustion tuning</u>
<u>b)</u>	<u>Distillate Fuel Oil</u>	<u>1)</u>	<u>Industrial boiler greater than 100</u>	<u>0.10</u>
		<u>2)</u>	<u>Industrial boiler less than or equal to 100</u>	<u>Combustion tuning</u>
<u>c)</u>	<u>Other Liquid Fuels</u>	<u>1)</u>	<u>Industrial boiler greater than 100</u>	<u>0.15</u>
		<u>2)</u>	<u>Industrial boiler less than or equal to 100</u>	<u>Combustion tuning</u>
<u>d)</u>	<u>Solid Fuel</u>	<u>1)</u>	<u>Industrial boiler greater than 100, circulating fluidized bed combustor</u>	<u>0.12</u>
		<u>2)</u>	<u>Industrial boiler greater than 250</u>	<u>0.18</u>
		<u>3)</u>	<u>Industrial boiler</u>	<u>0.25</u>

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greater than 100 but
less than or equal to 250

- 4) Industrial boiler Combustion tuning
Less than or equal to 100

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

$$\text{NO}_x \text{ emissions limitation for period in lb/MMBtu} = \frac{(\text{NO}_{x\text{NG}} * \text{BTU}_{\text{NG}} + \text{NO}_{x\text{COG}} * \text{BTU}_{\text{COG}} + \text{NO}_{x\text{BFG}} * \text{BTU}_{\text{BFG}}) / (\text{BTU}_{\text{NG}} + \text{BTU}_{\text{COG}} + \text{BTU}_{\text{BFG}})}$$

Where: $\text{NO}_{x\text{NG}} = 0.084 \text{ lb/MMBtu for natural gas}$
 $\text{BTU}_{\text{NG}} = \text{the heat input of natural gas in BTU over that period}$

$\text{NO}_{x\text{COG}} = 0.144 \text{ lb/MMBtu for coke oven gas}$
 $\text{BTU}_{\text{COG}} = \text{the heat input of coke oven gas in BTU over that period}$

$\text{NO}_{x\text{BFG}} = 0.0288 \text{ lb/MMBtu for blast furnace gas}$
 $\text{BTU}_{\text{BFG}} = \text{the heat input of blast furnace gas in BTU over that period}$

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

Section 217.165 Combination of Fuels

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

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

Section 217.166 Methods and Procedures for Combustion Tuning

The owner or operator of an industrial boiler subject to the combustion tuning requirements of Section 217.164 of this Subpart must have combustion tuning performed on the boiler at least annually. The combustion tuning must be performed by an employee of the owner or operator or a contractor who has successfully completed a training course on the combustion tuning of

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boilers firing the fuel or fuels that are fired in the boiler. The owner or operator must maintain the following records that must be made available to the Agency upon request:

- 1) The date the combustion tuning was performed;
- 2) The name, title, and affiliation of the person who performed the combustion tuning;
- 3) Documentation demonstrating the provider of the combustion tuning training course, the dates the training course was taken, and proof of successful completion of the training course;
- 4) Tune-up procedure followed and checklist of items (such as burners, flame conditions, air supply, scaling on heating surface, etc.) inspected prior to the actual tune-up; and
- 5) Operating parameters recorded at the start and at conclusion of combustion tuning.

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

SUBPART E: PROCESS HEATERS

Section 217.180 Applicability

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

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

Section 217.182 Exemptions

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

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

Section 217.184 Emissions Limitations

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

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

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

Section 217.185 Combination of Fuels

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

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

Section 217.186 Methods and Procedures for Combustion Tuning

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

- 1) The date the combustion tuning was performed;
- 2) The name, title, and affiliation of the person who performed the combustion tuning;
- 3) Documentation demonstrating the provider of the combustion tuning training course, the dates the training course was taken, and proof of successful completion of the training course;
- 4) Tune-up procedure followed and checklist of items (such as burners, flame conditions, air supply, scaling on heating surface, etc.) inspected prior to the actual tune-up; and
- 5) Operating parameters recorded at the start and at conclusion of combustion tuning.

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

SUBPART F: GLASS MELTING FURNACES

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Section 217.200 Applicability

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

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

Section 217.202 Exemptions

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

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

Section 217.204 Emissions Limitations

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

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

- b) The emissions limitations under this Section do not apply during glass melting furnace startup (not to exceed 70 days) or idling (operation at less than 35% of furnace capacity). For the purposes of demonstrating seasonal and annual

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compliance, the emissions limitation during such periods shall be calculated as follows:

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

Where: ANL = The applicable NOx emissions limitation under this Section in pounds per ton of glass produced

PPC = Permitted production capacity in tons of glass produced per day

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

SUBPART G: CEMENT AND LIME KILNS

Section 217.220 Applicability

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

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

Section 217.222 Exemptions

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

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

Section 217.224 Emissions Limitations

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

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		<u>NO_x</u> <u>Emissions</u> <u>Limitation</u> <u>(lb/ton clinker</u> <u>produced)</u>
<u>Emission Unit Type</u>		
1)	<u>Long dry kiln</u>	<u>5.1</u>
2)	<u>Short dry kiln</u>	<u>5.1</u>
3)	<u>Preheater kiln</u>	<u>3.8</u>
4)	<u>Preheater/precalciner kiln</u>	<u>2.8</u>
b)	<u>On and after January 1, 2012, no person shall cause or allow emissions of NO_x into the atmosphere from any lime kiln to exceed the following limitations. Compliance must be demonstrated with the applicable emissions limitation on an ozone season and annual basis.</u>	

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

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

SUBPART H: IRON AND STEEL AND ALUMINUM MANUFACTURING

Section 217.240 Applicability

- a) The provisions of Subpart C of this Part and this Subpart apply to all reheat furnaces, annealing furnaces, and galvanizing furnaces used in iron and steel

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making located at sources subject to this Subpart pursuant to Section 217.150 of this Part.

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

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

Section 217.242 Exemptions

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

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

Section 217.244 Emissions Limitations

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

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

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natural gas and coke oven gas

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

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

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

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

SUBPART M: ELECTRICAL GENERATING UNITS

Section 217.340 Applicability

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

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

Section 217.342 Exemptions

- a) Notwithstanding Section 217.340 of this Subpart, the provisions of this Subpart and this Subpart do not apply to a fossil fuel-fired stationary boiler operating under a federally enforceable limit of NO_x emissions from such boiler to less than 15 tons per year and less than five tons per ozone season.
- b) Notwithstanding Section 217.340 of this Subpart, the provisions of this Subpart do not apply to a coal-fired stationary boiler that commenced operation before January 1, 2008, that is complying with the Part 225 Subpart B through the multi-pollutant standard under Section 225.233 of Part 225 or the combined pollutant standards under Subpart F of Part 225.

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

Section 217.344 Emissions Limitations

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

<u>Fuel</u>	<u>Emission Unit Type</u>	<u>NO_x Emissions Limitation (lb/mmBtu)</u>
a) <u>Solid</u>	<u>Boiler</u>	<u>0.12</u>
b) <u>Natural gas</u>	<u>Boiler</u>	<u>0.06</u>
c) <u>Liquid</u>	1) <u>Boiler that commenced</u>	<u>0.10</u>

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operation before January 1, 2008

- 2) Boiler that commenced 0.08
operation on or after January 1, 2008

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

Section 217.345 Combination of Fuels

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

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

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

ExxonMobil Oil Corporation (Facility ID 197800AAA)

Point	Emission Unit Description	Compliance Date
0019	Crude Vacuum Heater (13-B-2)	December 31,2014
0038	Alky Iso-Stripper Reboiler (7-B-1)	December 31,2014
0033	CHD Charge Heater (3-B-1)	December 31,2014
0034	CHD Stripper Reboiler (3-B-2)	December 31,2014
0021	Coker East Charge Heater (16-B-1A)	December 31,2014
0021	Coker East Charge Heater (16-B-1B)	December 31,2014
0018	Crude Atmospheric Heater (1-B-1A)	December 31,2014
0018	Crude Atmospheric Heater (1-B-1B)	December 31,2014

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

ConocoPhillips Company Wood River Refinery (Facility ID 119090AAA)