

ILLINOIS POLLUTION CONTROL BOARD
June 25, 2015

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STATE OF ILLINOIS
Pollution Control Board

IN THE MATTER OF:)
)
AMENDMENTS TO 35 ILL. ADM. CODE)
PART 214, SULFUR LIMITATIONS, PART) R15-21
217, NITROGEN OXIDES EMISSIONS,) (Rulemaking - Air)
AND PART 225, CONTROL OF EMISSIONS)
FROM LARGE COMBUSTION SOURCES)

 ORIGINAL

HEARING OFFICER ORDER

On April 28, 2015, the Illinois Environmental Protection Agency (IEPA) filed a rulemaking generally proposing to control emissions of sulfur dioxide (SO₂) in and around areas designated as nonattainment with respect to the 2010 SO₂ National Ambient Air Quality Standard. The rulemaking was filed pursuant to Sections 4, 10, 27, 28, and 28.2 of the Environmental Protection Act (415 ILCS 5/4, 10, 27, 28, 28.2 (2012)) and Section 102.202 of the Board's procedural rules (35 Ill. Adm. Code 102.202).

Three hearings have been scheduled in this rulemaking. The first hearing will take place at 9:00 a.m. on July 8, 2015 in Springfield. Pre-filed testimony was due on June 8, 2015, and pre-filed questions must be filed by June 26, 2015 for the first hearing. The second hearing will take place at 10:00 a.m. on July 29, 2015 in Joliet. The third hearing will take place at 10:30 a.m. on August 4, 2015 in Pekin. Pre-filed testimony must be filed by July 17, 2015, and pre-filed questions must be filed by July 24, 2015 for the second and third hearings.

Attached to this order are Board staff questions for the witnesses of IEPA. These questions will be taken up at the first hearing. Opportunities for other participants attending the hearing to ask questions will be provided.

IT IS SO ORDERED.



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ATTACHMENT TO HEARING OFFICER ORDER
JUNE 25, 2015
BOARD STAFF QUESTIONS FOR FIRST HEARING

The following questions have been prepared for the Illinois Environmental Protection Agency (IEPA) based on the Board's review of IEPA's proposal. The Board asks that IEPA please respond to the following questions.

IEPA's Technical Support Document

Proposed Fuel Standards

1. Table 1 shows 2011 allowable sulfur dioxide (SO₂) emissions at "point and area" sources in Illinois based on existing SO₂ limits for fuel. Technical Support Document (TSD) at 13.
 - a. A column is titled "Point Sources Allowable Emission." Clarify whether the allowable emissions in Table 1 include both point and area sources.
 - b. Explain why IEPA used 2011 fuel use rather than more recent fuel use data.
 - c. Explain how IEPA determined allowable emissions in Table 1.
 - d. Provide IEPA's estimate of annual allowable SO₂ emissions under the proposed limits on sulfur content of fuel.
 - e. Provide IEPA's estimate of the annual SO₂ reductions that would be achieved under the proposed fuel standards.
 - f. If possible, provide IEPA's estimate of annual allowable SO₂ emissions and emission reductions in the Pekin and Lemont nonattainment areas.
2. IEPA states that statewide regulation of sulfur content in fuel is "appropriate, particularly as fuel complying with IEPA's proposed limitations is widely available in Illinois and is in fact already used by the majority of commercial and industrial sources in Illinois." Statement of Reasons (SR) at 7. In the Technical Support Document, IEPA provides in Table 5 trends in sales of various types of fuel for commercial and industrial uses showing a large percentage of fuel oil sales being ultra low sulfur diesel. TSD at 19-20. If possible, provide updated Table 5 data for 2014.
3. Assuming most residual and distillate fuel oils being used in Illinois already meet the proposed sulfur content limits (see SR at 7, TSD at 19-20), comment on whether reduction of SO₂ emissions achieved by compliant fuel have previously been accounted for in attainment modeling for the one-hour SO₂ National Ambient Air Quality Standards (NAAQS).

4. Citing to a 2006 document, IEPA notes that “[the United States Environmental Protection Agency (USEPA)] estimated that a transition to [ultra low sulfur diesel] would increase the price by approximately \$0.04 to \$0.05 per gallon.” TSD at 22. Provide the current price difference between the ultra low sulfur diesel and other types of diesel fuel (low sulfur or high sulfur).
5. Comment on the availability of ultra low sulfur diesel across Illinois, any price variability across Illinois, and whether ultra low sulfur diesel is available to the facilities identified in Appendix A to the TSD.

Source-Specific SO₂ Limits

6. Regarding emission reductions from the eight sources identified in proposed Section 214.601, IEPA states that the sources will comply by switching fuels, additional control equipment, or other operational changes. TSD at 14.
 - a. Identify the specific control measures that will be used for each of the units listed in Table 3 of the Technical Support Document. TSD at 15-16.
 - b. State whether each control measure is already being used or will be employed upon adoption of the proposed regulations.
 - c. Provide any cost information IEPA has pertaining to implementing these control measures.
 - d. Provide cost effectiveness data for each control measure in terms of dollars per pound.
7. Among the eight sources identified in proposed Section 214.601, Owens Corning in Summit, IL and Ingredion Bedford Park in Bedford Park, IL are included. Both are located in Cook County but outside the Lemont nonattainment area. TSD at 6.
 - a. Explain why these two sources are included in proposed Section 214.601.
 - b. Identify whether each source is considered a major source of SO₂ emissions.
 - c. Provide reported annual SO₂ emissions from each source for years 2007 through 2009.
 - d. Comment on whether IEPA included these sources in its June 2, 2011 recommendation to USEPA for SO₂ nonattainment area designations. TSD at 6.
8. Explain why the following SO₂ emission sources in Cook and Will Counties do not appear in proposed Section 214.601: Corn Products International Inc., Saint-Gobain Containers Inc., Congress Development Co., Koppers Inc., Carmeuse Lime Inc., Midwest

Generation – Crawford, Midwest Generation – Fisk, Saint Mary and Elizabeth Med. Center, CITGO Petroleum Corp., and Exxon Mobil Oil Corp.

9. IEPA states, “for a number of affected units, the proposed emission limits are already being achieved, but the units currently have higher allowable emission rates under current rules.” TSD at 14. Identify the sources that are already meeting the proposed emission limits.
10. In the Agency Analysis of Economic and Budgetary Effects of Proposed Rulemaking (Analysis) submitted with the rule proposal, IEPA states that it “determined that the proposed limits will be met by most sources through the reduction of allowable rates in source permits.” Analysis at 2. Explain whether IEPA anticipates that meeting the proposed limits through reduction of allowable rates will impact power generation and therefore sales and revenue.
11. Provide IEPA’s estimate of the overall annual reduction of SO₂ emissions under the proposed Subpart AA limits. Provide the annual reduction of SO₂ emissions in each nonattainment area for Lemont and Pekin.

Questions on Specific Provisions

Section 214.101 Measurement Methods

12. In subsection (a), a method to measure SO₂ is by “certified” continuous emissions monitoring system. Identify the entity that certifies a continuous emissions monitoring system.

Section 214.102 Abbreviations and Units

13. The term “btu” is defined at 35 Ill. Adm. Code 211.750 as “the quantity of heat required to raise one pound of water from 60°F to 61°F.” Comment on whether the abbreviation in the proposed amendments to Section 214.102 needs to include a reference to “(60 F)”.

Section 214.104 Incorporations by Reference

14. In subsection (c), the American Society for Testing and Materials (ASTM) standards incorporated by reference are more than 25 years old. Comment on whether these standards need to be updated to reflect any revised ASTM standards.

Sections 214.161 and 214.305 Exemptions

Note that the following two questions refer to IEPA’s proposed language as contained in its Motion to Amend dated April 30, 2015.

15. Proposed Section 214.305(b) exempts distillate fuel oil up to a combined total of 150,000 gallons per calendar year used by specified units at Caterpillar Inc. Technical Center in

Mossville, Illinois for purposes of research and development or testing of equipment intended for sale outside of Illinois. Comment on whether the activities covered by this exemption require the use of higher sulfur content distillate fuel. If not, explain the proposed intent.

16. Proposed Sections 214.161(c) and (d), and 214.305(c) and (d), allow extended compliance deadlines for certain units at Midwest Generation's stations and Caterpillar's Montgomery facility that have existing stocks of noncompliant fuel. For each source covered by these exemptions, identify the quantity of noncompliant fuel that will be consumed by each source under these exemptions. Also, comment on whether the compliance date should be limited to the volume of distillate fuel stockpiled before January 1, 2016.

Sections 214.162 & 214.421 Combination of Fuels; Combination of Fuels at Steel Mills in Metropolitan Areas

17. In Sections 214.162(d) and 214.421(d), is the value of "S_d" on or after January 1, 2017 in English units 0.015 lb/mmBtu (pounds per million British Thermal Units) instead of 0.0015 lb/mmBtu based on the conversion factor in Section 214.102(b)?

Section 214.603 Emission Limitations

18. Proposed Section 214.603(e)(2) requires Midwest Generation's Powerton station to comply with the proposed SO₂ limit on a 30-operating day rolling average basis. See TSD 9-10. Although the TSD at 9-10 explains the methodology and analysis IEPA used to determine the 30-day average limit would be in accordance with USEPA guidance, IEPA did not specifically identify the reason a rolling 30-day average is necessary for Powerton. Explain the rationale for allowing the use of 30-day rolling average to comply with the SO₂ limits at the Powerton station.

Section 214.604 Monitoring and Testing

19. Describe when the results of the monitoring and testing done in accordance with proposed Section 214.604 are required to be submitted to IEPA.

Section 214.605 Recordkeeping and Reporting

20. Although proposed Section 214.605(e) requires the owner or operator of a source to notify IEPA of "any exceedance of an applicable emission limitation," the proposed minimum requirements that follow do not require the notification include a description of the exceedance. As proposed, the minimum requirements for the notification only pertain to deviations and corrective or preventative measures taken. Address whether the minimum requirements listed should also refer to a description of any exceedance of an applicable emission limitation in Section 214.603.

Section 225.291 Combined Pollutant Standard: Purpose

21. Comment on replacing the phrase “such as” with “including” to be consistent with proposed Section 225.292(b).

Section 225.293 Combined Pollutant Standard: Notice of Intent

22. IEPA proposes to add subsection (d) to Section 225.293. Comment on instead adding this provision as a new subsection (f) to Section 225.292 and the following language change:

Additionally, the owner or operator of a specified EGU that, on or after January 1, 2015, changes the type of primary fuel combusted by the unit or the control device(s) installed and operating on the unit must notify the Agency of such change ~~by January 1, 2017, or~~ within 30 days of the completion of such change, ~~whichever is later.~~

Nonattainment Modeling

23. Provide a copy of documents listed below that pertain to Illinois nonattainment area designations. These documents are referenced in the TSD (TSD at 6) and 78 Red. Reg. 47195 (August 5, 2013).
- a. IEPA Letter dated June 2, 2011 and accompanying “Technical Support Document: Recommended Attainment/Nonattainment Designations in Illinois for the 2010 Revised Primary 1-Hour SO₂ National Ambient Air Quality Standard (AQPSTR 11-02).
 - b. USEPA Region 5 Letter dated February 6, 2013 in response to Illinois’ air quality designation recommendations and accompanying “Draft Technical Support Document: Illinois Area Designations For the 2010 SO₂ Primary National Ambient Air Quality Standard.”
24. USEPA Region 5’s Letter dated February 6, 2013 modified IEPA’s recommended nonattainment area designations but did not include any maps. Provide maps of the Pekin and Lemont nonattainment areas as designated by USEPA depicting the boundaries of the counties and townships, the facilities identified in Subpart AA, and the SO₂ monitors.
25. In its June 2, 2011 recommendation to USEPA regarding the nonattainment area designation encompassing Lemont, DuPage, and Lockport Townships, IEPA identified three particular sources of SO₂ emissions impacting the Lemont monitor: Oxbow Midwest Calcining, CITGO Petroleum Corp., and Midwest Generation’s Will County station. Two sources (Oxbow Midwest Calcining and Midwest Generation’s Will County station) are addressed in the rulemaking proposal, but CITGO is not. Describe SO₂

emissions from this CITGO facility. Explain why it is not addressed in proposed Part 214 Subpart AA.

26. Midwest Generation's Joliet facility is located outside the Lemont nonattainment area and is not listed as one of the culpable sources of SO₂ emissions impacting the Lemont monitor in IEPA's June 2011 submittal to USEPA. . Explain the purpose of including Midwest Generation's Joliet facility in proposed Subpart AA.
27. Midwest Generation requested that Will County 4 be exempted from the requirement to install flue gas desulfurization (FGD) equipment in lieu of Joliet 6 having such an exemption. SR at 12. In addition, Joliet 6, 7, and 8 and Will County 3 will convert to natural gas or diesel fuel. *Id.*
 - a. Provide further detail on the SO₂ emission reductions expected from these fuel conversions.
 - b. Explain any emissions impact of these conversions on estimated emissions for Will County 4 without FGD equipment.
 - c. Provide an estimate of the cost for making a similar fuel conversion at Will County 4 and compare that cost estimate with the above fuel conversions.
 - d. Explain whether the emissions impact of a fuel conversion at Will County 4 would be similar to that of the above fuel conversions.
 - e. Describe future plans for Will County 4 including its expected lifespan.
28. IEPA states that the statewide application of the proposed fuel sulfur content limits "is intended to aid attainment planning efforts regarding future attainment designations for the 2010 SO₂ standard." SR at 7. Further, IEPA notes, "USEPA intends to engage in at least two additional rounds of attainment designations for the SO₂ standard based on monitoring and/or modeling data submitted by states, which may result in additional [nonattainment areas] in Illinois." *Id.*, *see also* TSD at 7.
 - a. Describe any actions taken by USEPA or IEPA with regard to additional designations, including any guidance documents, potential time-frames for IEPA recommendations, and additional data collection and modeling.
 - b. Comment on IEPA's plans for submitting a recommendation to USEPA for additional designations and explain how the proposed statewide fuel standards will aid in the planning efforts.
29. IEPA proposes changes to Section 225.298 relating to restrictions under the Combined Pollutant Standard on transferring SO₂ emission allowances. Similarly, the Multi-Pollutant Standard prohibits certain transfers of SO₂ emission allowances. 35 Ill. Adm. Code 225.233(f)(2).

- a. Explain whether the proposed changes to Section 225.298 will impact SO₂ emissions in Illinois or in the Lemont nonattainment area.
 - b. Comment on whether the prohibition on selling or trading emission allowances to units in Ohio, Indiana, Illinois, Wisconsin, Michigan, Kentucky, Missouri, Iowa, Minnesota, or Texas in Section 225.298(a) will assist IEPA's efforts in addressing the two nonattainment areas or additional nonattainment areas that may be designated by USEPA for the 2010 one-hour SO₂ NAAQS in the future.
 - c. Comment on whether the reductions in SO₂ due to the allowances surrendered to IEPA on an annual basis pursuant to Section 225.233(f)(2) will assist IEPA's efforts in addressing the two nonattainment areas or additional nonattainment areas that may be designated by USEPA for the 2010 one-hour SO₂ NAAQS in the future.
 - d. Explain whether IEPA relied on, or plans to rely on, SO₂ allowances surrendered pursuant to Section 225.233(f)(2) to address attainment of the one-hour SO₂ NAAQS.
 - e. If not, explain why IEPA does not intend to rely upon SO₂ allowances surrendered pursuant to Section 225.233(f)(2) to address attainment of the one-hour SO₂ NAAQS.
 - f. USEPA has stated that in contrast to the Clean Air Interstate Rule, the Cross-State Air Pollution Rule ensures that no state would significantly contribute to nonattainment or interfere with maintenance of areas in attainment within its own state or neighboring states. 76 Fed. Reg. 48270, 48294, 48320-48321 (August 8, 2011). Comment on whether the trading restrictions in Section 225.298 and Section 225.233(f)(2) should be reevaluated.
30. IEPA states that it will submit the proposed rules to USEPA for parallel processing for inclusion in Illinois' state implementation plan. TSD at 6. Describe the status of IEPA's submittal to USEPA and any response from USEPA.

IEPA Outreach

31. In Appendix A to the TSD, IEPA provides a list of more than approximately 700 "Illinois Sources Potentially Affected by Proposed Amendments to Liquid Fuel Rules." Describe outreach efforts by IEPA to these sources or representative organizations of these sources or fuel suppliers concerning IEPA's proposed fuel sulfur content limits.
32. Sections 214.161(c), (d) and 214.305(b), (c), (d) provide exemptions from fuel sulfur content limits allowing certain facilities to use noncompliant fuels for research or existing fuel stocks. *See* TSD at 8. Comment on whether IEPA sought information from affected

entities listed in Appendix A to the TSD regarding their concerns with any specific fuel use limitations or utilization of existing fuel stocks.

Joint Committee on Administrative Rules

The following questions are based on comments submitted by the Joint Committee on Administrative Rules to the Board following first notice publication of the proposed rule language in the *Illinois Register*.

33. Section 214.101(a) ends with a citation to Ill. Rev. Stat. 1989, ch. 111 1/2, par. 1010, but the section does not appear to contain any statutory text. Comment on if this reference should be deleted.
34. In Section 214.162(b), comment on if this subsection should be changed to a descriptive “Where...” statement as part of Section 214.162(a).
35. In Section 214.201(c), does the phrase “so granted” only apply to “emission standard” or does it also apply to “exemption”? If yes, please provide clarifying language.
36. Section 214.300 refers to “Subparts N et seq.” There is no Subpart N. Comment on if this reference should be deleted.
37. In Section 225.298(a)(1), comment on deleting “of any vintage” or otherwise clarify what “vintage” means in this context.
38. In Section 214.161, comment on whether the reference to Midwest Generation should be updated to reflect the acquisition of those plants by NRG Energy, Inc.

Corrections to First Notice Publication Language

39. Following first notice publication in the *Illinois Register*, the Board intends to make the following corrections at second notice.
 - a. In Section 214.101(a), replace “Section 214.10(e)” with “Section 214.104(e).”
 - b. In Section 214.101(b), replace “incorporated” with “incorporated.”
 - c. In Section 214.102(a), replace “BTU or” with “Btu or.”
 - d. In Section 214.121(b)(2)(C)(i), replace “indicting” with “indicating.”
 - e. In Section 214.121(b)(2)(C)(iii), replace “an preventative measures taken” with “any preventative measures taken.”
 - f. In Section 214.161(b), replace “subsections (c), (d), and €” with “subsections (c) and (d).”

- g. In Sections 214.161(b)(1) and (b)(2), replace “fu el” with “fuel.”
- h. In Section 214.161(c), following 214.161(c)(4)(E), delete the inadvertently repeated subsections (1), (2), and (3).