Comparing: Agency Proposed vs. JCAR r01

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POLLUTION CONTROL BOARD NOTICE OF PROPOSED AMENDMENTS

TITLE 35: ENVIRONMENTAL PROTECTION SUBTITLE B: AIR POLLUTION

CHAPTER I: POLLUTION CONTROL BOARD

SUBCHAPTER C: EMISSION STANDARDS AND LIMITATIONS FOR STATIONARY SOURCES

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

SUBPART A: GENERAL PROVISIONS

Section 217.101 Measurement Methods

Measurement of nitrogen oxides must be according to:

- a) The phenol disulfonic acid procedures, 40 CFR 60, Appendix A-4, Method 7, as incorporated by reference in Section 217.104;
- b) Continuous emissions monitoring pursuant to 40 CFR 75, as incorporated by reference in Section 217.104;
- c) Determination of Nitrogen Oxides Emissions from Stationary Sources (Instrumental Analyzer Procedure), 40 CFR 60, Appendix A-4, Method 7E, as incorporated by reference in Section 217.104;
- d) Monitoring with portable monitors pursuant to ASTM D6522-20, as incorporated by reference in Section 217.104; and
- e) How do I conduct the initial and subsequent performance tests (for turbines), regarding NO_x pursuant to 40 CFR 60.4400, as incorporated by reference in Section 217.104.

(Source:	Amended at 48 Ill. Re	eg	, effective
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Section 217.102 Abbreviations and Units

a) The following abbreviations are used in this Part:

ASTM American Society for Testing and Materials

Btu British thermal unit bhp brake horsepower

CEMS continuous emissions monitoring system

Electrical Generating Unit dry standard cubic feet

g/bhp-hr grams per brake horsepower-hour

<u>kilogram</u>

kg/MW-hr kilograms per megawatt-hour

<u>lb</u> <u>pound</u>

lbs/mmBtupounds per million BtuMgmegagram or metric ton

mm million

mmBtu million British thermal units

mmBtu/hr million British thermal units per hour

MWe megawatt of electricity megawatt; one million watts

MW-hr megawatt-hour

NATS NO_x Allowance Tracking System

 $\frac{\text{NO}_2}{\text{NO}_x}$ $\frac{\text{nitrogen dioxide}}{\text{nitrogen oxides}}$

 O_2 oxygen

<u>psia</u> <u>pounds per square inch absolute</u> <u>peoc</u> <u>potential electrical output capacity</u>

PTE potential to emit parts per million

ppmv parts per million by volume

PEMS predictive emission monitoring system

TPY English ton tons per year

ASTM American Society for Testing and Materials

Btu British thermal unitbhp brake horsepower

CEMS continuous emissions monitoring system

EGU Electrical Generating Unit dsef dry standard cubic feet

g/bhp-hr grams per brake horsepower-hour

kg kilogram

kg/MW-hr	kilograms per megawatt-hour
Kg/IVI VV III	Knograms per megawatt nour

lb pound

lbs/mmBtupounds per million BtuMgmegagram or metric ton

mm million

mmBtu million British thermal units

mmBtu/hr million British thermal units per hour

MWe megawatt of electricity
MW megawatt; one million watts

MW-hr megawatt-hour

NATS NO_{*} Allowance Tracking System

NO₂ nitrogen dioxide NO_X nitrogen oxides

O₂ oxygen

psia pounds per square inch absolute
peoc potential electrical output capacity

PTE potential to emit parts per million

ppmv parts per million by volume

PEMS predictive emission monitoring system

T English ton
TPY tons per year

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

<u>English</u>	Metric
<u>2.205 lb</u> <u>1 T</u>	$\frac{1 \text{ kg}}{0.907 \text{ Mg}}$
1 lb/T	0.500 kg/Mg
English	Metric
2.205 lb	1 kg
1 T	0.907 Mg
1 lb/T	0.500 kg/Mg

(Source: Amended at 48 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) 40 CFR 96, subparts B, D, G, and H (1999);
- b) 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);
- c) 40 CFR 72 & 76 (2006);
- d) Alternative Control Techniques Document NO_x Emissions from Cement Manufacturing, EPA-453/R94-004, U.S. Environmental Protection Agency-Office of Air Quality Planning and Standards, Research Triangle Park, N.C. 27711, March 1994;
- e) 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;
- f) ASTM D6522-20, 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 (2020);
- g) Compilation of Air Pollutant Emission Factors: AP-42, Volume I: Stationary Point and Area Sources (2024), USEPA;
- h) 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;
- i) 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;
- j) 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;

- k) 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;
- 1) 40 CFR 60 and 75 (2024); and
- m) 40 CFR 63.7540 (2024).

(Source: Amended at 48 Ill. Reg. ______, effective

SUBPART D: NO_x GENERAL REQUIREMENTS

Section 217.150 Applicability

- a) Applicability
 - 1) Before May 1, 2025, the provisions of this Subpart and Subparts E, F, G, H, I, and M of this Part apply to the following:
 - A) 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:
 - i) 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
 - ii) 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
 - B) Any industrial boiler, process heater, glass melting furnace, cement kiln, lime kiln, iron and steel reheat, annealing, or galvanizing furnace, aluminum reverberatory or crucible furnace, or fossil fuel-fired stationary boiler at those sources described in subsection (a)(1)(A) 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.

- On and after May 1, 2025, except as otherwise provided in Subpart E or M, the provisions of this Subpart and Subparts E, F, G, H, I, and M of this Part apply to the owner or operator of any industrial boiler, process heater, glass melting furnace, cement kiln, lime kiln, iron and steel reheat, annealing, or galvanizing furnace, aluminum reverberatory or crucible furnace, or fossil fuel-fired stationary boiler that meets both of the following criteria:
 - A) The emission unit is at a source that is located in one of the following areas and that emits or has the potential to emit NO_x in an amount equal to or greater than 50 tons per year.
 - i) 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.
 - ii) The area composed of the Metro East area counties of Madison, Monroe, and St. Clair.
 - B) The emission unit emits 15 tons or more of NO_x to the atmosphere per calendar year.
- 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 E, F, G, H, I, or M of this Part continue to apply to any emission unit that was ever subject to the provisions of any of those Subparts.
- c) The provisions of this Subpart and Subparts E, F, G, H, I, and M do not apply to afterburners, flares, and incinerators.

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d) The owner or operator of an emission unit that is subject to this Subpart and Subpart E, F, G, H, I, 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:	Amended	at 48 Ill. Reg	<u></u>	, effective
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Section 217.152 Compliance Date and 30-Day Rolling Average Basis

- a) On and after May 1, 2025, the owner or operator of an emission unit subject to the requirements of this Subpart and Subpart E, F, G, H, I, or M must comply with the requirements of the applicable Subparts. Compliance with emissions limitations must be on a 30-day rolling average basis. A 30-day rolling average consists of 30 operating days where an operating day is a calendar day in which any affected emission unit combusts any fuel. Compliance with the 30-day rolling average must be demonstrated 30 operating days after May 1, 2025.
 - 1) A 30-day rolling average under Subparts E, F, I, and M is calculated using the total mass of emissions from the period and the total heat input from such period.
 - 2) A 30-day rolling average under Subparts G and H is calculated using the total mass of emissions from the period and the total amount of glass, clinker, or lime produced in the period.
- b) The owner or operator of an emission unit that is constructed or modified on or after May 1, 2025, and that is subject to this Subpart and Subpart E, F, G, H, I, or M must comply with the applicable Subparts within 180 days after initial startup of the new or modified emission unit.
- c) Notwithstanding subsection (a) of this Section, compliance with the requirements of Subpart G of this Part by an owner or operator of an emission unit subject to Subpart G of this Part is extended until December 31, 2014, if the unit is 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 May 7, 2010, whereby the emissions limitations are less than 30 percent of the emissions limitations under Section 217.204.
- d) Notwithstanding subsection (a) of this Section, the owner or operator of emission units subject to Subpart E or F of this Part and located at a petroleum refinery

must comply with the requirements of this Subpart and Subpart E or F of this Part, as applicable, for those emission units beginning January 1, 2015, 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 and Subpart E or F 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 E or F of this Part, as applicable, by reducing the emissions of emission units other than those listed in Appendix H, if the emissions limitations of those other emission units are equal to or more stringent than the applicable emissions limitations set forth in Subpart E or F of this Part, as applicable, by the dates set forth in Appendix H.

(Source:	Amended at 48 Ill. I	Reg	, effective
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Section 217.154 Initial Performance Testing

- a) Performance testing of NO_x emissions for emission units constructed on or before May 1, 2025, and subject to emissions limitations under Subpart E, F, G, H, or I 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 (CEMS), predictive emission monitoring system (PEMS), or combustion tuning.
- b) Performance testing of NO_x emissions for emission units for which construction or modification occurs after May 1, 2025, and that are subject to emissions limitations under Subpart E, F, G, H, or I of this Part must be conducted within 60 days after 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 CEMS, PEMS, or combustion tuning.
- 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 in writing at least 30 days before the date and five days before the 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.

(Source:	Amended at 48 Ill.	Reg. <u>–</u>	 , €	effective

Section 217.155 Initial Compliance Certification

- a) Before May 1, 2025:
 - 1) By the applicable compliance date under Section 217.152, an owner or operator of an emission unit subject to Subpart E, F, G, H, or I of this Part who is not demonstrating compliance through the use of a CEMS must certify to the Agency that the emission unit will be in compliance with the applicable emissions limitation of Subpart E, F, G, H, or I of this Part beginning on the applicable compliance date. The performance testing certification must include the results of the performance testing performed in accordance with Section 217.154(a) and (b) and the calculations necessary to demonstrate that the subject emission unit will be in initial compliance.
 - 2) By the applicable compliance date set forth under Section 217.152, an owner or operator of an emission unit subject to Subpart E, F, G, H, I, or M of this Part who is demonstrating compliance through the use of a CEMS must certify to the Agency that the affected emission units will be in compliance with the applicable emissions limitation of Subpart E, F, G, H, I, or M of this Part beginning on the applicable compliance date. The compliance certification must include a certification of the installation and operation of a CEMS required under Section 217.157 and the monitoring data necessary to demonstrate that the subject emission unit will be in initial compliance.

- b) On and after May 1, 2025:
 - By the applicable compliance date set forth under Section 217.152, an owner or operator of an emission unit subject to Subpart E, F, G, H, I, or M of this Part must certify to the Agency that the emission unit will be in compliance with the applicable emissions limitations of Subpart E, F, G, H, I, or M.
 - A) For emission units demonstrating compliance through performance testing, the certification must include the results of the performance testing performed in accordance with Section 217.157 and the calculations necessary to demonstrate that the subject emission unit will be in initial compliance with Subpart E, F, G, H, I, or M as applicable, of this Part.
 - B) For emission units demonstrating compliance through the use of a CEMS or PEMS, the certification must certify the installation and operation of a CEMS or PEMS, as applicable, required under Section 217.157.
 - 2) For emission units constructed or modified on or after May 1, 2025, the owner or operator must certify to the Agency that the emission unit will be in compliance with the applicable emissions limitations of Subpart E, F, G, H, I, or M within 180 days after initial startup of the new or modified emission unit.
 - A) For emission units demonstrating compliance through performance testing, the certification must include the results of the performance testing performed in accordance with Section 217.154 and the calculations necessary to demonstrate that the subject emission unit will be in initial compliance with Subpart E, F, G, H, I, or M, as applicable, of this Part.
 - B) For emission units demonstrating compliance through the use of a CEMS or PEMS, the certification must certify the installation and operation of a CEMS or PEMS, as applicable, required under Section 217.157 and the monitoring data necessary to demonstrate that the subject emission unit will be in initial compliance with Subpart E, F, G, H, I, or M, as applicable, of this Part.

(Source:	Amended	at 48 Ill. Reg.	, effecti	
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Section 217.156 Recordkeeping and Reporting

- a) The owner or operator of an emission unit subject to Subpart E, F, G, H, I, 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 E, F, G, H, I, or M of this Part, copies of the records must be submitted by the owner or operator of the source to the Agency within 30 days after receipt of a written request by the Agency.
 - 2) The 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 E, F, G, H, I, or M of this Part must maintain records that demonstrate compliance with the requirements of those Subparts, 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) Before May 1, 2025, monthly, seasonal, and annual operating hours. On and after May 1, 2025, daily operating hours.
 - 4) Before May 1, 2025, type and quantity of each fuel used monthly, seasonally, and annually. On and after May 1, 2025, type and quantity of each fuel used daily.
 - 5) On and after May 1, 2025, total mass emissions on a daily basis and on a 30-day rolling average basis.
 - 6) Product and material throughput, as applicable.
 - 7) Reports for all applicable emissions tests for NO_x conducted on the unit, including results.

- 8) The date, time, and duration of any startup, shutdown, or malfunction in the operation of any emission unit subject to Subpart E, F, G, H, I, or M of this Part or any emissions monitoring equipment. The records must include a description of the malfunction and corrective maintenance activity.
- 9) 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.
- 10) 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.
- 11) Identification of time periods for which operating conditions and pollutant data were not obtained by the CEMS or PEMS, including the reasons for not obtaining sufficient data and a description of corrective actions taken.
- 12) Before May 1, 2025, if complying with the emissions averaging plan provisions of Section 217.158, 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 E of this Part must maintain records in order to demonstrate compliance with the combustion tuning requirements under Section 217.166.
- d) The owner or operator of a process heater subject to Subpart F of this Part must maintain records in order to demonstrate compliance with the combustion tuning requirements under Section 217.186.
- e) The owner or operator of an emission unit subject to Subpart E, F, G, H, I, or M of this Part must maintain records in order to demonstrate compliance with the testing and monitoring requirements under Section 217.157.
- f) The owner or operator of an emission unit subject to Subpart E, F, G, H, or I 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 the 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.
- Before May 1, 2025, the owner or operator of an emission unit subject to Subpart E, F, G, H, I, or M of this Part must notify the Agency of any exceedances of an applicable emissions limitation of Subpart E, F, G, H, I, or M of this Part by sending the applicable report with an explanation of the causes of the exceedances to the Agency within 30 days following the end of the applicable compliance period in which the emissions limitation was not met. On and after May 1, 2025, the owner or operator of an emission unit subject to Subpart E, F, G, H, I, or M of this Part must notify the Agency of any exceedances of an applicable emissions limitation of Subpart E, F, G, H, I, or M of this Part by sending the applicable report with an explanation of the causes of the exceedances to the Agency within 30 days following the end of the applicable 30-day rolling average period in which the emissions limitation was not met.
- h) Within 30 days after 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 E, F, G, H, I, or M of this Part must submit records that document that the emission unit is exempt from those requirements to the Agency.
- i) Until May 1, 2025, 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); and
- 4) The information required to determine the total mass of actual NO_x emissions.
- j) On and after May 1, 2025, if demonstrating compliance through an emissions averaging plan, by March 1 following the previous calendar year, the owner or operator must submit to the Agency a report that includes the following:
 - 1) For all units that are part of the emissions averaging plan, the total mass of allowable NO_x emissions on a 30-day rolling average basis.
 - 2) The total mass of actual NO_x emissions on a 30-day rolling average basis for each unit included in the averaging plan.
 - The calculations that demonstrate that the total mass of actual NO_x emissions is less than the total mass of allowable NO_x emissions using equations in Section 217.158(g).
 - 4) The daily information required to determine the total mass of actual NO_x emissions on a 30-day rolling average basis.
- k) The owner or operator of an emission unit subject to the requirements of Section 217.157 and demonstrating compliance through the use of a CEMS or PEMS 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 the CEMS or PEMS for NO_x was not in operation, other than for purposes of calibrating or performing quality assurance or quality control activities for the monitoring equipment; and
 - 2) An excess emissions and monitoring systems performance report in accordance with the requirements of 40 CFR 60.7(c) and (d) and 60.13, or 40 CFR 75, or an alternate procedure approved by the Agency and USEPA.

- 1) Until May 1, 2025, 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 96, or an alternate procedure approved by the Agency and USEPA. On and after May 1, 2025, 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 75, or an alternate procedure approved by the Agency and USEPA.
- m) On and after May 1, 2025, the owner or operator of an emission unit subject to Subpart E, F, G, H, I, or M of this Part must submit an annual compliance certification report that demonstrates compliance with the applicable requirements to the Agency for the preceding calendar year by May 1 of the following year. The owner or operator may submit the annual compliance certification report to the Agency along with the Annual Emissions Report required under 35 Ill. Adm. Code 254 or the compliance certification required under 415 ILCS 5/39.5(7)(p)(v). The compliance report must include the following:
 - 1) Identification, type (e.g., gas-fired), and location of the emission unit.
 - 2) Methods used for determining compliance, including an emissions averaging plan, if applicable, a description of test methods, monitoring, recordkeeping, and reporting requirements.
 - 3) A certification of compliance with the applicable emissions limitation or identification of the periods of noncompliance with a quantification of the excess emissions limitation and the excess emissions.
 - 4) For each calendar month, the highest 30-day rolling average emission rate. The emissions data must be reported in the measurement units of the applicable emissions limitation.
 - 5) The emission unit's daily and total operating hours, capacity utilization, and the percent operation of any CEMS or PEMS during the hours the emission unit was operating.
 - A certification of compliance with all applicable requirements except those identified signed by a responsible official that contains the following: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete."

(Source: Amende	ed at 48 III. Reg	, effective
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Section 217.157 Testing and Monitoring

- a) Industrial Boilers and Process Heaters
 - The owner or operator of an industrial boiler subject to Subpart E of this 1) Part with a rated heat input capacity greater than 250 mmBtu/hr must install, calibrate, maintain, and operate a CEMS on the emission unit for the measurement of NO_x emissions discharged into the atmosphere in accordance with 40 CFR 75, as incorporated by reference in Section 217.104. However, the owner or operator of an industrial boiler subject to Subpart E of this Part with a rated heat input capacity greater than 250 mmBtu/hr that combusts blast furnace gas with up to 10% natural gas on an annual basis and located at a source that manufactures iron and steel is not required to install, calibrate, maintain, and operate a CEMS on that industrial boiler, provided the heat input from natural gas does not exceed 10% on an annual basis and the owner or operator complies with the performance test requirements under this Section and demonstrates, during each performance test, that NO_x emissions from the industrial boiler are less than 70% of the applicable emissions limitation under Section 217.164. If the owner or operator is unable to meet the requirements of this exception, a CEMS is required within 12 months after that event, or by January 1, 2015, whichever is later.
 - 2) The owner or operator of an industrial boiler subject to Subpart E 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 CEMS on the emission unit for the measurement of NO_x emissions discharged into the atmosphere in accordance with 40 CFR 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.
 - The owner or operator of a process heater subject to Subpart F of this Part with a rated heat input capacity greater than 100 mmBtu/hr must install, calibrate, maintain, and operate a CEMS on the emission unit for the measurement of NO_x emissions discharged into the atmosphere in accordance with 40 CFR 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.

- 4) On and after May 1, 2025, the owner or operator of an industrial boiler subject to Subpart E of this Part, or a process heater subject to Subpart F of this Part, with a rated heat input capacity greater than 50 mmBtu/hr but less than or equal to 100 mmBtu/hr must have an initial performance test conducted in accordance with subsection (a)(8)(A) of this Section and Section 217.154, and subsequent performance tests conducted in accordance with subsection (a)(8) of this Section.
- 5) If demonstrating compliance through an emissions averaging plan, the owner or operator of an industrial boiler subject to Subpart E of this Part, or a process heater subject to Subpart F of this Part, with a rated heat input capacity less than or equal to 100 mmBtu/hr and not demonstrating compliance through a CEMS must have an initial performance test conducted in accordance with subsection (a)(8)(A) of this Section and Section 217.154, and subsequent performance tests conducted in accordance with subsection (a)(8) of this Section.
- Instead of complying with the requirements of subsection (a) (4) or (5) of this Section, an owner or operator of an industrial boiler subject to Subpart E of this Part, or a process heater subject to Subpart F of this Part, with a rated heat input capacity less than or equal to 100 mmBtu/hr may install and operate a CEMS on the emission unit in accordance with the applicable requirements of 40 CFR 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. The CEMS must be used to demonstrate compliance with the applicable emissions limitation or emissions averaging plan on an ozone season and annual basis until May 1, 2025, and a 30-day rolling average on and after May 1, 2025.
- Notwithstanding subsection (a)(2) of this Section, the owner or operator of an auxiliary boiler subject to Subpart E 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 CEMS on the boiler for the measurement of NO_x emissions discharged into the atmosphere, but must conduct initial and subsequent performance tests in accordance with subsection (a)(8) of this Section.

- 8) All performance tests required by this subsection (a) must be conducted at the owner or operator's sole expense and must meet the requirements in subsection (a)(8)(A). All performance tests required by subsection (a) subsequent to an initial performance test must also meet the requirements in subsection (a)(8)(B):
 - A) The performance test must be conducted using 40 CFR 60, subpart A and appendix A, Method 1, 2, 3, 4, 7E, or 19, in appendix A-1, A-2, A-3, A-4, or A-7, respectively, as incorporated by reference in Section 217.104, 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. NOx emissions must be measured while the industrial boiler or process heater is operating at maximum operating capacity or while it 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 the combination of fuels typically used.
 - B) A performance test must be conducted 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, the owner or operator of an industrial boiler or process heater must have the test conducted in accordance with the applicable test methods and procedures specified in this Section within 90 days after receipt of a notice to test from the Agency or USEPA.
- b) Glass Melting Furnaces; Cement Kilns; Lime Kilns; Iron and Steel Reheat, Annealing, and Galvanizing Furnaces; and Aluminum Reverberatory and Crucible Furnaces
 - An owner or operator of a glass melting furnace subject to Subpart G of this Part, cement kiln or lime kiln subject to Subpart H of this Part, iron and steel reheat, annealing, or galvanizing furnace subject to Subpart I of this Part, or aluminum reverberatory or crucible furnace subject to Subpart I 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

CEMS on the emission unit for the measurement of NO_x emissions discharged into the atmosphere in accordance with 40 CFR 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.

- An owner or operator of a glass melting furnace subject to Subpart G of this Part, cement kiln or lime kiln subject to Subpart H of this Part, iron and steel reheat, annealing, or galvanizing furnace subject to Subpart I of this Part, or aluminum reverberatory or crucible furnace subject to Subpart I 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.
- An owner or operator of a glass melting furnace subject to Subpart G of this Part, cement kiln or lime kiln subject to Subpart H of this Part, iron and steel reheat, annealing, or galvanizing furnace subject to Subpart I of this Part, or aluminum reverberatory or crucible furnace subject to Subpart I 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) All the units, including those that are part of an emissions averaging plan, must conduct subsequent performance tests 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 must, at his or her own expense, have the test conducted in accordance with the applicable test methods and procedures specified in this Section within 90 days after receipt of a notice to test from the Agency or USEPA.
- 4) The owner or operator of a glass melting furnace, cement kiln, or lime kiln must have a performance test conducted using 40 CFR 60, subpart A and Methods 1, 2, 3, 4, or 7E in appendix A-1, A-2, A-3, or A-4, respectively, 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 60, subpart A and Method 1, 2, 3, 4, 7E, or 19 in appendix A-1, A-2, A-3, A-4, or A-7, respectively, 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 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) does not apply if the owner or operator is demonstrating compliance with an emissions limitation through a CEMS 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 G of this Part, cement kiln or lime kiln subject to Subpart H of this Part, iron and steel reheat, annealing, or galvanizing furnace subject to Subpart I of this Part, or aluminum reverberatory or crucible furnace subject to Subpart I 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 CEMS on the emission unit in accordance with the applicable requirements of 40 CFR 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 CEMS must be used to demonstrate compliance with the applicable emissions limitation or emissions averaging plan on an ozone season and annual basis until May 1, 2025, and a 30-day rolling average on and after May 1, 2025.
- c) Fossil Fuel-Fired Stationary Boilers. Until May 1, 2025, 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 CEMS on the emission unit for the measurement of NO_x emissions discharged into the atmosphere in accordance with 40 CFR 96, subpart H. On and after May 1, 2025, 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 CEMS on the emission unit for the

measurement of NO_x emissions discharged into the atmosphere in accordance with 40 CFR 75.

- d) Common Stacks. If two or more emission units subject to Subpart E, F, G, H, I, M, or Q of this Part are served by a common stack and the owner or operator of the emission units is operating a CEMS, the owner or operator may, with written approval from the Agency, use a single CEMS for the combination of emission units subject to Subpart E, F, G, H, I, M, or Q of this Part that share the common stack, provided the emission units are subject to an emissions averaging plan under this Part.
- e) Compliance with the 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)(6) or (b)(5) of this Section, or who has elected to comply with the PEMS requirements under subsection (f) of this Section, is required by the applicable compliance date under Section 217.152 of this Subpart.
- 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 other 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 PEMS on the emission unit for the measurement of NO_x emissions discharged into the atmosphere in accordance with the requirements of 40 CFR 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 until May 1, 2025, and a 30-day rolling average on and after May 1, 2025.

(Source: Amended at 48 Ill. Reg.	effective	<u> </u>
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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 E, F, G, H, I, 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)(i) or (ii) or Section 217.150(a)(2)(A)(i) or (ii), 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. The emission units at the source are affected units and are subject to the requirements of this Section.

- 1) The following units may be included in an emissions averaging plan:
 - A) Units that commenced operation on or before January 1, 2002.
 - B) Before My 1, 2025, units that the owner or operator may claim as exempt under 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 the 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) On and after May 1, 2025, units that are not otherwise subject to Subpart E, F, G, H, I, or M, as applicable, under Section 217.150(a)(2)(B), but that the owner or operator chooses to include in an emissions averaging plan. For as long as the a unit is included in an emissions averaging plan, it will be treated as an affected unit and subject to the applicable emissions limitations, testing, monitoring, recordkeeping and reporting requirements.
 - D) 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 the 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)(D) of this Section.
- B) Before May 1, 2025, units that the owner or operator is claiming are exempt under 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 the order allows for emissions averaging. In the case of petroleum refineries, this subsection (a)(2)(C) does not prohibit including industrial boilers or process heaters, or both, in an emissions averaging plan when an enforceable order does not prohibit the reductions made under the order from also being used for compliance with any rules or regulations designed to address regional haze or the non-attainment status of any area.
- b) Before May 1, 2025, an owner or operator must submit an emissions averaging plan to the Agency by January 1, 2015. The plan must include, but is not limited to, the following:
 - 1) The list of affected units included in the plan by unit identification number; and
 - 2) A sample calculation demonstrating compliance using the methodology provided in subsection (g) of this Section for the ozone season (May 1 through September 30) and calendar year (January 1 through December 31).
- c) On and after May 1, 2025, an owner or operator must submit an emissions averaging plan to the Agency at least 30 days before beginning the use of that plan to demonstrate compliance. The plan must include, but is not limited to, the following:
 - 1) The list of affected units included in the plan by unit identification number.
 - 2) The allowable emissions limitation for each unit, as provided in Sections 217.164, 217.184, 217.204, 217.224, 217.244, and 217.344 of this Part, as applicable.

- 3) A sample calculation demonstrating compliance using the methodology provided in subsection (h) of this Section on a 30-day rolling average basis.
- 4) The date the owner or operator will begin using the emissions averaging plan.
- d) An owner or operator may amend an emissions averaging plan only once per calendar year.
- e) Notwithstanding subsection (d) 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 after the occurrence, an updated emissions averaging plan; or
 - Before May 1, 2025, if a unit that was exempt from the requirements of Subpart E, F, G, H, I, or M of this Part under 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 the unit within 30 days after the unit no longer qualifies for the exemption.
 - On and after May 1, 2025, if a unit that was not otherwise subject to Subpart E, F, G, H, I, or M, as applicable, under Section 217.150(a)(2)(B) becomes subject to Subpart E, F, G, H, I, or M, as applicable, the owner or operator may amend its existing averaging plan to include the unit within 30 days after the unit becomes subject to the applicable Subpart.
- f) An owner or operator must:
 - 1) Until May 1, 2025, 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 under subsection (b) of this Section, the monitoring data or test data determined under Section 217.157, and the actual hours of operation for the applicable averaging plan period.
 - 2) On and after May 1, 2025, demonstrate compliance on a 30-day rolling average basis by using the methodology and the units listed in the most

recent emissions averaging plan submitted to the Agency under subsection (c) of this Section, the monitoring data or test data determined under Section 217.157, and the actual hours of operation for the applicable averaging plan period.

- 3) Until May 1, 2025, submit to the Agency, by March 1 following each calendar year, a compliance report containing the information required by Section 217.156(i). On and after May 1, 2025, submit to the Agency, by March 1 following each calendar year, a compliance report containing the information required by Section 217.156(j).
- g) Until May 1, 2025, 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:

$(Mod)N_{all}$

Where:

k

Number of different fuel types.

n = Number of different units in the averaging plan.

(Mod)) = Total mass of allowable NO_x emissions in tons for a unit as determined in subsection (g)(2) of this Section.

For each unit in the averaging plan, and each fuel used by the 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,

(Del) = (Del)
$$H_i/2000$$

(Add) = $EM_{act(i)}x^{H_i}/_{2000}$

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

(Del) = (Del)
$$P_i/2000$$

(Add) = $EM_{act(i)}x^{P_i}/2000$

2) Allowable emissions must be determined as follows:

When emission limits are prescribed in lb/mmBtu,

(Del) = (Del)
$$H_i$$
/2000
(Add)= $E_{all(i)}x^{H_i}$ /2000

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

(Del) = (Del)
$$P_i/2000$$

$$(Add) = EM_{all(i)}x^{P_i}/_{2000}$$

Where:

(Mod) = Total mass of actual NO_x emissions in tons for a unit.

(Mod) = Total mass of allowable NO_x emissions in tons for a unit.

Actual NO_x emission rate (lbs/mmBtu or lbs/ton of product) as determined by a performance test, a CEMS, or an alternative method approved by the Agency.

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. For an affected industrial boiler subject to Subpart E of this Part, or process heater subject to Subpart F 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 the boiler or heater has undergone combustion tuning. For all other units in an emissions averaging plan, an uncontrolled NO_x emission rate from USEPA's AP-42, as incorporated by reference in Section 217.104, or an uncontrolled NO_x emission rate as determined by an alternative method approved by the Agency, will be used.

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

P = weight in tons of processed product.

h) On and after May 1, 2025, 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 on a 30-day rolling average basis. The following equation must be used to determine compliance:

$$N_{act} \le 0.9 N_{all}$$

Where:

$$\underbrace{\text{Mod}}_{\text{ucc}} = \sum_{i=l}^{n} \sum_{j=l}^{k} EM_{act(i,j)}$$

Where N_{act} is the total sum of the actual NO_x mass emissions from units included in the averaging plan for each fuel used (tons per 30-day rolling average basis).

$$(Mod_{uu}) = \sum_{i=l}^{n} \sum_{j=l}^{k} EM_{all(i,j)}$$

Where N_{all} is the total sum of the allowable NO_x mass emissions from units included in the averaging plan for each fuel used (tons per 30-day rolling average basis).

 $(Mod)_{t(i)}$ = Total mass of actual NO_x emissions in tons for a unit as determined in subsection (h)(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.

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

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

1) Actual emissions must be determined as follows:

When emissions limitations are prescribed in lb/mmBtu,

$$(Add) = E_{act(i)}x^{P_i}/2000$$

When emissions limitations are prescribed in lb/ton of processed product,

$$(De = (De1)^{2000}$$

$$(Add) = E_{act(i)} x^{P_i} /_{2000}$$

2) Allowable emissions must be determined as follows:

When emissions limitations are prescribed in lb/mmBtu,

$$(Add) = E_{all(i)}x^{H_i}/_{2000}$$

When emissions limitations are prescribed in lb/ton of processed product,

$$(Add) = E_{all(i)}x^{P_i}/_{2000}$$

Where:

(Mod) = Total mass of actual NO_x emissions in tons for a unit.

(Mod) = Total mass of allowable NO_x emissions in tons for a unit.

- Actual NO_x emission rate (lbs/mmBtu or lbs/ton of product) as determined by a performance test, a CEMS, a PEMS, or an alternative method approved by the Agency.
- 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. For an affected industrial boiler subject to Subpart E of this Part, or process heater subject to Subpart F 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 the boiler or heater has undergone combustion tuning. For all other units in an emissions averaging plan, an uncontrolled NO_x emission rate from USEPA's AP-42, as incorporated by reference in Section 217.104, or an uncontrolled NO_x emission rate as determined by an alternative method approved by the Agency, will be

used.

Heat input (mmBtu/30-day rolling average basis)
 H calculated from fuel flow meter and the heating value of the fuel used.

P = weight in tons of processed product.

- i) 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)(i) or (ii) or Section 217.150(a)(2)(A)(i) or (ii) 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, the testing and monitoring requirements under Section 217.394, and the recordkeeping and reporting requirements under Section 217.396.
- j) Until May 1, 2025, 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 the 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.
- k) Until May 1, 2025, the owner or operator of an emission unit that combusts a combination of coke oven gas and other gaseous fuels and that is located at a source that manufactures iron and steel who is demonstrating compliance with an applicable Subpart through an emissions averaging plan under this Section may exclude from the calculation demonstrating compliance those time periods when the coke oven gas desulfurization unit included in the emissions averaging plan is shut down for maintenance, provided that the 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 the 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.
- 1) Until May 1, 2025, 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 NO_x pollution control equipment that controls one or more emission units included in the emissions averaging plan is shut down for a maintenance turnaround, provided that:

- 1) the owner or operator notify the Agency in writing, at least 30 days in advance of the shutdown, of the NO_x pollution control equipment for the maintenance turnaround:
- 2) the shutdown of the NO_x pollution control equipment does not exceed 45 days per ozone season or calendar year; and
- 3) except for those emission units vented to the NO_x pollution control equipment undergoing the maintenance turnaround, NO_x pollution control equipment, if any, continues to operate on all other emission units operating during the maintenance turnaround.

(Source:	Amended at 48 Ill. Reg.	, effective	, effective
)		

SUBPART E: INDUSTRIAL BOILERS

Section 217.160 Applicability Exemptions

- a) 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, if the boilers meet the applicability criteria under Subpart M of this Part.
- b) 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 the units are located at a petroleum refinery and the units are required to meet emission limits or control requirements for NO_x as provided for in an enforceable order.
- c) Before May 1, 2025, the provisions of this Subpart do not apply to an industrial boiler operating under a federally enforceable limit of NO_x emissions from the boiler to less than 15 tons per year and less than five tons per ozone season.

(Source:	Amended at 48 Ill	. Reg. —	<u> </u>	, effective
· _)		

Section 217.162 Exemptions (Repealed)

(Source: Repealed at 48 Ill. Reg	,	effective
)	

Section 217.164 Emissions Limitations

a) Except as provided for under Section 217.152, on and after January 1, 2015, no person shall cause or allow emissions of NO_x into the atmosphere from any industrial boiler to exceed the following limitations. Until May 1, 2025, compliance must be demonstrated with the applicable emissions limitation on an ozone season and annual basis. On and after May 1, 2025, compliance must be demonstrated with the applicable emissions limitation on a 30-day rolling average basis.

		NO _x Emissions Limitation
	Emission Unit Type and Rated	(lb/mmBtu) or Requirement
Fuel	Heat Input Capacity (mmBtu/hr	Before May 1, 2025
Natural Gas or Other Gaseous Fuels	Industrial boiler greater than 100	0.08
	Industrial boiler less than or equal to 100	Combustion tuning
Distillate Fuel Oil	Industrial boiler greater than 100	0.10
	Industrial boiler less than or equal to 100	Combustion tuning
Other Liquid Fuels	Industrial boiler greater than 100	0.15
	Industrial boiler less than or equal to 100	Combustion tuning

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Solid Fuel	Industrial boiler greater than 100, circulating fluidized bed combustor	0.12
	Industrial boiler greater than 250	0.18
	Industrial boiler greater than 100 but less than or equal to 250	0.25
	Industrial boiler less than or equal to 100	Combustion tuning
Fuel	NO _x -Emissions Emission Unit Type and Rated Heat Input Capacity (mmBtu/hr)	— Limitations (lb/mmBtu) — or Requirement — On and after May 1, 2025
Natural Gas or Other Gaseous Fuels	Industrial boiler greater than 50	0.08
Industrial boiler less than equal to 50	Combustion tuning	
Distillate Fuel Oil 50	Industrial boiler greater than	0.10
Industrial boiler less than equal to 50	Combustion tuning	
Other Liquid Fuels 50	Industrial boiler greater than	0.15
Industrial boiler less than equal to 50	Combustion tuning	
Solid Fuel 50, circulating fluidized l combustor	Industrial boiler greater than bed	0.10

Fuel Natural Gas or Other Gaseous Fuels	NO _x Emission Unit Type and Rated Heat Input Capacity (mmBtu/hr) Industrial boiler greater than 50	Limitation (lb/mmBtu) or Requirement On and after May 1, 2025 0.08
	Industrial boiler less than or equal to 50	Combustion tuning
Distillate Fuel Oil	Industrial boiler greater than 50	<u>0.10</u>
	Industrial boiler less than or equal to 50	Combustion tuning
Other Liquid Fuels	Industrial boiler greater than 50	<u>0.15</u>
	Industrial boiler less than or equal to 50	Combustion tuning
Solid Fuel	Industrial boiler greater than 50, circulating fluidized bed combustor	<u>0.10</u>
	Industrial boiler greater than 250	<u>0.15</u>
	Industrial boiler greater than 50 but less than or equal to 250	<u>0.20</u>
	Industrial boiler less than or equal to 50	Combustion tuning
Industrial boiler greater th	nan 0.15	

0.20

Industrial boiler greater than 250

Industrial boiler greater than 50 but less than or equal to

 NO_x

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250

Industrial boiler less than or Combustion tuning equal to 50

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

```
\frac{(\text{Mod})_{Bu_{w_n}}^{1/2} + Bu_{NC}^{Bu_{w_n}})_{+Bu_{w_n}}^{Bu_{w_n}} + Bu_{NC}^{Bu_{w_n}}}{Btu_{NG}} * Btu_{COG}} * Btu_{COG}) + (NO_{x_{BFG}} * Btu_{BFG})}{Btu_{NG}} + Btu_{COG} + Btu_{BFG}}
          emissions
          limitation for =
          period in
          lb/mmBtu
            Where:
                 (Mod
                                    0.084 lb/mmBtu for natural gas
                                    the heat inpu of natural gas in Btu over that period
                 (Mod)
                                    0.144 lb/mmBtu for coke oven gas
                (Mod)
                                    the heat input of coke oven gas in Btu over that period
                 (Mod);
                                    0.0288 lb/mmBtu for blast furnace gas
                 (Mod)<sub>G</sub>
                                    the heat input of blast furnace gas in Btu over that period
                (Mod);
(Source: Amended at 48 Ill. Reg. ______, effective
```

Section 217.166 Methods and Procedures for Combustion Tuning

a) Until May 1, 2025, the owner or operator of an industrial boiler subject to the combustion tuning requirements of Section 217.164 must have combustion tuning performed on the boiler at least annually. The combustion tuning must be performed by an employee of the owner or operator or a contractor who has successfully completed a training course on the combustion tuning of boilers firing the fuel or fuels that are fired in the boiler. The owner or operator must maintain the following records that must be made available to the Agency upon request:

- 1) The date the combustion tuning was performed;
- 2) The name, title, and affiliation of the person who performed the combustion tuning;
- 3) Documentation demonstrating the provider of the combustion tuning training course, the dates the training course was taken, and proof of successful completion of the training course;
- 4) Tune-up procedure followed and checklist of items (such as burners, flame conditions, air supply, scaling on heating surface, etc.) inspected prior to the actual tune-up; and
- 5) Operating parameters recorded at the start and at conclusion of combustion tuning.
- b) On and after May 1, 2025, the owner or operator of an industrial boiler subject to the combustion tuning requirements of Section 217.164 must have combustion tuning performed on the boiler at least annually. The combustion tuning must be performed in accordance with 40 CFR 63.7540(a)(10)(i) through (vi), as incorporated by reference in Section 217.104.

(Source: Amended at 48 Ill. Reg	, effective	<u> </u>

Section 217.180 Applicability Exemptions

Before May 1, 2025, the provisions of this Subpart do not apply to a process heater operating under a federally enforceable limit of NO_x emissions from the heater to less than 15 tons per year and less than five tons per ozone season.

SUBPART F: PROCESS HEATERS

, effective	
, effective	, effective
	, errective

Section 217.184 Emissions Limitations

Except as provided for under Section 217.152, on or after January 1, 2015, no person shall cause or allow emissions of NO_x into the atmosphere from any process heater to exceed the following limitations. Until May 1, 2025, compliance must be demonstrated with the applicable emissions limitation on an ozone season and annual basis. On and after May 1, 2025, compliance must be demonstrated with the applicable emissions limitation on a 30-day rolling average basis.

Emission Unit Type and Rated Heat Input Capacity (mmBtu/hr) Natural Gas or Other Gaseous Fuels Process heater greater than 100 Process heater less than or equal to 100 Residual Fuel Oil Process heater greater than 100, natural draft Process heater greater than 100, mechanical draft Process heater less than or equal to 100 Other Liquid Fuels Process heater greater than 100, natural draft Process heater greater than 100, mechanical draft Process heater greater than 100, natural draft Process heater greater than 100, natural draft Process heater greater than 100, no5 natural draft Process heater greater than 100, nos mechanical draft Process heater greater than 100, nos mechanical draft Process heater less than or equal to 100 Emission Unit Type and Rated Heat Input Capacity (mmBtu/hr) Nos Emissions Limitation (lb/mmBtu) or Requirement Before May 1, 2025			NO _x Emissions Limitation (lb/mmBtu) or
Natural Gas or Other Gaseous Fuels Process heater greater than 100 Residual Fuel Oil Process heater greater than 100, natural draft Process heater greater than 100, natural draft Process heater greater than 100, mechanical draft Process heater less than or equal to 100 Other Liquid Fuels Process heater greater than 100, natural draft Process heater greater than 100, natural draft Process heater greater than 100, natural draft Process heater greater than 100, no.05 natural draft Process heater greater than 100, no.08 mechanical draft Process heater less than or equal to 100 Combustion tuning Combustion tuning No. Emissions Limitation (lb/mmBtu) or Requirement On and after May 1, 2025		Emission Unit Type and Rated	,
Process heater less than or equal to 100 Residual Fuel Oil Process heater greater than 100, natural draft Process heater greater than 100, nechanical draft Process heater less than or equal to 100 Other Liquid Fuels Process heater greater than 100, natural draft Process heater greater than 100, nechanical draft Process heater less than or equal combustion tuning to 100 Emission Unit Type and Rated Heat Input Capacity (mmBtu/hr) Nox Emissions Limitation (lb/mmBtu) or Requirement On and after May 1, 2025	Fuel	Heat Input Capacity (mmBtu/hr)	Before May 1, 2025
Residual Fuel Oil Process heater greater than 100,		Process heater greater than 100	0.08
Process heater greater than 100, mechanical draft Process heater less than or equal to 100 Other Liquid Fuels Process heater greater than 100, natural draft Process heater greater than 100, natural draft Process heater greater than 100, mechanical draft Process heater less than or equal to 100 Emission Unit Type and Rated Heat Input Capacity (mmBtu/hr) No. Emissions Limitation (lb/mmBtu) or Requiremen On and after May 1, 2025		-	Combustion tuning
Process heater less than or equal to 100 Other Liquid Fuels Process heater greater than 100, natural draft Process heater greater than 100, natural draft Process heater greater than 100, nechanical draft Process heater less than or equal to 100 Emission Unit Type and Rated Heat Input Capacity (mmBtu/hr) Nox Emissions Limitation (lb/mmBtu) or Requiremen On and after May 1, 2025	Residual Fuel Oil		0.10
Other Liquid Fuels Process heater greater than 100,			0.15
natural draft Process heater greater than 100, 0.08 mechanical draft Process heater less than or equal Combustion tuning to 100 Emission Unit Type and Rated (lb/mmBtu) or Requiremen		<u> -</u>	Combustion tuning
Process heater less than or equal Combustion tuning to 100 Dox Emissions Limitation Ib/mmBtu or Requiremen	Other Liquid Fuels		0.05
to 100 Emission Unit Type and Rated Fuel Emission Unit Type and Rated Heat Input Capacity (mmBtu/hr) No _x Emissions Limitation (lb/mmBtu) or Requiremen On and after May 1, 2025			0.08
Fuel Emission Unit Type and Rated (lb/mmBtu) or Requiremen Heat Input Capacity (mmBtu/hr) On and after May 1, 2025		-	Combustion tuning
Fuel Heat Input Capacity (mmBtu/hr) On and after May 1, 2025			No _x Emissions Limitation
	Fuel		
	Natural Gas or Other	Process heater greater than 50	0.08

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Gaseous Fuels	$\frac{\text{Process heater less than or equal}}{\underline{\text{to } 50}}$	Combustion tuning
<u>dual Fuel Oil</u>	Process heater greater than 50, natural draft	<u>0.10</u>
	Process heater greater than 50, mechanical draft	<u>0.15</u>
	Process heater less than or equal to 50	Combustion tuning
er Liquid Fuels	Process heater greater than 50, natural draft	<u>0.05</u>
	Process heater greater than 50, mechanical draft	<u>0.08</u>
	Process heater less than or equal to 50	Combustion tuning
	<u>10 30</u>	
 Fuel	Emission Unit Type and Rated Heat Input Capacity	NO _* Emissions Limitation (lb/mmBtu) or Requirement On and after May 1, 2025
—Fuel ————————————————————————————————————	Emission Unit Type and Rated Heat Input Capacity	- (lb/mmBtu) or Requirement
Natural Gas or Other	Emission Unit Type and Rated Heat Input Capacity (mmBtu/hr) Process heater greater than	- (lb/mmBtu) or Requirement On and after May 1, 2025
Natural Gas or Other	Emission Unit Type and Rated Heat Input Capacity ————————————————————————————————————	- (lb/mmBtu) or Requirement On and after May 1, 2025 0.08
Natural Gas or Other Gaseous Fuels	Emission Unit Type and Rated Heat Input Capacity ————————————————————————————————————	- (lb/mmBtu) or Requirement On and after May 1, 2025 0.08 Combustion tuning
Natural Gas or Other Gaseous Fuels	Emission Unit Type and Rated Heat Input Capacity (mmBtu/hr) Process heater greater than 50 Process heater less than or equal to 50 Process heater greater than 50, natural draft Process heater greater than	On and after May 1, 2025 0.08 Combustion tuning 0.10

POLLUTION CONTROL BOARD NOTICE OF PROPOSED AMENDMENTS 50. natural draft

Process heater greater than 0.08 50, mechanical draft

Process heater less than or Combustion tuning equal to 50

(Source: Amended at 48 III. Reg. _______, effective_________, effective________,

Section 217.186 Methods and Procedures for Combustion Tuning

- Until May 1, 2025, the owner or operator of a process heater subject to the combustion tuning requirements of Section 217.184 must have combustion tuning performed on the heater at least annually. 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.
- b) On and after May 1, 2025, the owner or operator of a process heater subject to the combustion tuning requirements of Section 217.184 must have combustion tuning performed on the heater at least annually. The combustion tuning must be performed in accordance with 40 CFR 63.7540(a)(10)(i) through (vi), as

incorporated by reference in Section 217.104.

(Source: Amended at 48 Ill. Reg.	, effective	, effective
)		
SUBPART G: GLASS N	MELTING FURNACES	
Section 217.200 Applicability Exemptions		
Before May 1, 2025, the provisions of this Subparoperating under a federally enforceable limit of N tons per year and less than five tons per ozone sea	IO_x emissions from the fur	_
(Source: Amended at 48 Ill. Reg.	, effective	, effective
)		
Section 217.202 Exemptions (Repealed)		
(Source: Repealed at 48 Ill. Reg.	, effective	
)		
Section 217.204 Emissions Limitations		

On and after January 1, 2015, no person shall cause or allow emissions of NO_x a) into the atmosphere from any glass melting furnace to exceed the following limitations. Until May 1, 2025, compliance must be demonstrated with the emissions limitation on an ozone season and annual basis. On and after May 1, 2025, compliance must be demonstrated with the applicable emissions limitation on a 30-day rolling average basis.

Product	Emission Unit Type	NO _x Emissions Limitation (lb/ton glass produced) Before May 1, 2025
	21	<u>, , , , , , , , , , , , , , , , , , , </u>
Container Glass	Glass melting furnace	5.0
F1 . C1		7.0
Flat Glass	Glass melting furnace	7.9
Other Glass	Glass melting furnace	11.0

Product	Emission Unit Type	NO _x Emissions Limitation (lb/ton glass produced) On and after May 1, 2025
Container Glass	Glass melting furnace	4.0
Flat Glass	Glass melting furnace	7.0
Other Glass	Glass melting furnace	4.0

b) Before May 1, 2025, the emissions during glass melting furnace startup (not to exceed 70 days) or furnace idling (operation at less than 35% of furnace capacity) will be excluded from calculations for the purpose of demonstrating compliance with the seasonal and annual emissions limitations under this Section, provided that the owner or operator, at all times, including periods of startup and idling, to the extent practicable, maintain and operate any affected emission unit, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. The owner or operator of a glass melting furnace must maintain records that include the date, time, and duration of any startup or idling in the operation of the glass melting furnace.

SUBPART H: CEMENT AND LIME KILNS

Section 217.220 Applicability Exemptions

Before May 1, 2025, 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 the kiln to less than 15 tons per year and less than five tons per ozone season.



Section 217.222 Exemptions (Repealed)

(Source: Repealed at 48 Ill. Reg. _______, effective________, effective_______,

Section 217.224 Emissions Limitations

a) On and after January 1, 2015, no person shall cause or allow emissions of NO_x into the atmosphere from any cement kiln to exceed the following limitations. Until May 1, 2025, compliance must be demonstrated with the applicable emissions limitation on an ozone season and annual basis. On and after May 1, 2025, compliance must be demonstrated with the applicable emissions limitation on a 30-day rolling average basis.

	NO _x Emissions Limitation
	(lb/ton clinker produced)
Emission Unit Type	Before May 1, 2025
Long dry kiln	5.1
Short dry kiln	5.1
Preheater kiln	3.8
Preheater/precalciner kiln	2.8

	NO _x Emissions Limitation (lb/ton clinker produced)	
Emission Unit Type	On and after May 1, 2025	
Long dry kiln	3.0	
Short dry kiln	2.3	
Preheater kiln	3.8	
Preheater/precalciner kiln	2.8	

b) On and after January 1, 2015, no person shall cause or allow emissions of NO_x into the atmosphere from any lime kiln to exceed the following limitations. Until May 1, 2025, compliance must be demonstrated with the applicable emissions limitation on an ozone season and annual basis. On and after May 1, 2025, compliance must be demonstrated with the applicable emissions limitation on a 30-day rolling average basis.

		NO _x Emissions Limitation
Fuel	Emission Unit Type	(lb/ton lime produced)

1,01102 01 11101 0222 111121 21121 12			
Gas	Rotary kiln	2.2	
Coal	Rotary kiln	2.5	
(Source: Amended at 48 Ill. Re	g. , effective		, effective
)			

SUBPART I: IRON AND STEEL AND ALUMINUM MANUFACTURING

Section 217.240 Applicability Exemptions

Before May 1, 2025, 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 the furnace to less than 15 tons per year and less than five tons per ozone season.

(Source: Amended at 48 Ill. Reg, effective	, effective
Section 217.242 Exemptions (Repealed)	
(Source: Amended Repealed at 48 Ill. Reg, effective)	<u>,</u>

Section 217.244 Emissions Limitations

a) On and after January 1, 2015, 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. Until May 1, 2025, compliance must be demonstrated with the applicable emissions limitation on an ozone season and annual basis. On and after May 1, 2025, compliance must be demonstrated with the applicable emissions limitation on a 30-day rolling average basis.

	NO _x Emissions
	Limitation (lb/mmBtu)
Emission Unit Type	Before May 1, 2025
Reheat furnace, regenerative	0.18
Reheat furnace, recuperative, combusting natura	0.09

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gas	
Reheat furnace, recuperative, combusting a combination of natural gas and coke oven gas	0.142
Reheat furance, cold-air	0.03
Annealing furnace, regenerative	0.38
Annealing furnace, recuperative	0.16
Annealing furance, cold-air	0.07
Galvanizing furnace, regenerative	0.46
Galvanizing furnace, recuperative	0.16
Galvanizing furnace, cold air	0.06

	NO _x Emissions Limitation (lb/mmBtu)
Emission Unit Type	On and after May 1, 2025
Reheat furnace, cold air	0.03
Reheat furnace, regenerative and recu	perative 0.09
Annealing furnace, cold air	0.07
Annealing furnace, regenerative and	recuperative 0.08
Galvanizing furnace, cold air	0.06
Galvanizing furnace, regenerative and recuperative	d 0.08

b) On and after January 1, 2015, 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. Until May 1, 2025, compliance must be demonstrated with the applicable emissions limitation on an ozone season and annual basis. On and after May 1, 2025, compliance must be demonstrated with the applicable emissions limitation on a 30-day rolling average basis.

		NO_x	Emissions
	Emission Unit Type	Limitatio	on (lb/mmBtu)
	Reverberatory furnace	1	0.08
	Crucible furnace		0.16
(Source	: Amended at 48 III. Reg	, effective	
	SUBPART M: ELECTRICA	L GENERATING UNIT	S
Section 217.34	0 Applicability and Exemptions		
;	Notwithstanding Subpart V of this I and this Subpart apply to any fossil a generator that has a nameplate capelectricity for sale, excluding any unat sources subject to this Subpart un	fuel-fired stationary boil pacity greater than 25 MV nits listed in Appendix D	er serving at any time We and produces
:	Before May 1, 2025, the provisions fuel-fired stationary boiler operating emissions from the boiler to less that ozone season.	g under a federally enforce	ceable limit of NO _x
(Source	: Amended at 48 III. Reg	, effective	, effective
Section 217.34	2 Exemptions (Repealed)		
	-		
(Source	: Repealed at 48 Ill. Reg	, effective	, effective

Section 217.344 Emissions Limitations

On and after January 1, 2015, 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. Until May 1, 2025, compliance must be demonstrated with the applicable emissions limitation on an

ozone season and annual basis. On and after May 1, 2025, compliance must be demonstrated with the applicable emissions limitation on a 30-day rolling average basis.

Fuel	Emission Unit Type	NO _x Emissions Limitation (lb/mmBtu)
Solid	Boiler	0.12
Natural gas	Boiler	0.06
Liquid	Boiler that commenced operation before January 1, 2008	0.10
	Boiler that commenced operation on or after January 1, 2008	0.08
(Source: Amended	at 48 Ill. Reg, effective	, effective

SUBPART Q: STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES AND TURBINES

Section 217.386 Applicability

- a) Before May 1, 2025, the provisions of this Subpart apply to all:
 - 1) Stationary reciprocating internal combustion engines listed in Appendix G of this Part.
 - 2) Stationary reciprocating internal combustion engines and turbines located at a source that emits or has the potential to emit NO_x in an amount equal to or greater than 100 tons per year and is in either the area composed of the Chicago area counties of Cook, DuPage, Kane, Lake, McHenry, and Will, the Townships of Aux Sable and Goose Lake in Grundy County, and the Township of Oswego in Kendall County, or in the area composed of the Metro-East counties of Jersey, Madison, Monroe, and St. Clair, and the Township of Baldwin in Randolph County, where:
 - A) The engine at nameplate capacity is rated at equal to or greater than 500 bhp output; or

- B) The turbine is rated at equal to or greater than 3.5 MW (4,694 bhp) output at 14.7 psia, 59°F and 60 percent relative humidity.
- b) On and after May 1, 2025, the provisions of this Subpart apply to all:
 - 1) Stationary reciprocating internal combustion engines listed in Appendix G of this Part.
 - 2) Stationary reciprocating internal combustion engines and turbines located at a source that emits or has the potential to emit NO_x in an amount equal to or greater than 50 tons per year and is in either the area composed of the Chicago area counties of Cook, DuPage, Kane, Lake, McHenry, and Will, the Townships of Aux Sable and Goose Lake in Grundy County, and the Township of Oswego in Kendall County, or in the area composed of the Metro-East counties of Madison, Monroe, and St. Clair, where:
 - A) The engine at nameplate capacity is rated at equal to or greater than 500 bhp output; or
 - B) The turbine is rated at equal to or greater than 3.5 MW (4,694 bhp) output at 14.7 psia, 59°F and 60 percent relative humidity.
- c) Notwithstanding subsections (a)(2) and (b)(2) of this Section, an affected unit is not subject to the requirements of this Subpart Q if the engine or turbine is:
 - 1) Used as an emergency or standby unit as defined by 35 Ill. Adm. Code 211.1920. However, the owner or operator of the unit must comply with the recordkeeping requirement under Section 217.396(a)(13);
 - 2) Used for research or for the purposes of performance verification or testing;
 - 3) Used to control emissions from landfills, where at least 50 percent of the heat input is gas collected from a landfill;
 - 4) Used for agricultural purposes, including the raising of crops or livestock that are produced on site, but not for associated businesses like packing operations, sale of equipment or repair; or

- 5) An engine with nameplate capacity rated at less than 1,500 bhp (1,118 kW) output, mounted on a chassis or skids, designed to be moveable, and moved to a different source at least once every 12 months.
- d) If an exempt unit ceases to fulfill the criteria specified in subsection (c) of this Section, the unit is subject to the control requirements of this Subpart Q, and the owner or operator must notify the Agency in writing within 30 days after becoming aware that the exemption no longer applies and comply with the control requirements of this Subpart Q.
- e) The requirements of this Subpart Q will continue to apply to any engine or turbine that has ever been subject to the requirements of Section 217.388, even if the affected unit or source ceases to fulfill the rating requirements of subsection (a) or (b) of this Section or becomes eligible for an exemption under subsection (c) of this Section.

(Source:	Amended at 48 Ill. Reg.	, effective , eff	<u>, eff</u>	<u>fective</u>
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Section 217.388 Control and Maintenance Requirements

- a) On and after the applicable compliance date in Section 217.392, an owner or operator of an affected unit must inspect and maintain affected units as required by subsection (a)(4) of this Section and comply with one of the following: the applicable emissions concentration as set forth in subsection (a)(1) of this Section, the requirements for an emissions averaging plan as specified in subsection (a)(2) of this Section, or the requirements for operation as a low usage unit as specified in subsection (a)(3) of this Section.
 - 1) Limits the discharge from an affected unit into the atmosphere of any gases that contain NO_x to no more than:
 - A) 150 ppmv (corrected to 15 percent O₂ on a dry basis) for spark-ignited rich-burn engines;
 - B) 210 ppmv (corrected to 15 percent O₂ on a dry basis) for spark-ignited lean-burn engines, except for existing spark-ignited Worthington engines that are not listed in Appendix G;

- C) 365 ppmv (corrected to 15 percent O₂ on a dry basis) for existing spark-ignited Worthington engines that are not listed in Appendix G;
- D) Before May 1, 2025, 660 ppmv (corrected to 15 percent O₂ on a dry basis) for diesel engines;
 - On and after May 1, 2025, 210 ppmv (corrected to 15 percent O_2 on a dry basis) for diesel engines that are constructed on and after May 1, 2025;
- E) Before May 1, 2025, 42 ppmv (corrected to 15 percent O₂ on a dry basis) for gaseous fuel-fired turbines;
 - On and after May 1, 2025, 25 ppmv (corrected to 15 percent O₂ on a dry basis) for gaseous fuel-fired turbines;
- F) Before May 1, 2025, 96 ppmv (corrected to 15 percent O₂ on a dry basis) for liquid fuel-fired turbines; and
 - On and after May 1, 2025, 65 ppmv (corrected to 15 percent O₂ on a dry basis) for liquid fuel-fired turbines.
- 2) Complies with an emissions averaging plan as provided for in either subsection (a)(2)(A) or (a)(2)(B) of this Section:
 - A) For any affected unit identified by Section 217.386: The requirements of the applicable emissions averaging plan as set forth in Section 217.390; or
 - B) For units identified in Section 217.386(a)(2). The requirements of an emissions averaging plan adopted under any other Subpart of this Part. For the affected engines and turbines the applicable requirements of this Subpart apply, including calculation of NO_x allowable and actual emissions rates, compliance dates, monitoring, testing, reporting, and recordkeeping.
- Operates, for units not listed in Appendix G, the affected unit as a low usage unit under subsection (a)(3)(A) or (a)(3)(B) of this Section. Low usage units that are not part of an emissions averaging plan are not subject to the requirements of this Subpart Q except for the requirements to

inspect and maintain the unit under subsection (a)(4) of this Section, test as required by Section 217.394(g), and retain records under Section 217.396(b) and (e). Either the limitation in subsection (a)(3)(A) or (a)(3)(B) may be used at a source, but not both:

- A) Before May 1, 2025, the potential to emit (PTE) is no more than 100 TPY NO_x aggregated from all engines and turbines located at the source that are not otherwise exempt under Section 217.386(c), and not complying with the requirements of subsection (a)(1) or (a)(2) of this Section, and the NO_x PTE limit is contained in a federally enforceable permit; or
- B) The aggregate bhp-hrs/MW-hrs from all affected units located at the source that are not exempt under Section 217.386(c), and not complying with the requirements of subsection (a)(1) or (a)(2) of this Section, are less than or equal to the bhp-hrs and MW-hrs operation limit listed in subsections (a)(3)(B)(i) and (a)(3)(B)(ii) of this Section. The operation limits of subsections (a)(3)(B)(i) and (a)(3)(B)(ii) of this Section must be contained in a federally enforceable permit, except for units that drive a natural gas compressor located at a natural gas compressor station or storage facility. The operation limits are:
 - i) 8 mm bhp-hrs or less on an annual basis for engines; and
 - ii) 20,000 MW-hrs or less on an annual basis for turbines.
- 4) Inspects and performs periodic maintenance on the affected unit, in accordance with a Maintenance Plan that documents:
 - A) For a unit not located at natural gas transmission compressor station or storage facility, either:
 - i) The manufacturer's recommended inspection and maintenance of the applicable air pollution control equipment, monitoring device, and affected unit; or
 - ii) If the original equipment manual is not available or substantial modifications have been made that require an alternative procedure for the applicable air pollution control device, monitoring device, or affected unit, the owner or

operator must establish a plan for inspection and maintenance in accordance with what is customary for the type of air pollution control equipment, monitoring device, and affected unit.

- B) For a unit located at a natural gas compressor station or storage facility, the operator's maintenance procedures for the applicable air pollution control device, monitoring device, and affected unit.
- b) Owners and operators of affected units may change the method of compliance with this Subpart, as follows:
 - When changing the method of compliance from subsection (a)(3) of this Section to subsection (a)(1) or (a)(2) of this Section, the owner or operator must conduct testing and monitoring according to the requirements of Section 217.394(a) through (f), as applicable. Before May 1, 2025, for this purpose, references to the "applicable compliance date" in Section 217.394(a)(2) and (a)(3) means the date by which compliance with subsection (a)(1) or (a)(2) of this Section is to begin.
 - 2) An owner or operator of an affected unit that is changing the method of compliance from subsection (a)(1) or (a)(2) of this Section to subsection (a)(3) of this Section must:
 - A) Continue to operate the affected unit's control device, if that unit relied upon a NO_x emissions control device for compliance with the requirements of subsection (a)(1) or (a)(2) of this Section; and
 - B) Prior to changing the method of compliance to subsection (c) of this Section, complete any outstanding initial performance testing, subsequent performances testing or monitoring as required by Section 217.394(a), (c), (d), (e) or (f) for the affected unit. If the deadline for the testing or monitoring has not yet occurred (e.g., the five-year testing or monitoring sequence has not yet elapsed), the owner or operator must complete the test or monitoring prior to changing the method of compliance to subsection (a)(3) of this Section. After changing the method of compliance to subsection (a)(3) of this Section, no additional testing or monitoring will be required for the affected unit while it is complying with subsection (a)(3) of this Section, except as provided for in Section 217.394(g).

(Source:	Amended at 48 Ill. Reg.	, effective	, effective
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Section 217.390 Emissions Averaging Plans

- a) An owner or operator of certain affected units may comply through an emissions averaging plan.
 - 1) A unit or units that commenced operation before January 1, 2002 may be included in only one emissions averaging plan, as follows:
 - A) Units:
 - i) Located at a single source or at multiple sources in Illinois to address compliance for units identified in Section 217.386(a)(1), so long as the units are owned by the same company or parent company where the parent company has working control through stock ownership of its subsidiary corporations; or
 - ii) Before May 1, 2025, located at a single source or at multiple sources in either the Chicago area counties or Metro-East area counties to address compliance for units identified in Section 217.386(a)(2), so long as the units are owned by the same company or parent company where the parent company has working control through stock ownership of its subsidiary corporations. On and after May 1, 2025, units located at a single source or at multiple sources all located in either the Chicago area counties or Metro-East area counties to address compliance for units identified in Section 217.386(b)(2), so long as the units are owned by the same company or parent company where the parent company has working control through stock ownership of its subsidiary corporations;
 - B) Units that have a compliance date later than the control period for which the averaging plan is being used for compliance;
 - C) Units that are not otherwise subject to this Subpart (so long as the units are owned by the same company or parent company where the parent company has working control through stock ownership

of its subsidiary corporations) or that the owner or operator may claim as exempt under Section 217.386(c) but does not claim as exempt. For as long as the unit is included in an emissions averaging plan, it will be treated as an affected unit and subject to the applicable emission concentration, limits, testing, monitoring, recordkeeping and reporting requirements; and

- D) Units that comply with the requirements for low usage units set forth in Section 217.388(a)(3), so long as the unit or units operate NO_x emissions control technology. For as long as the unit is included in an emissions averaging plan, it will be subject to the applicable emission concentration limits in subsection (i)(7) of this Section, the applicable testing and monitoring requirements for affected units in Section 217.394(a) through (f), and the applicable recordkeeping and reporting requirements for affected and low usage units in Section 217.396(a) through (e).
- 2) The following types of units may not be included in an emissions averaging plan:
 - A) Units that commence operation after January 1, 2002, unless the unit or units replace a unit or units described in subsection (a)(1) of this Section that commenced operation on or before January 1, 2002, or the unit or units replace a unit or units described in subsection (a)(1) of this Section that replaced a unit or units described in subsection (a)(1) of this Section 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 annual basis than the actual NO_x emissions of the unit or units that are replaced. The owner or operator of a unit that is shut down and replaced must comply with the provisions of Section 217.396(c)(3) before the replacement unit may be included in an emissions averaging plan.
 - B) Units that the owner or operator is claiming are exempt under Section 217.386(c).
- b) Before May 1, 2025, an owner or operator must submit an emissions averaging plan to the Agency by the applicable compliance date set forth in Section 217.392,

or by May 1 of the year in which the owner or operator is using a new emissions averaging plan to comply.

- 1) The plan must include, but is not limited to:
 - A) The list of affected units included in the plan by unit identification number and permit number.
 - B) A sample calculation demonstrating compliance using the methodology provided in subsection (h) of this Section for both the ozone season and calendar year.
- 2) The plan will be effective as follows:
 - A) An initial plan for units required to comply by January 1, 2008 is effective January 1, 2008;
 - B) An initial plan for units required to comply by May 1, 2010 is effective May 1, 2010 for those units;
 - C) A new plan submitted under subsection (b) of this Section but not submitted by January 1, 2008 or May 1, 2010 is effective retroactively to January 1 of the applicable year;
 - D) An amended plan submitted under subsection (d) of this Section is effective retroactively to January 1 of the applicable year; or
 - E) An amended plan submitted under subsection (e) of this Section is effective on the date it is received by the Agency.
- c) On and after May 1, 2025, an owner or operator must submit an emissions averaging plan to the Agency at least 30 days before beginning the use of that plan to demonstrate compliance. The plan must include, but is not limited to the following:
 - 1) The list of affected units included in the plan by unit identification number and permit number.
 - 2) The applicable NO_x emissions concentration under Section 217.388(a)(1) for each affected unit.

- 3) A sample calculation demonstrating compliance using the methodology provided in subsection (j) of this Section on a 30-day rolling average basis.
- 4) The date the owner or operator will begin using the emissions averaging plan.
- d) An owner or operator may amend an emissions averaging plan only once per calendar year.
- e) Despite subsection (d) of this Section, an owner or operator, and the buyer or seller, if applicable:
 - 1) Must submit an updated emissions averaging plan or plans to the Agency within 60 days if a unit that is listed in an emissions averaging plan is sold or taken out of service.
 - 2) May amend its emissions averaging plan to include another unit within 30 days after discovering that the unit no longer qualifies as an exempt unit under Section 217.386(c) or as a low usage unit under Section 217.388(a)(3).
 - May submit an updated emissions averaging plan or plans to the Agency within 60 days after purchasing a new unit to include the new unit.
- f) Until May 1, 2025, an owner or operator must:
 - Demonstrate compliance for both the ozone season (May 1 through September 30) and the calendar year (January 1 through December 31) by using the methodology and the units listed in the most recent emissions averaging plan submitted to the Agency under subsection (b), (d), or (e) of this Section; the higher of the monitoring or test data determined under Section 217.394; and the actual hours of operation for the applicable control period;
 - 2) Notify the Agency by October 31 following the ozone season, if compliance cannot be demonstrated for that ozone season; and
 - 3) Submit to the Agency by January 31 following each calendar year, a compliance report containing the information required by Section 217.396(c)(4).

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- g) On and after May 1, 2025, an owner or operator must:
 - Demonstrate compliance on a 30-day rolling average basis by using the methodology and the units listed in the most recent emissions averaging plan submitted to the Agency under subsection (c), (d), or (e) of this Section; the higher of the monitoring or test data determined under Section 217.394; and the actual hours of operation for the applicable averaging plan period.
 - 2) Submit to the Agency by January 31 following each calendar year, a compliance report containing the information required by Section 217.396(c)(5).
- h) Until May 1, 2025, 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:

(Mod): Nall

Where:

$$\underbrace{\text{Nod}}_{\text{Nact}} = \sum_{i=1}^{n} EM_{act(i)}$$

$$\underbrace{\text{Mod}}_{\text{Nall}} \rightarrow = \sum_{i=1}^{n} EM_{all(i)}$$
Nall =

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

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

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

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

i = Subscript denoting an individual unit and fuel used.

n = Number of different units in the averaging plan.

- i) Until May 1, 2025, for each unit in the averaging plan, and each fuel used by a unit, determine actual and allowable NO_x emissions using the following equations, except as provided for in subsection (1) of this Section:
 - 1) Actual emissions must be determined as follows:

$$(\text{Mod})_i^{\star \underline{H}} = E_{act(i)} \times H_i$$

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

2) Allowable emissions must be determined as follows:

$$(Mod)$$
' $\stackrel{\times}{=} E_{all(i)} \times H_i$

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

Where:

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

EM_{all(} = Total mass of allowable NO_x emissions in lbs for a unit, i) except as provided for in subsection (i)(3) of this Section. E_{act} = Actual NO_x emission rate (lbs/mmBtu) calculated according to the above equation.

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

- H = Heat input (mmBtu/ozone season or mmBtu/year) calculated from fuel flow meter and the heating value of the fuel used.
- $C_{d(act)}$ = Actual concentration of NO_x in lb/dscf (ppmv x 1.194 x10⁻⁷) on a dry basis for the fuel used. Actual concentration is determined on each of the most recent test runs or monitoring passes performed under Section 217.394, whichever is higher.
- C_{d(all)} = Allowable concentration of NO_x in lb/dscf (allowable emission limit in ppmv specified in Section 217.388(a)(1), except as provided for in subsection (i)(4), (i)(5), (i)(6), or (i)(7) of this Section, if applicable, multiplied by 1.194 x 10⁻⁷) on a dry basis for the fuel used.
- F_d = The ratio of the gas volume of the products of combustion to the heat content of the fuel (dscf/mmBtu) as given in the table of F Factors included in 40 CFR 60, appendix A, Method 19 or as determined using 40 CFR 60, appendix A, Method 19.
- %O_{2d} = Concentration of oxygen in effluent gas stream measured on a dry basis during each of the applicable tests or monitoring runs used for determining emissions, as represented by a whole number percent, e.g., for 18.7%O_{2d}, 18.7 would be used.
- i = Subscript denoting an individual unit and the fuel used.
- j = Subscript denoting each test run or monitoring pass for an affected unit for a given fuel.
- m = The number of test runs or monitoring passes for an affected unit using a given fuel.
- For a replacement unit that is electric-powered, the allowable NO_x emissions from the affected unit that was replaced should be used in the averaging calculations and the actual NO_x emissions for the electric-powered replacement unit (EM_{act elec(i)}) are zero. Allowable NO_x emissions for the electric-powered replacement are calculated using the actual total bhp-hrs generated by the electric-powered replacement unit on an ozone season and on an annual basis multiplied by the allowable NO_x emission rate in lb/bhp-hr of the replaced unit. The allowable mass of NO_x emissions from an electric-powered replacement unit (EM_{all elec(i)}) must be determined by multiplying the nameplate capacity of the unit by the hours operated during the ozone season or annually and the allowable NO_x

emission rate of the replaced unit (E_{all rep}) in lb/mmBtu converted to lb/bhp-hr. For this calculation the following equation should be used:

$(\text{Mod})_{l} \stackrel{\text{bhp} \times OP \times F \times F}{elec(i)} \stackrel{\text{bhp}}{=} \text{bhp} \times OP \times F \times E_{all \ rep(i)}$

Where:

 $EM_{all \, elec(i)}$ = Mass of allowable NO_x emissions from the electric-powered replacement unit in pounds per ozone

season or calendar year.

bhp = Nameplate capacity of the electric-powered replacement

unit in brake horsepower.

OP = Operating hours during the ozone season or calendar

year.

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

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

replaced unit.

i = Subscript denoting an individual electric unit and the

fuel used.

- 4) For a replacement unit that is not electric, the allowable NO_x emissions rate used in the above equations set forth in subsection (i)(2) of this Section must be the higher of the actual NO_x emissions as determined by testing or monitoring data or the applicable uncontrolled NO_x emissions factor from Compilation of Air Pollutant Emission Factors: AP-42, Volume I: Stationary Point and Area Sources, as incorporated by reference in Section 217.104 for the unit that was replaced.
- For a unit that is replaced with purchased power, the allowable NO_x emissions rate used in the equations set forth in subsection (i)(2) of this Section must be the emissions concentration set forth in Section 217.388(a)(1) or subsection (i)(6) of this Section, when applicable, for the type of unit that was replaced. For owners or operators replacing units with purchased power, the annual hours of operations that must be used are the calendar year hours of operation for the unit that was shut down, averaged over the three-year period prior to the shutdown. The actual NO_x emissions for the units replaced by purchased power ($EM_{(i)act}$) are zero. These units may be included in any emissions averaging plan for no more

than five years beginning with the calendar year that the replaced unit is shut down.

- 6) For units that have a later compliance date, allowable emissions rate used in the equations set forth in subsection (i)(2) of this Section must be:
 - A) Prior to the applicable compliance date under Section 217.392, the higher of the actual NO_x emissions as determined by testing or monitoring data or the applicable uncontrolled NO_x emissions factor from Compilation of Air Pollutant Emission Factors:

 AP-42, Volume I: Stationary Point and Areas Sources, as incorporated by reference in Section 217.104; or
 - B) On and after the unit's applicable compliance date under Section 217.392, the applicable emissions concentration for that type of unit under Section 217.388(a)(1).
- 7) For a low usage unit complying with the requirements of Section 217.388(a)(3) and used in an emissions averaging plan, the allowable NO_x emissions rate used in the above equations set forth in subsection (i)(2) of this Section must be the higher of the actual NO_x emissions as determined by testing or monitoring data or the applicable uncontrolled NO_x emissions factor from Compilation of Air Pollutant Emission Factors: AP-42, Volume I: Stationary Point and Area Sources, as incorporated by reference in Section 217.104.
- j) On and after May 1, 2025, 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 on a 30-day rolling average basis. The following equation must be used to determine compliance:

$$(Mod)^{3}N_{all}$$

Where:

$$\underbrace{N_{act} \rightarrow 0}_{N_{act} \rightarrow 0} = \sum_{i=1}^{n} EM_{act(i)}$$

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$$\underbrace{\text{Mod}}_{N_{all}} = \sum_{i=1}^{n} EM_{all(i)}$$
N_{all}

 N_{act} = Total sum of the actual NO_x mass emissions from units included in the averaging plan for each fuel used (lbs per 30-day rolling average basis).

 N_{all} = Total sum of the allowable NO_x mass emissions from units included in the averaging plan for each fuel used (lbs per 30-day rolling average basis).

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

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

i = Subscript denoting an individual unit and fuel used.

n = Number of different units in the averaging plan.

- k) On and after May 1, 2025, for each unit in the averaging plan, and each fuel used by a unit, determine actual and allowable NO_x emissions using the following equations, except as provided for in subsection (l) of this Section:
 - 1) Actual emissions must be determined as follows:

$$(\operatorname{Mod})_{t(i)}^{\mathbf{E}} \times \underline{H} E_{act(i)} \times H_i$$

$$(\text{Mod}) \sum_{j=1}^{m} C_{d(act(j))} \times F_{d} \times \left(\frac{20.9}{20.9 - \%O_{2d(j)}}\right)$$

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

2) Allowable emissions must be determined as follows:

$$(\text{Mod})_{[\mathcal{A}]}^{\text{reg}} \times \overset{H}{\longrightarrow} E_{all(i)} \times H_i$$

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

$$E_{all(i)} = \frac{m}{m}$$

Where:

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

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

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

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

H = Heat input (mmBtu/30-day rolling average basis) calculated from fuel flow meter and the heating value of the fuel used.

 $C_{d(act)}$ = Actual concentration of NO_x in lb/dscf (ppmv x 1.194 x10⁻⁷) on a dry basis for the fuel used. Actual concentration is determined on each of the most recent test runs or monitoring passes performed under Section 217.394, whichever is higher.

C_{d(all)} = Allowable concentration of NO_x in lb/dscf (allowable emission limit in ppmv specified in Section 217.388(a)(1), except as provided for in subsection (k)(4), (k)(5), (k)(6), or (k)(7) of this Section, if applicable, multiplied by 1.194 x 10⁻⁷) on a dry basis for the fuel used.

F_d = The ratio of the gas volume of the products of combustion to the heat content of the fuel (dscf/mmBtu) as given in the table of F Factors included in 40 CFR 60, appendix A-7, Method 19 or as determined using 40 CFR 60, appendix A-7, Method 19.

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

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

- j = Subscript denoting each test run or monitoring pass for an affected unit for a given fuel.
- m = The number of test runs or monitoring passes for an affected unit using a given fuel.
- For a replacement unit that is electric-powered, the allowable NO_x emissions from the affected unit that was replaced should be used in the averaging calculations and the actual NO_x emissions for the electric-powered replacement unit (EM_{act elec(i)}) are zero. Allowable NO_x emissions for the electric-powered replacement are calculated using the actual total bhp-hrs generated by the electric-powered replacement unit during a 30-day rolling average period multiplied by the allowable NO_x emission rate in lb/bhp-hr of the replaced unit. The allowable mass of NO_x emissions from an electric-powered replacement unit (EM_{all elec(i)}) must be determined by multiplying the nameplate capacity of the unit by the hours operated during a 30-day rolling average period and the allowable NO_x emission rate of the replaced unit (E_{all rep}) in lb/mmBtu converted to lb/bhp-hr. For this calculation the following equation should be used:

$\underbrace{\text{Mod}}_{elec(i)} = \underbrace{\text{hp} \times OP \times E \times E}_{elec(i)} + \underbrace{\text{hp} \times OP \times F \times E}_{all \ rep(i)}$

Where:

 $EM_{all \, elec(i)}$ = Mass of allowable NO_x emissions from the

electric-powered replacement unit in pounds per 30-day

rolling average period.

bhp = Nameplate capacity of the electric-powered replacement

unit in brake horsepower.

OP = Operating hours during the 30-day rolling average

period.

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

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

replaced unit.

i = Subscript denoting an individual electric unit and the

fuel used.

For a replacement unit that is not electric, the allowable NO_x emissions rate used in the above equations set forth in subsection (k)(2) of this

Section must be the higher of the actual NO_x emissions as determined by testing or monitoring data or the applicable uncontrolled NO_x emissions factor from Compilation of Air Pollutant Emission Factors: AP-42, Volume I: Stationary Point and Area Sources, as incorporated by reference in Section 217.104, for the unit that was replaced.

- For a unit that is replaced with purchased power, the allowable NO_x emissions rate used in the equations set forth in subsection (k)(2) of this Section must be the emissions concentration set forth in Section 217.388(a)(1) or subsection (k)(6) of this Section, when applicable, for the type of unit that was replaced. For owners or operators replacing units with purchased power, the annual hours of operations that must be used are the calendar year hours of operation for the unit that was shut down, averaged over the three-year period prior to the shutdown. The actual NO_x emissions for the units replaced by purchased power $(EM_{(i)act})$ are zero. These units may be included in any emissions averaging plan for no more than five years beginning with the calendar year that the replaced unit is shut down.
- 6) For units that have a later compliance date, allowable emissions rate used in the equations set forth in subsection (k)(2) of this Section must be:
 - A) Prior to the applicable compliance date under Section 217.392, the higher of the actual NO_x emissions as determined by testing or monitoring data or the applicable uncontrolled NO_x emissions factor from Compilation of Air Pollutant Emission Factors: AP-42, Volume I: Stationary Point and Areas Sources, as incorporated by reference in Section 217.104; or
 - B) On and after the unit's applicable compliance date under Section 217.392, the applicable emissions concentration for that type of unit under Section 217.388(a)(1).
- 7) For a low usage unit complying with the requirements of Section 217.388(a)(3) and used in an emissions averaging plan, the allowable NO_x emissions rate used in the above equations set forth in subsection (k)(2) of this Section must be the higher of the actual NO_x emissions as determined by testing or monitoring data or the applicable uncontrolled NO_x emissions factor from Compilation of Air Pollutant Emission Factors: AP-42, Volume I: Stationary Point and Area Sources, as incorporated by reference in Section 217.104.

- Until May 1, 2025, for units that use CEMS, the data must show that the total mass of actual NO_x emissions determined under subsection (l)(1) of this Section is less than or equal to the allowable NO_x emissions calculated in accordance with the equations in subsections (h) and (l)(2) of this Section for both the ozone season and calendar year. The equations in subsection (g) of this Section will not apply. On and after May 1, 2025, for units that use CEMS, the data must show that the total mass of actual NO_x emissions determined under subsection (l)(1) of this Section is less than or equal to the total mass of allowable NO_x emissions calculated in accordance with the equations in subsections (j) and (l)(2) of this Section for each 30-day rolling average period. The equations in subsection (k) of this Section will not apply.
 - 1) The total mass of actual NO_x emissions in lbs for a unit (EM_{act}) must be the sum of the total mass of actual NO_x emissions from each affected unit using CEMS data collected in accordance with 40 CFR 60 or 75, or alternate methodology that has been approved by the Agency or USEPA and included in a federally enforceable permit.
 - 2) The allowable NO_x emissions must be determined as follows:

$$(Mod)_{\text{Beauty}} = \sum_{j=1}^{m} (Cd_{j} \times flow_{y} \times 111944 \times 10^{-7})$$

Where:

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

flow_{ji} = Stack flow (dscf/hr) for a given stack.

 Cd_j = Allowable concentration of NO_x (ppmv) specified in Section 217.388(a)(1) for a given stack (1.194 x 10^{-7} converts to

lb/dscf).

j = subscript denoting each hour operation of a given unit.

m = Total number of hours of operation of a unit.

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

(Source: Amended at 48 Ill. Reg. ______, effective_______, effective______, effective_______,

- a) On and after January 1, 2008, an owner or operator of an affected engine listed in Appendix G may not operate the affected engine unless the requirements of this Subpart Q are met.
- b) On and after May 1, 2010, an owner or operator of a unit identified by Section 217.386(a)(2), and that is not listed in Appendix G, may not operate the affected unit unless the requirements of this Subpart Q are met or the affected unit is exempt under Section 217.386(c).
- c) On and after May 1, 2025, an owner or operator of a stationary internal combustion engine or turbine subject to this Subpart Q must not operate the affected engine or turbine unless the requirements of this Subpart Q are met. Compliance must be demonstrated with the applicable emissions concentration or emissions averaging plan on a 30-day rolling average basis. A 30-day rolling average consists of 30 operating days where an operating day is a calendar day in which any subject emission unit combusts any fuel. Compliance with the 30-day rolling average for units that have conducted an initial performance test under Section 217.394(a) or installed and operated a CEMS under Section 217.394(f) must be demonstrated 30 operating days after May 1, 2025. A 30-day rolling average is calculated using the total mass of emissions from the period and the total volume of products of combustion in the period.
- d) Before May 1, 2025, owners and operators of an affected unit may use NO_x allowances to meet the compliance requirements in Section 217.388 as specified in this subsection (d). A NO_x allowance is defined as an allowance used to meet the requirements of a NO_x trading program in which the State of Illinois participates where one allowance is equal to one ton of NO_x emissions.
 - 1) NO_x allowances may be used only under the following circumstances:
 - A) An anomalous or unforeseen operating scenario inconsistent with historical operations for a particular ozone season or calendar year that causes an exceedance of an emissions or operating hour limitation;
 - B) To achieve compliance for no more than two events in any rolling five-year period;
 - C) If the anomalous or unforeseen operating scenario occurs during an ozone season, it counts as a single event for purposes of the

calendar year even if there is an exceedance of both an ozone season emission limitation and an annual emissions limitation as a result of the operating scenario; and

- D) For a unit that is not listed in Appendix G.
- 2) The owner or operator of the affected unit must surrender to the Agency a NO_x allowance for each ton or portion of a ton of NO_x by which actual emissions exceed allowed emissions, as follows:
 - A) Where a low usage limitation under Section 217.388(a)(3)(B) has been exceeded, the owner or operator of the affected unit must calculate the NO_x emissions resulting from the number of hours that exceeded the operating hour low usage limit and surrender to the Agency one NO_x allowance for each ton or portion of a tinton of NO_x that was calculated.
 - B) For noncompliance with a limitation in an emissions averaging plan that includes low usage units, the owner or operator of the affected low usage unit must calculate the NO_x emissions using the applicable allowable emissions concentration from Section 217.388(a)(1).
 - C) For noncompliance with a seasonal limit in Section 217.388(a)(2), only a NO_x ozone season allowance must be used.
 - D) For noncompliance with the emissions concentration limits in Section 217.388(a)(1), low usage limitations in Section 217.388(a)(3) or an annual limitation in an emissions averaging plan in Section 217.388(a)(2), only a NO_x annual allowance may be used.
 - E) Despite the provisions of subsections (d)(2)(C) and (d)(2)(D) of this Section, if a NO_x annual trading program does not exist, a NO_x ozone season allowance may be used for noncompliance with the emissions concentration limits in Section 217.388(a)(1), low usage limitations in Section 217.388(a)(3) or an annual limitation in an emissions averaging plan in Section 217.388(a)(2).
- 3) The owner or operator must submit a report documenting the circumstances that required the use of NO_x allowances and identify what

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

(Source:	Amended at 48 Ill. Reg.	, effective , eff	 , effective
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Section 217.394 Testing and Monitoring

- a) Before May 1, 2025, an owner or operator must conduct an initial performance test under subsection (d)(1) or (d)(2) of this Section as follows:
 - By January 1, 2008, for affected engines listed in Appendix G. Performance tests must be conducted on units listed in Appendix G, even if the unit is included in an emissions averaging plan under Section 217.388(a)(2).
 - 2) By the applicable compliance date set forth in Section 217.392, or within the first 876 hours of operation per calendar year, whichever is later:
 - A) For affected units not listed in Appendix G that operate more than 876 hours per calendar year; and
 - B) For units that are not affected units that are included in an emissions averaging plan and operate more than 876 hours per calendar year.
 - 3) Once within the five-year period after the applicable compliance date as set forth in Section 217.392 or once within the five-year period following the date the unit commenced operation:
 - A) For affected units that operate fewer than 876 hours per calendar year; and
 - B) For units that are not affected units that are included in an emissions averaging plan and that operate fewer than 876 hours per calendar year.

- b) On and after May 1, 2025, an owner or operator of a reciprocating internal combustion engine or turbine, including those that are part of an emissions averaging plan, must either conduct performance testing or install and operate a CEMS in compliance with the requirements in this Section, as applicable, unless the engine or turbine operates as a low usage unit under Section 217.388(a)(3)(B). An owner or operator must conduct an initial performance test under subsection (d)(1) or (d)(2) of this Section. Performance testing of NOx emissions for engines and turbines for which construction or modification occurs after May 1, 2025, must be conducted within 60 days after achieving maximum operating rate but no later than 180 days after initial startup of the new or modified engine or turbine, in accordance with this Section.
- c) An owner or operator of an engine or turbine must conduct subsequent performance tests under subsection (c)(1), (c)(2), and (c)(3) of this Section as follows:
 - 1) Affected engines listed in Appendix G and all units included in an emissions averaging plan must conduct a performance test at the owner or operator's own expense once every five years. Testing must be performed in the calendar year by May 1 or within 60 days after starting operation, whichever is later;
 - 2) If the monitored data shows that the unit is not in compliance with the applicable emissions concentration or emissions averaging plan, the owner or operator must report the deviation to the Agency in writing within 30 days and conduct a performance test under subsection (d) of this Section within 90 days of the determination of noncompliance; and
 - When, in the opinion of the Agency or USEPA, it is necessary to conduct testing to demonstrate compliance with Section 217.388, the owner or operator of a unit must, at his or her own expense, conduct the test in accordance with the applicable test methods and procedures specified in this Section within 90 days after receipt of a notice to test from the Agency or USEPA.

d) Testing Procedures:

1) For an engine: The owner or operator must conduct a performance test using Method 7 or 7E of 40 CFR 60, appendix A-4, as incorporated by reference in Section 217.104. Each compliance test must consist of three

separate runs, each lasting a minimum of 60 minutes. NO_x emissions must be measured while the affected unit is operating at peak load. If the unit combusts more than one type of fuel (gaseous or liquid), including backup fuels, a separate performance test is required for each fuel.

- 2) For a turbine: The owner or operator must conduct a performance test using the applicable procedures and methods in 40 CFR 60.4400, as incorporated by reference in Section 217.104.
- e) Monitoring: Except for those years in which a performance test is conducted under subsection (a), (b), or (c) of this Section, the owner or operator of an affected unit or a unit included in an emissions averaging plan must monitor NO_x concentrations annually, once between January 1 and May 1 or within the first 876 hours of operation per calendar year, whichever is later. If annual operation is less than 876 hours per calendar year, each affected unit must be monitored at least once every five years. Monitoring must be performed as follows:
 - 1) A portable NO_x monitor utilizing method ASTM D6522-20, as incorporated by reference in Section 217.104, or a method approved by the Agency must be used. If the engine or turbine combusts both liquid and gaseous fuels as primary or backup fuels, separate monitoring is required for each fuel.
 - 2) NO_x and O₂ concentrations measurements must be taken three times for a duration of at least 20 minutes. Monitoring must be done at highest achievable load. The concentrations from the three monitoring runs must be averaged to determine whether the affected unit is in compliance with the applicable emissions concentration or emissions averaging plan, as specified in Section 217.388.
- f) Instead of complying with the requirements of subsections (a), (b), (c), (d) and (e) of this Section, an owner or operator may install and operate a CEMS on an affected unit that meets the applicable requirements of 40 CFR 60, subpart A and appendix B, or 40 CFR 75, incorporated by reference in Section 217.104, and complies with the quality assurance procedures specified in 40 CFR 60, appendix F or 40 CFR 75, as incorporated by reference in Section 217.104, or an alternate procedure as approved by the Agency or USEPA in a federally enforceable permit. Until May 1, 2025, the CEMS must be used to demonstrate compliance with the applicable emissions concentration or emissions averaging plan only on an ozone season and annual basis. On and after May 1, 2025, the CEMS must be

used to demonstrate compliance with the applicable emissions concentration or emissions averaging plan only on a 30-day rolling average basis.

g) The testing and monitoring requirements of this Section do not apply to affected units in compliance with the requirements of the low usage limitations under Section 217.388(a)(3), unless the units are included in an emissions averaging plan. Despite the above circumstances, when, in the opinion of the Agency or USEPA, it is necessary to conduct testing to demonstrate compliance with Section 217.388, the owner or operator of a unit must, at his or her own expense, conduct the test in accordance with the applicable test methods and procedures specified in this Section within 90 days after receipt of a notice to test from the Agency or USEPA.

(Source: Amended at 48 Ill. Reg.	, effective	, effective
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Section 217.396 Recordkeeping and Reporting

- a) Recordkeeping. The owner or operator of any unit included in an emissions averaging plan (e.g., affected units, nonsubject units, units that could be exempt under Section 217.386(c), and low usage units) or an affected unit that is not exempt under Section 217.386(c) and is not subject to the low usage exemption of Section 217.388(a)(3) must maintain records that demonstrate compliance with the requirements of this Subpart Q, which include, but are not limited to:
 - 1) Identification, type (e.g., lean-burn, gas-fired), and location of each unit.
 - 2) Calendar date of the record.
 - 3) Before May 1, 2025, the number of hours the unit operated on a monthly basis and during each ozone season. On and after May 1, 2025, daily operating hours.
 - 4) Type and quantity of the fuel used on a daily basis.
 - 5) On and after May 1, 2025, total mass emissions on a daily basis and on a 30-day rolling average basis.
 - 6) The results of all monitoring performed on the unit and reported deviations.

- 7) The results of all tests performed on the unit.
- 8) The plan for performing inspection and maintenance of the units, air pollution control equipment, and the applicable monitoring device under Section 217.388(a)(4).
- 9) A log of inspections and maintenance performed on the unit's air emissions, monitoring device, and air pollution control device. These records must include, at a minimum, date, load levels and any manual adjustments, along with the reason for the adjustment (e.g., air to fuel ratio, timing or other settings).
- 10) Before May 1, 2025, if complying with the emissions averaging plan provisions of Sections 217.388(a)(2) and 217.390, copies of the calculations used to demonstrate compliance with the ozone season and annual control period limits, noncompliance reports for the ozone season, and ozone and annual control period compliance reports submitted to the Agency.
- Identification of time periods for which operating conditions and pollutant data were not obtained by either the CEMS or alternate monitoring procedures, including the reasons for not obtaining sufficient data and a description of corrective actions taken.
- 12) Any NO_x allowance reconciliation reports submitted under Section 217.392(d)(3).
- 13) If the engine or turbine is used as an emergency or standby unit, records documenting the annual hours of operation of these units in non-emergency situations.
- b) The owner or operator of an affected unit or unit included in an emissions averaging plan must maintain the records required by subsection (a) or (e) of this Section, as applicable, for a period of five years at the source at which the unit is located. The records must be made available to the Agency and USEPA upon request.
- c) Reporting Requirements
 - 1) The owner or operator must notify the Agency in writing 30 days and five days prior to testing, under Section 217.394(a) and (c) and:

- A) If, after the 30-days notice for an initially scheduled test is sent, there is a delay (e.g., due to operational problems) in conducting the performance test as scheduled, the owner or operator of the unit must notify the Agency as soon as possible of the delay in the original test date, either by providing at least seven days prior notice of the rescheduled date of the performance test or by arranging a new test date with the Agency by mutual agreement;
- B) Provide a testing protocol to the Agency 60 days prior to testing; and
- C) Not later than 30 days after the completion of the test, submit the results of the test to the Agency.
- <u>Under the requirements for monitoring in Section 217.394(e), the owner or operator of the unit must report to the Agency any monitored exceedances of the applicable NO_x concentration from Section 217.388(a)(1) or (a)(2) within 30 days after performing the monitoring.</u>
- Within 90 days after permanently shutting down an affected unit or a unit included in an emissions averaging plan, the owner or operator of the unit must withdraw or amend the applicable permit to reflect that the unit is no longer in service.
- 4) Until May 1, 2025, if demonstrating compliance through an emissions averaging plan:
 - A) By October 31 following the applicable ozone season, the owner or operator must notify the Agency if he or she cannot demonstrate compliance for that ozone season; and
 - B) By January 31 following the applicable calendar year, the owner or operator must submit to the Agency a report that demonstrates the following:
 - i) For all units that are part of the emissions averaging plan, the total mass of allowable NO_x emissions for the ozone season and for the annual control period;

- ii) The total mass of actual NO_x emissions for the ozone season and annual control period for each unit included in the averaging plan;
- iii) The calculations that demonstrate that the total mass of actual NO_x emissions are less than the total mass of allowable NO_x emissions using equations in Sections 217.390(h) and (i); and
- iv) The information required to determine the total mass of actual NO_x emissions and the calculations performed in subsection (c)(4)(B)(iii) of this Section.
- On and after May 1, 2025, if demonstrating compliance through an emissions averaging plan, by January 31 following the previous calendar year, the owner or operator must submit to the Agency a report that includes the following:
 - A) For all units that are part of the emissions averaging plan, the total mass of allowable NO_x emissions on a 30-day rolling average basis.
 - B) The total mass of actual NO_x emissions on a 30-day rolling average basis for each unit included in the averaging plan.
 - C) The calculations that demonstrate that the total mass of actual NO_x emissions is less than the total mass of allowable NO_x emissions using equations in Sections 217.390(j) and (k).
 - D) The daily information required to determine the total mass of actual NO_x emissions on a 30-day rolling average basis.
- 6) If operating a CEMS, the owner or operator must submit an excess emissions and monitoring systems performance report in accordance with the requirements of 40 CFR 60.7(c) and 60.13 or 40 CFR 75, incorporated by reference in Section 217.104, or an alternate procedure approved by the Agency or USEPA and included in a federally enforceable permit.
- 7) If using NO_x allowances to comply with the requirements of Section 217.388, reconciliation reports as required by Section 217.392(d)(3).

- d) On and after May 1, 2025, the owner or operator of an emission unit subject to Subpart Q must submit an annual compliance certification report that demonstrates compliance with the applicable requirements to the Agency for the preceding calendar year by May 1 of the following year. The owner or operator may submit the annual compliance certification report to the Agency along with the Annual Emissions Report required under 35 Ill. Adm. Code 254 or the compliance certification required under 415 ILCS 5/39.5(7)(p)(v). The compliance report must include the following:
 - 1) Identification, type (e.g., lean-burn, gas-fired), and location of the emission unit.
 - 2) Methods used for determining compliance, including an emissions averaging plan, if applicable, a description of test methods, monitoring, recordkeeping, and reporting requirements.
 - 3) A certification of compliance with the applicable emissions concentration or identification of the periods of noncompliance with a quantification of the excess emissions concentration and the excess emissions.
 - 4) For each calendar month, the highest 30-day rolling average emission rate. The emissions data must be reported in the measurement units of the applicable emissions concentration.
 - 5) The emission unit's daily and total operating hours, capacity utilization, and the percent operation of any CEMS during the hours the emission unit was operating.
 - 6) A certification of compliance with all applicable requirements except those identified signed by a responsible official that contains the following: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete."
- e) The owner or operator of an affected unit that is complying with the low usage provisions of Section 217.388(a)(3) must:
 - 1) Before May 1, 2025, for each unit complying with Section 217.388(a)(3)(A), maintain a record of the NO_x emissions for each calendar year;

- 2) For each unit complying with Section 217.388(a)(3)(B), maintain a record of bhp or MW-hours operated each calendar year; and
- 3) Before May 1, 2025, for each unit utilizing NO_x allowances for compliance under Section 217.392(d)(3), maintain and submit any NO_x allowance reconciliation reports.
- f) Instead of complying with the requirements of subsection (a) of this Section, subsection (b) of this Section, subsections (c)(1) through (c)(5) of this Section, and subsection (e) of this Section, an owner or operator of an affected unit complying with the requirements of Section 217.388(a)(1) and operating a CEMS on that unit may meet the applicable testing, monitoring, reporting and recordkeeping requirements for that CEMS of 40 CFR 75, as incorporated by reference in Section 217.104.

(Source:	Amended at 48 Ill. Reg.	, effective	, effective

Summary report: Litera Compare for Word 11.8.0.56 Document comparison done on 8/7/2024 3:42:21 PM			
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Delete	179		
Move From	0		
Move To	0		
Table Insert	4		
Table Delete	10		
Table moves to	0		
Table moves from	0		
Embedded Graphics (Visio, ChemDraw, Images etc.)	51		
Embedded Excel	0		
Format changes	0		
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