ILLINOIS POLLUTION CONTROL BOARD
September 20, 2023

IN THE MATTER OF:	)	
	)	
AMENDMENTS TO 35 ILL. ADM. CODE	)	R 23-18(A)
201, 202, AND 212	)	(Rulemaking - Air)
	)	
	)	

HEARING OFFICER ORDER

On August 7, 2023, the Illinois Environmental Regulatory Group (IERG), Rain CII Carbon LLC (Rain Carbon), Dynegy Midwest Generation LLC (Dynegy) and Midwest Generation LLC (MWG), American Petroleum Institute (API), and East Dubuque Nitrogen Fertilizers LLC (EDNF) filed rulemaking proposals to amend 35 Ill. Adm. Code 212, 215, 216, and 217 to provide alternate emission limitations during periods of startup, shutdown, breakdown, and malfunction. On August 17, 2023, the Board accepted these proposals for hearing.

The hearing officer scheduled the first hearing for September 27, 2023, with a deadline of August 28, 2023, to file testimony. A hearing officer order granted Rain Carbon's motion to extend the deadline for its pre-filed testimony to September 5, 2023.

On August 28, 2023, Rain Carbon filed the testimony of Ross Gares, IERG filed the testimony of David Wall, API filed the testimony of John Derek Reese, EDNF filed the testimony of Philip G. Crnkovich, MWG filed the testimony of Sharene Shealey, and Dynegy filed the testimony of Cynthia Vodopivec. On September 5, 2023, Rain Carbon filed the testimony of Bryan Higgins.

The hearing officer also directed participants to pre-file questions based on that testimony by September 20, 2023.

The Board and its staff have reviewed the testimony and submit questions listed in the attachment to this order. Although the questions are directed to each proposal's witnesses, any participant may respond to the attached questions or submit a comment.

All filings in this proceeding will be available on the Board's website at pcb.illinois.gov under this docket number R 23-18(A). Unless the Board, hearing officer, Clerk or procedural rules provide otherwise, all documents in this proceeding must be filed electronically through the Clerk's Office On-Line (COOL). 35 Ill. Adm. Code 101.302(h), 101.1000(c), 101.Subpart J.

IT IS SO ORDERED.

Chloe Salk, Hearing Officer
Illinois Pollution Control Board
60 East Van Buren Street, Suite 630
Chicago, Illinois 60605
312-814-3932
chloe.salk@illinois.gov

Attachment to Hearing Officer Order of September 20, 2023
R23-18(A): Amendments to 35 Ill. Adm. Code 201, 202, and 212

General

1. Please comment on whether the proponents or the Agency have any concerns regarding the non-substantive revisions to the proposed amendments shown in Attachment A. These changes are intended to remove redundant or unnecessary language, replacing outdated language and legalese, updating statutory references, and providing other non-substantive clarifications.

Rain CII Carbon LLC (Rain Carbon)

Ross Gares

2. On page 1, you note that you advise all Rain Carbon U.S. facilities, including the one in Illinois, on the start-up and operation of coke calciners and associated equipment.
    a. How many calcining facilities does Rain Carbon operate in the U.S. and where are they located?
    b. Are any of Rain Carbon calcining facilities located in other states covered by the USEPA's 2015 SIP Call?
    c. If so, please comment how those facilities are addressing SSM SIP Call compliance.
3. On Pages 2 and 3, you state that the Facility will often be forced to shut down and restart the kilns during malfunction events. Please describe the typical "malfunction" and "breakdown" events encountered at the Robinson facility that requires shutdown.
4. The proposed alternative particulate matter (PM) standard under Section 212.322(d)(2) states, in part, "It shall not be a violation of this Part to operate the pyroscrubber servicing Kiln 1 or Kiln 2 below the minimum operating temperature in subsection (d)(1) during this time." Please clarify if Rain Carbon is required by any provision in Part 212 to operate the pyroscrubber servicing Kiln 1 or Kiln 2 to operate at 1800˚F. If not, please explain the proposed intent.
5. On page 6, you state that the natural gas burners are used to increase the temperature of the kiln and pyroscrubber from ambient to a minimum temperature of 400°F, as measured at the inlet to the pyroscrubber. Please comment on whether high temperature natural gas burners are available that may be used to increase the temperature of the kiln and pyroscrubber from ambient to a minimum temperature of 1800°F. If so, discuss the implications of using such high temperature burners in the calcining kilns.
6. On page 8, you state that based on last six years of operational data that Rain Carbon facility experienced for both kilns combined, on average, less than five start-ups per year,

and less than 10 malfunctions per year. Further, you note that start-ups can last up to 24 hours and malfunctions lasts for shorter time periods of 4-5 hours in length.

a. Given this information, please explain the basis for the proposed alternative PM standards that seek relief for a period of 720 hours or 30 days per year for each kiln.

b. Does Rain Carbon maintain records of SMB events for each kiln, including the duration of the event and inlet operating temperature? If so, would it be possible to submit that information into the record?

7. On page 11, you refer to a settlement agreement with USEPA. Please clarify if this agreement is in the record. If not, please submit a copy.

8. On page 14, you state the proposed PM AEL provides limited relief during the period of start-up when it is not possible to reach pyroscrubber temperatures sufficient to control PM rather than an averaging period for the duration of start-up. Please comment on whether there is a significant difference between the two time periods. What would be typical duration of start-up as compared to duration it takes for pyroscrubber temperatures to reach optimal temperature to meet opacity standards.

Brian Higgins

9. On pages 6 and 7, you state that Trinity used USEPA's Significant Impact Levels for assessing the environmental impact of the proposed AELs because of lack of thresholds for evaluating the environmental impact from SMB events,

a. Please comment on whether this methodology has been used previously in Illinois or other states to evaluate the impact of SMB emissions on attainment or maintenance of NAAQS to USEPA.

b. If so, please provide any citation to federal register notices of USEPA determinations regarding the consideration of SILs to evaluate impact of SMB emissions.

c. If not, comment on the approvability of the proposed AELs by USEPA based on the approach used to support the AELs.

10. On page 1-1, the TSD states that during the start-up test performed on July 20, 2023, the maximum opacity reading was recorded at 50% and above 30% for more than 8-minutes in a 60-minute period (Run #1). The other four test runs did not exceed the opacity limit of 30%. Based on opacity testing results (AirSource Test Report, Appendix C3):

a. What would be the shortest averaging time required to comply with the 30% opacity limit?

b. Please comment on whether the test results support a shorter averaging period than the proposed opacity compliance averaging period of up to three, 1-hour average periods is necessary during startup. If not, please explain why a longer period is necessary.

11. On page 3-1, the TSD notes that the mass VOM emission rates calculated by AirSource during each of the five test runs were significantly below the allowable VOM emission rate of 8 lb/hr under 35 Ill. Adm. Code 215.30. Given that the test runs conducted by AirSource were procedurally representative of a typical start-up, Do you believe that the test results support a much shorter averaging time rather than the proposed 24-hour averaging period for VOM emissions during start-ups.

Dynegy and Midwest Generation

12. On page 22, SOR refers to Ms. Vodopivec's pre-filed testimony that indicates Dynegy's affected units are controlled by both ESPs and baghouses.

    a. Please clarify if all five Dynegy boilers (Baldwin, Kincaid and Newton) covered by the proposed alternative emissions limits are equipped with both ESPs and baghouses.

    b. Comment on whether the Joint Proposal could be further narrowed by limiting the proposed alternative emission standards to apply to the boilers equipped with only ESPs. Alternatively, could boilers equipped with both ESPs and baghouses have a shorter averaging time than the proposed 3 hours.

American Petroleum Institute

John Reese

13. On page 1 you state that your current responsibilities include advocating on environmental and process safety issues that may impact the procedures and/or operations of the refineries in the United States.

    a. Please comment on how many refineries with petroleum catalytic cracking units have been affected by USEPA's 2015 SSM SIP call in states other than Illinois.

    b. Are you aware of how the affected refineries in other states are addressing the SIP Call requirements?

    c. Are you aware of any other states that have adopted alternate emission limitation (AELs) for petroleum catalytic cracking units during SSM events? If so, please provide pertinent details regarding such AELs, including any USEPA determinations.

14. Please clarify whether new or existing petroleum catalytic cracking units are generally subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Petroleum Refineries or would they have to comply with them only if the proposed alternative standards are adopted by the Board.

15. On page 3, you note that if refractory repairs were made, a refractory dry-out is required and the regenerator temperature must be raised slowly to prevent water from damaging the refractory.

    a. Please comment on how frequently refractory repairs are done on cracking units.

    b. What would be typical rate of regenerator temperature increase under normal startup condition when no refractory repair is involved?

16. On page 10, regarding Marathon refinery's adjusted standard petition, you indicate that Marathon's FCCU had five startups over a 3-year period.

    a. Please clarify whether one or two startups per year are typical for FCCU.

    b. Would it be possible to provide startup information like Marathon's for FCCUs at the other refineries covered by the API's proposal?

17. Also on page 10, you note that API's proposed AEL requires that the frequency and duration of operation in startup or hot standby mode are minimized to the greatest extent practicable.

    a. Please comment on whether the affected refineries maintain information on the frequency and duration of FCCUs in hot standby mode on monthly or yearly basis. If so, please provide such data.

    b. Also comment on whether hot standby operational mode falls under the purview of SSM SIP call.

East Dubuque Nitrogen Fertilizers

Philip Crnkvich

18. On page 4, you state that the Nitric Acid Processes emit more NOx per pound of production during startup and shutdown than they do during normal operation. Please comment on whether EDNF maintains records of the frequency and duration of startups and shutdowns of the two Nitric Acid Processes. If so, please submit such information into the record.

19. On page 5, you note that the Nitric Acid Processes cannot meet Section 217.381 during startup and shutdown because ammonia cannot be added to the SCRs unless the temperature of the SCRs is at least 350°F. Please comment on whether auxiliary heaters could be used to increase the SCR temperature to 350°F prior to addition of ammonia during startup and shutdown.

20. On page 12, you note that EDNF's proposal is more stringent than the existing rule because the 30-day rolling average, rolled daily allowable NOx emissions limit is lower than the current single value (daily) limit.

    a. Please explain the rationale for proposing a NOx limit based on 30-day rolling average during normal operations.

    b. Comment on whether the rule should include a single value NOx limit during normal operation to prevent any spikes in NOx emissions.

21. Are you aware of a recent USEPA Final Rule (Fed. Reg., Vol. 88, No. 149, Aug. 4, 2023) approving Florida's State Implementation Plan (SIP) revisions, including NOx limitations for Nitric Acid Plants? If so, please comment on how the proposed NOx limitations compare with those in the Florida SIP revisions approved by USEPA.

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

PART 212
VISIBLE AND PARTICULATE MATTER EMISSIONS

SUBPART A: GENERAL

Section

SUBPART B: VISIBLE EMISSIONS

Section

SUBPART D: PARTICULATE MATTER EMISSIONS FROM INCINERATORS

Section

SUBPART E: PARTICULATE MATTER EMISSIONS FROM FUEL COMBUSTION EMISSION UNITS

Section

SUBPART K: FUGITIVE PARTICULATE MATTER

SUBPART L: PARTICULATE MATTER EMISSIONS FROM PROCESS EMISSION UNITS

SUBPART N: FOOD MANUFACTURING

SUBPART O: PETROLEUM REFINING, PETROCHEMICAL AND CHEMICAL MANUFACTURING

SUBPART Q: STONE, CLAY, GLASS AND CONCRETE MANUFACTURING

SUBPART R: PRIMARY AND FABRICATED METAL PRODUCTS AND MACHINERY MANUFACTURE

SUBPART S: AGRICULTURE

Section

SUBPART T: CONSTRUCTION AND WOOD PRODUCTS

Section

SUBPART U: ADDITIONAL CONTROL MEASURES

Section

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

SOURCE: Adopted as Chapter 2: Air Pollution, Rules 202 and 203: Visual and Particulate Emission Standards and Limitations, R71-23, 4 PCB 191, filed and effective April 14, 1972; amended in R77-15, 32 PCB 403, at 3 Ill. Reg. 5, p. 798, effective February 3, 1979; amended in R78-10, 35 PCB 347, at 3 Ill. Reg. 39, p. 184, effective September 28, 1979; amended in R78-11, 35 PCB 505, at 3 Ill. Reg. 45, p. 100, effective October 26, 1979; amended in R78-9, 38 PCB

411, at 4 Ill. Reg. 24, p. 514, effective June 4, 1980; amended in R79-11, 43 PCB 481, at 5 Ill. Reg. 11590, effective October 19, 1981; codified at 7 Ill. Reg. 13591; amended in R82-1 (Docket A), at 10 Ill. Reg. 12637, effective July 9, 1986; amended in R85-33 at 10 Ill. Reg. 18030, effective October 7, 1986; amended in R84-48 at 11 Ill. Reg. 691, effective December 18, 1986; amended in R84-42 at 11 Ill. Reg. 1410, effective December 30, 1986; amended in R82-1 (Docket B) at 12 Ill. Reg. 12492, effective July 13, 1988; amended in R91-6 at 15 Ill. Reg. 15708, effective October 4, 1991; amended in R89-7(B) at 15 Ill. Reg. 17710, effective November 26, 1991; amended in R91-22 at 16 Ill. Reg. 7880, effective May 11, 1992; amended in R91-35 at 16 Ill. Reg. 8204, effective May 15, 1992; amended in R93-30 at 18 Ill. Reg. 11587, effective July 11, 1994; amended in R96-5 at 20 Ill. Reg.7605, effective May 22, 1996; amended in R23-18 at 47 Ill. Reg. 12107, effective July 25, 2023; amended in R23-18(A) at 47 Ill. Reg. _____, effective _____.

Section 212.124 Exceptions

a) Sections 212.122 and 212.123 will not apply to emissions of water or water vapor from an emission unit.

b) An emission unit that has obtained an adjusted opacity standard in compliance with Section 212.126 will be subject to that standard rather than the limitations of Section 212.122 or 212.123.

c) Compliance with the particulate regulations of this Part will constitute a defense.

1) For all emission units that are not subject to Chapters 111 or 112 of the CAA and Sections 212.201, 212.202, 212.203 or 212.204 but are subject to Sections 212.122 or 212.123: the opacity limitations of Sections 212.122 and 212.123 will not apply if it is shown that the emission unit was, at the time of emission, in compliance with the applicable particulate emissions limitations of Subparts D through T.

2) For all emission units that are not subject to Chapters 111 or 112 of the CAA but are subject to Sections 212.201, 212.202, 212.203 or 212.204:

A) An exceedance of the limitations of Section 212.122 or 212.123 will constitute a violation of the applicable particulate limitations of Subparts D through T. It will be a defense to a violation of the applicable particulate limitations if, during a subsequent performance test conducted within a reasonable time not to exceed 60 days, under the same operating conditions for the unit and the control devices, and in accordance with Method 5, 40 CFR 60, incorporated by reference in Section 212.113, the owner or operator shows that the emission unit is in compliance with the particulate emission limitations.

B) It will be a defense to an exceedance of the opacity limit if, during a subsequent performance test conducted within a reasonable time not to exceed 60 days, under the same operating conditions of the emission unit and the control devices, and in accordance with Method 5, 40 CFR part 60, Appendix A, incorporated by reference in Section 212.113, the owner or operator shows that the emission unit is in compliance with the allowable particulate emissions limitation while, simultaneously, having visible emissions equal to or greater than the opacity exceedance as originally observed.

d) During times of startup of coal-fired boiler 1 or 2 at the Baldwin Energy Complex, coal-fired boiler 1 or 2 at the Kincaid Power Station, coal-fired boiler 1 at Newton Power Station, or coal-fired boiler 51, 52, 61, or 62 at the Powerton Generating Station, or of malfunction or breakdown of these boilers or the air pollution control equipment serving these boilers, when average opacity exceeds 20 or 30 percent for a six-minute period, as applicable ~~pursuant to~~under Section 212.122(a) or 212.123(a)~~ of this Subpart~~, compliance with Section 212.122(a) or 212.123(a) may alternatively be demonstrated for that six-minute period as follows:

1) Alternative Averaging Period. Compliance for that six-minute period may be determined based on a three-hour average of opacity, utilizing opacity readings for those six minutes and the immediately preceding 174 minutes.

2) Recordkeeping and Reporting

A) Any person relying on the Alternative Averaging Period in sub~~S~~ection ~~212.124~~(d)(1) ~~of this Subpart shall~~must maintain records of ~~such~~the average opacity calculations and ~~shall~~must report ~~such~~the calculations to Illinois EPA as part of the next quarterly excess emissions report for the source.

B) For periods of startup, ~~such~~the report must~~shall~~ include:

i) The date, time, and duration of the startup.

ii) A description of the startup.

iii) The reason(s) for the startup.

iv) An indication of whether ~~or not~~ written startup procedures were followed. If not~~any written startup procedures were not followed~~, the report ~~shall~~must include any departures

from established procedures along withnd any reason the procedures could not be followed.

v) A description of any actions taken to minimize the magnitude or duration of opacity that requires utilization of the Alternative Averaging Period in subsectionSection 212.124(d)(1) of this Subpart.

vi) An explanation whether similar incidents could be prevented in the future and, if so, a description of the actions taken or to be taken to prevent similar incidents in the future.

vii) Confirmation of fulfillment of the requirements of subsSection 212.124(d)(3) of this Subpart.

C) For periods of malfunction and breakdown, thesuch report mustshall include:

i) The date, time, duration (i.e., the length of time during which operation continued with opacity in excess of 20 or 30 percent, as applicable, on a six-minute average basis) until corrective actions were taken or the boiler was taken out of service.

ii) A description of the incident.

iii) Any corrective actions used to reduce the magnitude or duration of opacity that requires utilization of the Alternative Averaging Period in subSsection 212.124 (d)(1) of this Subpart.

iv) Confirmation of fulfillment of the requirements of subSsections 212.124(d)(2)(D) and (d)(3) of this Subpart.

D) Any person who causes or allows the continued operation of a coal-fired boiler during a malfunction or breakdown of the coal-fired boiler or related air pollution control equipment when such continued operation would require reliance on the Alternative Averaging Period in subsSection 212.124(d)(1) of this Subpart to demonstrate compliance with Sections 212.122 or 212.123 of this Subpart, as applicable, mustshall immediately report such incident to the Agency by telephone, facsimile, electronic mail, or such other method as constitutes the fastest available alternative, except as if other-wise provided in the operating permit. ThereaAfter

reporting to the Agency, ~~any the~~such person must~~shall~~ comply with all reasonable directives of the Agency regarding~~with respect to~~ the incident.

3) Work Practices

Any person relying on the Alternative Averaging Period in subs~~S~~ection ~~212.124~~(d)(1) ~~of this Subpart~~ must comply with the following Work Practices.

A) Operate the coal-fired boiler and related air pollution control equipment in a manner consistent with good engineering practice for minimizing opacity during startup, malfunction or breakdown.

B) Use good engineering practices and best efforts to minimize the frequency and duration of operation in startup, malfunction, and breakdown.

e) During any period of start-up at the emission unit designated Kiln 1 or Kiln 2 at the Rain CII Carbon LLC facility located in Robinson, Illinois, when average opacity exceeds 30 percent for a six-minute period, as applicable ~~pursuant to~~under Section 212.123(a) ~~of this Subpart~~, compliance with Section 212.123(a) may alternatively be demonstrated for that six-minute period as follows.

1) Compliance with that six-minute period may be determined based on Test Method 9 (40 C.F.R. Part 60, Appendix A, incorporated by reference in Section 212.113) opacity readings the average of non-consecutive opacity readings during a 1-hour period; provided, however, that compliance may be based on the average of up to three, 1-hour average periods, in the event that compliance is not demonstrated during the preceding hour.

2) For purposes of this subsection (e), "start-up" is defined as the duration from when green coke feed is introduced into the kiln until the temperature at the pyroscrubber inlet servicing the kiln achieves a minimum operating temperature of 1800°F (based on a three-hour rolling average).

(Source: Amended at 47 Ill. Reg._____, effective _____)

Section 212.322 Process Emission Units For Which Construction or Modification Commenced Prior to April 14, 1972

a) Except as further provided in this Part, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any process emission unit for which construction or modification commenced

prior to April 14, 1972, which, either alone or in combination with the emission of particulate matter from all other similar process emission units at a source or premises, exceeds the allowable emission rates specified in subsection (c) of this Section.

b) Interpolated and extrapolated values of the data in subsection (c) of this Section shall be determined by using the equation:

$$E = C + A(P)^{B10}$$

where:

P = process weight rate; and,
E = allowable emission rate; and,

1) For process weight rates up to 27.2 Mg/hr (30 T/hr):

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	1.985	4.10
B	0.67	0.67
C	0	0

2) For process weight rates in excess or 27.2 Mg/hr (30 T/hr):

	Metric	English
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	25.21	55.0
B	0.11	0.11
C	-18.4	-40.0

c) Limits for Process Emission Units For Which Construction or Modification Commenced Prior to April 14, 1972

Metric		English	
P	E	P	E
Mg/hr	kg/hr	T/hr	lbs/hr
0.05	0.27	0.05	0.55
0.1	0.42	0.10	0.87
0.2	0.68	0.20	1.40

0.3	0.89	0.30	1.83
0.4	1.07	0.40	2.22
0.5	1.25	0.50	2.58
0.7	1.56	0.75	3.38
0.9	1.85	1.00	4.10
1.8	2.9	2.00	6.52
2.7	3.9	3.00	8.56
3.6	4.7	4.00	10.40
4.5	5.4	5.00	12.00
9.	8.7	10.00	19.20
13.	11.1	15.00	25.20
18.	13.8	20.00	30.50
23.	16.2	25.00	35.40
27.2	18.15	30.00	40.00
32.0	18.8	35.00	41.30
36.0	19.3	40.00	42.50
41.0	19.8	45.00	43.60
45.0	20.2	50.00	44.60
90.0	23.2	100.00	51.20
140.0	25.3	150.00	55.40
180.0	26.5	200.00	58.60
230.0	27.7	250.00	61.00
270.0	28.5	300.00	63.10
320.0	29.4	350.00	64.90
360.0	30.0	400.00	66.20
400.0	30.6	450.00	67.70
454.0	31.3	500.00	69.00

where:

P = Process weight rate in Mg/hr or T/hr, and
E = Allowable emission rate in kg/hr or lbs/hr.

d) Alternative Standard

1) The owner or operator of the Rain CII Carbon LLC facility located in Robinson, Illinois, ~~shall be~~is allowed to emit particulate matter into the atmosphere in excess of the allowable emission rates specified in subsection (c) applicable to the emission unit designated Kiln 1 or Kiln 2 during any period of time that the temperature of the inlet to the pyroscrubber servicing either emission unit does not achieve a minimum operating temperature of 1800°F during start-up, malfunction, or breakdown (based on a three-hour rolling average).

2) Use of the alternative standard in subsection (d)(1) ~~shall~~must not exceed 720 hours in the aggregate per kiln in a calendar year. It ~~shall~~will not be a violation of this Part to operate the pyroscrubber servicing Kiln 1 or Kiln 2 below the minimum operating temperature in subsection (d)(1) during this time.

3) During any time that Kiln 1 or Kiln 2 is operated while the pyroscrubber servicing the emission unit is not achieving the minimum operating temperature in subsection (d)(1), the owner or operator must:

A) minimize emissions to the extent reasonably practicable;

B) not introduce green coke into the kiln unless or until a minimum operating temperature of 400°F measured at the inlet to the pyroscrubber is achieved; and

C) operate the natural gas-fired burners to minimize the duration that a kiln operates below 1800°F, consistent with technological limitations, manufacturer specifications, and good air pollution control practices for minimizing emissions.

4) The owner or operator must keep and maintain all records necessary to demonstrate compliance with this subsection, including, ~~but not limited to,~~ records of each hour that the pyroscrubber operated below the minimum operating temperature specified in this subsection.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

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

PART 215
ORGANIC MATERIAL EMISSION STANDARDS AND LIMITATIONS

SUBPART A: GENERAL PROVISIONS

Section

SUBPART B: ORGANIC EMISSIONS FROM STORAGE AND LOADING OPERATIONS

Section

SUBPART C: ORGANIC EMISSIONS FROM MISCELLANEOUS EQUIPMENT

Section

SUBPART E: SOLVENT CLEANING

SUBPART F: COATING OPERATIONS

SUBPART H: SPECIAL LIMITATIONS FOR SOURCES IN MAJOR URBANIZED AREAS WHICH ARE NONATTAINMENT FOR OZONE

SUBPART I: ADJUSTED RACT EMISSIONS LIMITATIONS

SUBPART K: USE OF ORGANIC MATERIAL

SUBPART N: VEGETABLE OIL PROCESSING

SUBPART P: PRINTING AND PUBLISHING

SUBPART Q: LEAKS FROM SYNTHETIC ORGANIC CHEMICAL AND POLYMER MANUFACTURING EQUIPMENT

SUBPART R: PETROLEUM REFINING AND RELATED INDUSTRIES; ASPHALT MATERIALS

Section

SUBPART S: RUBBER AND MISCELLANEOUS PLASTIC PRODUCTS

Section

SUBPART T: PHARMACEUTICAL MANUFACTURING

Section

SUBPART U: COKE MANUFACTURING AND BY-PRODUCT RECOVERY

SUBPART V: AIR OXIDATION PROCESSES

SUBPART W: AGRICULTURE

SUBPART X: CONSTRUCTION

SUBPART Y: GASOLINE DISTRIBUTION

SUBPART Z: DRY CLEANERS

SUBPART AA: PAINT AND INK MANUFACTURING

SUBPART BB: POLYSTYRENE PLANTS

SUBPART PP: MISCELLANEOUS FABRICATED PRODUCT MANUFACTURING PROCESSES

Section
215.920 Applicability
215.923 Permit Conditions
215.926 Control Requirements

SUBPART QQ: MISCELLANEOUS FORMULATION MANUFACTURING PROCESSES

Section
215.940 Applicability
215.943 Permit Conditions
215.946 Control Requirements

SUBPART RR: MISCELLANEOUS ORGANIC CHEMICAL MANUFACTURING PROCESSES

Section
215.960 Applicability
215.963 Permit Conditions
215.966 Control Requirements

215.APPENDIX A Rule into Section Table
215.APPENDIX B Section into Rule Table
215.APPENDIX C Past Compliance Dates
215.APPENDIX D List of Chemicals Defining Synthetic Organic Chemical and Polymer Manufacturing
215.APPENDIX E Reference Methods and Procedures
215.APPENDIX F Coefficients for the Total Resource Effectiveness Index (TRE) Equation

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

SOURCE: Adopted as Chapter 2: Air Pollution, Rule 205: Organic Material Emission Standards and Limitations, R71-23, 4 PCB 191, filed and effective April 14, 1972; amended in R77-3, 33 PCB 357, at 3 Ill. Reg. 18, p. 41, effective May 3, 1979; amended in R78-3 and R78-4, 35 PCB 75, at 3 Ill. Reg. 30, p. 124, effective July 28, 1979; amended in R80-5 at 7 Ill. Reg. 1244, effective January 21, 1983; codified at 7 Ill. Reg. 13601 Corrected at 7 Ill. Reg. 14575; amended in R82-14 at 8 Ill. Reg. 13254, effective July 12, 1984; amended in R83-36 at 9 Ill. Reg. 9114, effective May 30, 1985; amended in R82-14 at 9 Ill. Reg. 13960, effective August 28, 1985; amended in R85-28 at 11 Ill. Reg. 3127, effective February 3, 1987; amended in R82-14 at 11 Ill. Reg. 7296, effective April 3, 1987; amended in R85-21(A) at 11 Ill. Reg. 11770, effective June 29, 1987; recodified in R86-39 at 11 Ill. Reg. 13541; amended in R82-14 and R86-12 at 11 Ill. Reg. 16706, effective September 30, 1987; amended in R85-21(B) at 11 Ill. Reg. 19117,

effective November 9, 1987; amended in R86-36, R86-39, R86-40 at 11 Ill. Reg. 20829, effective December 14, 1987; amended in R82-14 and R86-37 at 12 Ill. Reg. 815, effective December 24, 1987; amended in R86-18 at 12 Ill. Reg. 7311, effective April 8, 1988; amended in R86-10 at 12 Ill. Reg. 7650, effective April 11, 1988; amended in R88-23 at 13 Ill. Reg. 10893, effective June 27, 1989; amended in R88-30(A) at 14 Ill. Reg. 3555, effective February 27, 1990; emergency amendments in R88-30A at 14 Ill. Reg. 6421, effective April 11, 1990, for a maximum of 150 days; amended in R88-19 at 14 Ill. Reg. 7596, effective May 8, 1990; amended in R89-16(A) at 14 Ill. Reg. 9173, effective May 23, 1990; amended in R88-30(B) at 15 Ill. Reg. 3309, effective February 15, 1991; amended in R88-14 at 15 Ill. Reg. 8018, effective May 14, 1991; amended in R91-7 at 15 Ill. Reg. 12217, effective August 19, 1991; amended in R91-10 at 15 Ill. Reg. 15595, effective October 11, 1991; amended in R89-7(B) at 15 Ill. Reg. 17687, effective November 26, 1991; amended in R91-9 at 16 Ill. Reg. 3132, effective February 18, 1992; amended in R91-24 at 16 Ill. Reg. 13555, effective August 24, 1992; amended in R91-30 at 16 Ill. Reg. 13849, effective August 24, 1992; amended in R98-15 at 22 Ill. Reg. 11427, effective June 19, 1998; amended in R12-24 at 37 Ill. Reg. 1683, effective January 28, 2013; expedited correction at 37 Ill. Reg. 16858, effective January 28, 2013; amended in R19-1 at 44 Ill. Reg.15032, effective September 4, 2020; amended in R23-18(A) at Ill. Reg. _____, effective _____.

Section 215.302 Alternative Standard

a) Emissions of organic material in excess of those permitted by Section 215.301 are allowable if thesuch emissions are controlled by one of the following methods:

1)~~a)~~ Flame, thermal or catalytic incineration so as either to reduce thesuch emissions to 10 ppm equivalent methane (molecular weight 16) or less, or to convert 85 percent of the hydrocarbons to carbon dioxide and water; ~~or,~~

2)~~b)~~ A vapor recovery system which adsorbs and/or condenses at least 85 percent of the total uncontrolled organic material that would otherwise be emitted to the atmosphere; or,

3)~~c)~~ Any other air pollution control equipment approved by the Agency capable of reducing by 85 percent or more the uncontrolled organic material that would be otherwise emitted to the atmosphere.

b) Compliance with the permitted emissions of organic material under subsection (a) during any period of start-up at the emission unit designated Kiln 1 or Kiln 2 at the Rain CII Carbon LLC facility located in Robinson, Illinois, must be determined by the average of hourly emissions of organic material during start-up of the emission unit~~; provided, however, that~~ but ~~in no event shall~~ the averaging period of any single start-up must not exceed twenty-four (24) hours. For purposes of the alternative standard in this subsection (b), "start-up" is defined as the duration from when green coke feed is introduced into the kiln until the temperature at the pyroscrubber inlet servicing the kiln achieves a minimum

operating temperature of 1800°F (based on a 3-hour rolling average). During any period of start-up, the owner or operator must:

1) minimize emissions to the extent reasonably practicable;

2) not introduce green coke into the kiln until a minimum operating temperature of 400°F measured at the inlet to the pyroscrubber is achieved; ~~and~~

3) operate the natural gas-fired burners to minimize the duration of start-up, consistent with technological limitations, manufacturer specifications, and good air pollution control practices for minimizing emissions; and~~.~~

4) ~~The owner or operator must~~ keep and maintain all records necessary to demonstrate compliance with this subsection, including, ~~but not limited to,~~ records of the duration and frequency of each start-up period.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

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

PART 216
CARBON MONOXIDE EMISSIONS

SUBPART A: GENERAL PROVISIONS

SUBPART B: FUEL COMBUSTION EMISSION SOURCES

SUBPART C: INCINERATORS

SUBPART N: PETROLEUM REFINING AND CHEMICAL MANUFACTURE

SUBPART O: PRIMARY AND FABRICATED METAL PRODUCTS

AUTHORITY: Implementing Section 10 and authorized by Section 27 of the Environmental Protection Act (415 ILCS 5/10 and 27).

SOURCE: Adopted as Chapter 2: Air Pollution, Rule 206: Carbon Monoxide Emissions, R71-23, 4 PCB 191, April 13, 1972, filed and effective April 14, 1972; amended at 3 Ill. Reg. 47, p. 92, effective November 8, 1979; amended at 4 Ill. Reg. 24, p. 514, effective June 4, 1980; codified at 7 Ill. Reg. 13607; amended in R87-18 at 12 Ill. Reg. 20774, effective December 6, 1988; amended in R90-23 at 16 Ill. Reg. 18075, effective November 13, 1992; amended in R23-18(A) at 47 Ill. Reg. _____, effective _____.

Section 216.103 Definitions

The definitions contained in 35 Ill. Adm. Code 201 and 211 apply to this Part. The definitions for "catalytic cracking unit" and "hot standby" in 40 C.F.R. 63.1579, incorporated by reference in Section 216.104, apply to Section 216.361(d) ~~of this Part~~. The definition of "startup" in 40 C.F.R. 63.2, incorporated by reference in Section 216.104, applies to Section 216.361(d) ~~of this Part~~. The definitions of "startup" and "shutdown" in 40 C.F.R. 63.7575, incorporated by reference in Section 216.104, apply to Section 216.121(b) ~~of this Part~~.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

Section 216.104 Incorporations by Reference

The following materials are incorporated by reference: non-dispersive infrared method, 40 CFR 60, Appendix A, Method 10 (1982); 40 C.F.R. Part 63, Subpart A (2022); 40 C.F.R. Part 63, Subpart UUU (2022); 40 C.F.R. 63, Subpart DDDDD (2022). This Section incorporates no later editions or amendments.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

SUBPART B: FUEL COMBUSTION EMISSION SOURCES

Section 216.121 Fuel Combustion Emission Sources

a) ~~No~~ A person must not~~shall~~ cause or allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission source with actual heat input greater than 2.9 MW (10 mmbtu/hr) to exceed 200 ppm, corrected to 50 percent excess air.

b) ~~Notwithstanding~~Despite subsection (a), during periods of startup and shutdown, any new or existing fuel combustion emission source can elect to comply with subsection (a) or the alternate standards for these operating modes in 40 C.F.R. 63, Subpart DDDDD, Table 3 Items 5 and 6, 40 C.F.R. 63.7500(a)(3) and (f), 40 C.F.R. 63.7505(e), 40 C.F.R. 63.7535(b), and 40 C.F.R. 63.7555(d)(9)-(12), incorporated by reference in Section 216.104.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

SUBPART N: PETROLEUM REFINING AND CHEMICAL MANUFACTURE

Section 216.361 Petroleum and Petrochemical Processes

a) A~~No~~ person must not~~shall~~ cause or allow the emission of a carbon monoxide waste gas stream into the atmosphere from a petroleum or petrochemical process unless ~~such~~ the waste gas stream is burned in a direct flame afterburner or carbon monoxide boiler so that the resulting concentration of carbon monoxide in the~~such~~ waste gas stream is less than or equal to 200 ppm corrected to 50 percent excess air, or the~~such~~ waste gas stream is controlled by other equivalent air pollution control equipment approved by the Agency according to the provisions of 35 Ill. Adm. Code 201.

b) ~~Notwithstanding~~ Despite subsection (a), any existing petroleum or petrochemical process using catalyst regenerators of fluidized catalytic converters equipped for in situ combustion of carbon monoxide, may emit a carbon monoxide waste gas stream into the atmosphere if the carbon monoxide concentration of the~~such~~ waste gas stream is less than or equal to 750 ppm corrected to 50 percent excess air.

c) ~~Notwithstanding~~ Despite subsection (a), any new petroleum or petrochemical process using catalyst regenerators of fluidized catalytic converters equipped for in situ combustion of carbon monoxide, may emit a carbon monoxide waste gas stream into the atmosphere if the carbon monoxide concentration of the~~such~~ waste gas stream is less than or equal to 350 ppm corrected to 50 percent excess air.

d) ~~Notwithstanding~~Despite subsections (a) through (c), during periods of startup and hot standby, any new or existing petroleum catalytic cracking units can elect to comply with subsections (a) through (c) or the alternate limitation for these operating modes in 40 C.F.R. 63 Subpart UUU Tables 9, 10, 14, and 41, 40 C.F.R. 63.1565(a)(5), 40 C.F.R. 63.1570(c) and (f), 40 C.F.R. 63.1572(c), and 40 C.F.R. 63.1576(a)(2) and (d), incorporated by reference in Section 216.104.

(Source: Amended at 47 Ill. Reg. _____, effective _____)

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

PART 217
NITROGEN OXIDES EMISSIONS
SUBPART A: GENERAL PROVISIONS

Section
Section

SUBPART B: NEW FUEL COMBUSTION EMISSION SOURCES

Section

SUBPART C: EXISTING FUEL COMBUSTION EMISSION UNITS

Section

SUBPART D: NO_x GENERAL REQUIREMENTS

Section

SUBPART E: INDUSTRIAL BOILERS

Section

SUBPART F: PROCESS HEATERS

SUBPART G: GLASS MELTING FURNANCES

SUBPART H: CEMENT AND LIME KILNS

SUBPART I: IRON AND STEEL AND ALUMINUM MANUFACTURING

SUBPART K: PROCESS EMISSION SOURCES

SUBPART M: ELECTRICAL GENERATING UNITS

SUBPART O: CHEMICAL MANUFACTURE

SUBPART Q: STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES AND TURBINES

SUBPART T: CEMENT KILNS

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

SUBPART V: ELECTRIC POWER GENERATION

SUBPART W: NO_x TRADING PROGRAM FOR ELECTRICAL GENERATING UNITS

SUBPART X: VOLUNTARY NO_x EMISSIONS REDUCTION PROGRAM

217.840 Agency Action
217.845 Emissions Determination Methods
217.850 Emissions Monitoring
217.855 Reporting
217.860 Recordkeeping
217.865 Enforcement

217.APPENDIX A Rule into Section Table
217.APPENDIX B Section into Rule Table
217.APPENDIX C Compliance Dates
217.APPENDIX D Non-Electrical Generating Units
217.APPENDIX E Large Non-Electrical Generating Units
217.APPENDIX F Allowances for Electrical Generating Units
217.APPENDIX G Existing Reciprocating Internal Combustion Engines Affected by the NO_x SIP Call
217.APPENDIX H Compliance Dates for Certain Emissions Units at Petroleum Refineries

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

Source: Adopted as Chapter 2: Air Pollution, Rule 207: Nitrogen Oxides Emissions, R71-23, 4 PCB 191, April 13, 1972, filed and effective April 14, 1972; amended at 2 Ill. Reg. 17, p. 101, effective April 13, 1978; codified at 7 Ill. Reg. 13609; amended in R01-9 at 25 Ill. Reg. 128, effective December 26, 2000; amended in R01-11 at 25 Ill. Reg. 4597, effective March 15, 2001; amended in R01-16 and R01-17 at 25 Ill. Reg. 5914, effective April 17, 2001; amended in R07-18 at 31 Ill. Reg. 14254, effective September 25, 2007; amended in R07-19 at 33 Ill. Reg. 11999, effective August 6, 2009; amended in R08-19 at 33 Ill. Reg. 13345, effective August 31, 2009; amended in R09-20 at 33 Ill. Reg. 15754, effective November 2, 2009; amended in R11-17 at 35 Ill. Reg. 7391, effective April 22, 2011; amended in R11-24 at 35 Ill. Reg. 14627, effective August 22, 2011; amended in R11-08 at 35 Ill. Reg. 16600, effective September 27, 2011; amended in R09-19 at 35 Ill. Reg. 18801, effective October 25, 2011; amended in R15-21 at 39 Ill. Reg. 16213, effective December 7, 2015; amended in R23-18(A) at 47 Ill. Reg. _____, effective _____.

SUBPART O: CHEMICAL MANUFACTURE

Section 217.381 Nitric Acid Manufacturing Processes

a) New Weak Nitric Acid Processes. ~~No~~ A person ~~shall~~ must not cause or allow the emission of nitrogen oxides into the atmosphere from any new weak nitric acid manufacturing process to exceed the following standards and limitations:

1) 0.75~~1.5~~ kg of nitrogen oxides (expressed as nitrogen dioxide) per metric tonne of acid produced (100 percent acid basis) (1.5 ~~3.0~~ lbs/T)), 30-day rolling average, rolled daily, during all Operating Periods (including during Startup and Shutdown);

2) Visible emissions in excess of 5 percent opacity, during all Operating Periods except during Startup and Shutdown;

3) During Startup and Shutdown, as defined in subsection (e) ~~below~~, visible emissions must~~shall~~ be controlled through:

A) Operating in a manner consistent with good air pollution control practices for minimizing emissions;

B) Maintaining a log of Startup and Shutdown events; and

C) Operating ~~in~~ according to~~ance with~~ written Startup and Shutdown procedures that are specifically developed to minimize Startup emissions, duration of individual starts, and frequency of Startups.

4) The limitations on visible emissions in this section are in lieu of the limitations in 35 Ill. Adm. Code 212.123.

5)~~3)~~ 0.05 kg of nitrogen oxides (expressed as nitrogen dioxide) per metric tonne of acid produced (100 percent acid basis) from any acid storage tank vents (0.1 lbs/T).

6) In determining compliance with subsection~~paragraph~~ (a)(1), during process operating periods where there is little or no acid production (e.g., Startup or Shutdown), the average hourly acid production rate ~~shall~~must be determined from the data collected over the previous 30 days of normal acid production periods.

b) Existing Weak Nitric Acid Processes. ~~No person shall~~A person must not cause or allow the emission of nitrogen oxides into the atmosphere from any existing weak nitric acid manufacturing process to exceed the following standards and limitations:

1) 2.75 kg of nitrogen oxides (expressed as nitrogen dioxide) per metric tonne of acid produced (100 percent acid basis) (5.5 lbs/T);

2) Visible emissions in excess of 5 percent opacity;

3) 0.1 kg of nitrogen oxides (expressed as nitrogen dioxide) per metric tonne of acid produced (100 percent acid basis) from any acid storage tank vents (0.2 lbs/T).

c) Concentrated Nitric Acid Processes. ~~No~~ A person ~~shall~~ must not cause or allow the emission of nitrogen oxides into the atmosphere from any concentrated nitric acid manufacturing process to exceed the following standards and limitations:

1) 1.5 kg of nitrogen oxides (expressed as nitrogen dioxide) per metric tonne of acid produced (100 percent acid basis)(3.0 lbs/T);

2) 225 ppm of nitrogen oxides (expressed as nitrogen dioxide) in any effluent gas stream emitted into the atmosphere;

3) Visible emissions~~emisisons~~ in excess of 5 percent opacity.

d) Nitric Acid Concentrating Processes. ~~No~~ A person ~~shall~~ must not cause or allow the emission of nitrogen oxides into the atmosphere from any nitric acid concentrating process to exceed the following limitations:

1) 1.5 kg of nitrogen oxides (expressed as nitrogen dioxide) per metric tonne of acid produced (100 percent acid basis) (3.0 lbs/T);

2) Visible emissions~~emisisons~~ in excess of 5 percent opacity.

e) Definitions for purposes of this section:

1) "Operating Periods" ~~shall~~ mean periods during which a process is producing nitric acid and nitrogen oxides are emitted. Operating Periods begin at the initiation of Startup, end at the completion of Shutdown, and include all periods of ~~m~~Malfunction.

2) "Shutdown" ~~shall~~ means the cessation of nitric acid production operations of the process for any reason. Shutdown begins at the time the feed of ammonia to the process ceases and ends the earlier of three hours later or the cessation of feed of compressed air to the process.

3) "Startup" ~~shall~~ means the process of initiating nitric acid production operations at a process. Startup begins one hour prior to the initiation of the feed of ammonia to the process and ends no more than five hours after such initiation of the feed of ammonia.

(Source: Amended at 47 Ill. Reg. _____, effective _____)