BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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

NOTICE

To: John Therriault, Assistant Clerk
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph, Suite 11-500
Chicago, Illinois 60601-3218

PLEASE TAKE NOTICE that I have today filed with the Office of the Pollution Control Board the Illinois Environmental Protection Agency's Responses to IERG's Pre-Filed Questions, a copy of which is herewith served upon you.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY

By: /s/ Dana Vetterhoffer
Assistant Counsel

DATED: July 7, 2015
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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY'S RESPONSES TO IERG'S PRE-FILED QUESTIONS

The Illinois Environmental Protection Agency ("Illinois EPA" or "Agency"), by its attorney, offers the following responses to the Illinois Environmental Regulatory Group's ("IERG") pre-filed questions, filed with the Board on June 26, 2015.

1. The Agency states on Page 6 of its Technical Support Document that it "...recommended to the USEPA that five sub-county areas be designated as nonattainment..." for the 2010 sulfur dioxide standard. The USEPA ultimately designated three of the recommended areas as nonattainment by combining two of the areas into the Lemont nonattainment area and adding an additional township to the Agency's recommendation for what is now the Pekin nonattainment area. (78 Fed Reg 47191 August 5, 2013)

a) What were the two areas recommended for nonattainment that the USEPA did not designate?

RESPONSE: LaSalle Township, LaSalle County; Chouteau and Wood River Townships, Madison County.

b) Do you know the reason that USEPA did not follow the Agency's recommendation for these other two areas?

RESPONSE: These townships were included in the Agency's recommendation based on 2008-2010 monitoring data. The USEPA, on the other hand, based its final nonattainment designations on 2009-2011 monitoring data; this data showed that the "design value" for these townships met or fell below the 75 ppb threshold.

c) Had the monitoring data for the LaSalle County and Madison County areas been recording violations of the sulfur dioxide standard for periods of time prior to 2008-2010?

RESPONSE: It is unclear to the Agency which SO_2 standard this question references. For the 2010 1-hour SO_2 NAAQS, no; however, the 2010 SO_2 NAAQS was not effective until August 2010. For the SO_2 standards in effect in years earlier than 2008, Madison County recorded violations; however, such violations are not relevant to this rulemaking.

d) Have these areas violated the sulfur dioxide standard since the 2009-2011 time period?

RESPONSE: These areas have not violated the 2010 SO_2 NAAQS since 2011, according to the Agency's monitoring data.

e) Do you know or do you have an opinion as to why these areas no longer violate the standard according to the air monitoring data?

RESPONSE: To the Agency's knowledge, the Oglesby monitor was primarily impacted by the Lone Star Industries, Inc. cement plant. Cement production at the facility has ceased. For Madison County, the reason is not as clear, but SO_2 emission reductions at a number of industrial facilities in this area have likely contributed.

f) Do the latest monitored readings in the Lemont and Pekin nonattainment areas continue to show violations of the sulfur dioxide standard?

RESPONSE: The latest three-year design value (2012-2014) for the Lemont area does not show a violation of the 1-hour SO_2 standard. The design value for the Pekin area does.

g) When does the Agency expect that it can, or will, request the Lemont area be designated as attaining the standard?

RESPONSE: The Agency expects to request redesignation to attainment after this rule is adopted, presuming the monitoring data stays "clean" and the emission limitations and requirements proposed in this rulemaking are in place.

h) Have sulfur dioxide emissions been decreasing significantly since 2010, the year the current sulfur dioxide standard was adopted?

RESPONSE: For point sources, combined reported and estimated emissions data indicate a 3% decrease from 2010-2011; a 6.5% decrease from 2011-2012; and a 23.3% decrease from 2012-2013. SO_2 is, however, a highly localized pollutant for purposes of the 1-hour SO_2 standard, so the Agency cannot generalize these percentage reductions to any particular area. The Agency does not have similar data for area and mobile source SO_2 emissions.

2. In Section 3.1 of the Technical Support Document on Page 13, Emission Reductions from Liquid Fuel Standard, Table 1 is characterized as showing the annual allowable emissions for point and area sources in Illinois. However, the heading for the allowable emissions in Table 1 seems to indicate that the listed emissions are for point sources only.

a) Do the emissions shown in Table 1 include those from area sources as well as point sources or just point sources as indicated in the Table titled Illinois EPA 2011 Fuel Oil SO_2 Emissions?

RESPONSE: The reference to "area sources" in the text was accidental. Table 1 includes point sources only.

b) Does the Agency have a breakdown similar to Table 1 for actual emissions of sulfur dioxide from liquid fuels?

RESPONSE: See Table 10 below.

Table 10: 2011 Illinois EPA emission inventory (tons/year)

Residential	
Distillate	133.13
Residual	--
Commercial	
Distillate	1065.96
Residual	156.44
Industrial	
Distillate	812.54
Residual	21.58

3. In Section 4.2 of the Technical Support Document on Page 19, Feasibility of Proposed Liquid Fuels Standards, the Agency states that its analysis of its proposed rule shows it to be feasible because the majority of commercial and industrial sources are currently using fuels that are compliant with the proposed amendments. Table 5 in that Section on Page 20 is taken from the Energy Information Administration and indicates that a considerable amount of the fuel oil sales in Illinois in 2013 were for low sulfur diesel (500ppm) and ultra low sulfur diesel (15ppm).

a) Does the feasibility determination made by the Agency also suggest that the allowable emissions shown in Table 1 likely greatly exceed the actual emissions that are now being experienced or would be experienced if affected entities were using liquid fuels at sulfur levels allowed by the current emission limits for liquid fuels?

RESPONSE: Yes.

b) Do you expect that the actual emission reductions from the proposed liquid fuels rule will be much less than would be the case if affected entities were using liquid fuels at sulfur levels allowed by the current emission limits for liquid fuels?

RESPONSE: Actual emission reductions from the Agency's proposed fuel sulfur content limitations will be lower than the allowable emission reductions, as nearly all sources have been using ultra low sulfur diesel ("ULSD") for a number of years. The Agency's attainment modeling must be based on allowable emissions.

c) Have you identified the specific emission sources that will be subject to the proposed liquid fuels rule to determine how they will be affected by the proposed rule?

RESPONSE: See Appendix A to the TSD. The Agency believes nearly all of these sources have been using ULSD for a number of years.

4. The proposed liquid fuel rule requires affected entities to be using compliant fuel by January 1, 2017 if they are not covered by an exemption.

a) Does the Agency expect affected sources to know for certain the sulfur content of existing fuel in all tanks?

RESPONSE: The Agency expects affected sources to maintain records demonstrating that the fuel oil used complies with the proposed sulfur content limitations, i.e. that the fuel oil's sulfur content does not exceed 15 ppm.

b) What does the Agency expect affected sources to do in order to ensure all tanks are at the proposed fuel level limit?

RESPONSE: The Agency expects affected sources to continue to purchase and use compliant fuel, and to undertake any additional measures that are necessary to ensure compliance.

5. In its Statement of Reasons on Pages 1 and 2, the Agency acknowledges that it is applying the proposed liquid fuel rule to areas not impacting the nonattainment area to aid in future attainment planning efforts and avoid a piecemeal approach as additional areas are designated nonattainment. A more cost effective and potentially environmentally beneficial approach might be to allow affected entities in those areas to purchase compliant fuel by January 1, 2016 but not require that only compliant fuel be burned after January 1, 2017. Has the Agency considered such an approach, and if so, why did it choose the approach proposed instead?

RESPONSE: The Agency has considered such an approach and opted against it. First, sources outside the Lemont and Pekin nonattainment areas may still negatively impact attainment in those areas. Consequently, a provision exempting sources outside the boundaries of the nonattainment areas from the sulfur content limitations is not tenable. Second, the Agency believes most impacted sources are already complying with its proposed fuel sulfur content limitations. The Agency's discussions with fuel distributors indicated that such distributors offer only ULSD for sale in Illinois; in fact, several of the distributors expressed a belief that selling non-ULSD fuel was already prohibited. Third, the Agency anticipates additional areas being designated as nonattainment for the 2010 SO_2 standard in the future. The proposed statewide fuel standards will aid the Agency's attainment planning efforts for these areas by establishing maximum allowable SO_2 emissions for sources using these fuels. These values will reduce the allowable emissions modeled in any newly-designated nonattainment area.

6. In Section 214.121(b)(2)(C)(i), the proposed rule requires that records be maintained demonstrating that the fuel oil being used complies with the applicable requirements and includes a statement that these records include "…records from the fuel supplier indicating the

sulfur content of the fuel oil and the method used to determine the sulfur content." Has the Agency enumerated all of the various methods that would be acceptable for demonstrating that the fuel oil complies with applicable requirements?

RESPONSE: No. The Agency is filing a Second Motion to Amend Rulemaking Proposal with the Board concurrent with these responses to clarify that sources have some flexibility regarding the types of records they must maintain, as long as such records demonstrate compliance with the fuel standards.

7. Regarding the Agency's proposed changes to the 214.301 General Limitation Rule, it is stated in Page 23 of the State [sic] of Reasons that "This revision is not intended to change existing requirements related to this limitation, but rather codify the Agency's longstanding interpretation of such requirements."

a) How long has this section been a part of the Board rules?

RESPONSE: The Agency has not investigated the promulgation date of this Section, but IERG appears to provide an answer in Question 11 below.

b) What has been the method for determining compliance with this rule?

RESPONSE: Compliance with this Section has been determined by using all credible evidence. For sources without CEMS, this usually means the stack testing provisions in 35 Ill. Adm. Code Part 283 are used. For sources with CEMS, the information provided via CEMS data has been used, as CEMS measure sources' emissions continuously and thus provide a more accurate and timely view of the compliance status of sources that are typically of greater concern.

8. The Agency's proposal specifies that the 214.301 emission limit is to be averaged over a one-hour period. Can compliance with the standard be determined by averaging three nominally one-hour tests using the stack test procedure that has been historically used?

RESPONSE: Yes, unless the source has a CEMS, in which case CEMS data must be used. The Agency is filing a Second Motion to Amend Rulemaking Proposal with the Board concurrent with these responses that will clarify this for sources.

9. In its proposal, the Agency is also adding continuous emission monitors as a sulfur dioxide measurement method.

a) Does the Agency intend this proposal to require affected units to install CEMS where they are not already required by law, regulation, or permit?

RESPONSE: No, the Agency does not intend the proposed language adding CEMS as an SO_2 monitoring method to require affected units to install CEMS.

b) Will three hour averages be used to maintain consistency with the historical method for determining compliance?

RESPONSE: Sources without a CEMS can demonstrate compliance using the stack testing procedures in 35 Ill. Adm. Code Part 283, which involve averaging three stack tests that are each required to be at least one hour in length. These procedures do not involve a 3-hour block average; rarely would a source conduct three stack tests of exactly one hour each back to back to back without interruption. Further, the stack test must be performed for a *minimum* of one hour. A source, for example could opt to perform three 5-hour stack tests; this does not mean compliance is determined on a 15-hour block average basis.

Sources with a CEMS, on the other hand, which operate continuously and thus provide a more accurate and timely view of the compliance status of sources, must demonstrate compliance on a 1-hour average basis.

c) If not, would this be considered a change in the stringency of the rule since stack tests were the only basis for determining compliance previously?

RESPONSE: No. While the Agency proposes officially adding CEMS as a method of measuring SO_2 emissions in this rulemaking, the Agency has historically considered all credible evidence when determining a source's compliance with Section 214.301.

10. Under the modeling guidance cited in the Agency's Technical Support Document on Page 25 (USEPA, 2014), USEPA discusses methods for adjusting the modeled emission rates for averaging times longer than one hour. Footnote 13 on Page 25 of that document states, "Stack tests generally involve three runs of approximately 1 hour each. Although stack tests therefore implicitly provide approximately 3-hour average results, the EPA does not expect any adjustments for limits for which compliance is determined by stack tests."

a) Are you familiar with this?

RESPONSE: Yes.

b) Has the Agency considered specifying that compliance with 214.301 would be by stack test, as is currently the case, and simply use the continuous emission monitor to determine when a stack test should be run?

RESPONSE: The Agency has considered it and rejected it. The Agency strongly opposes, and conversations with USEPA lead the Agency to believe that USEPA would likewise strongly oppose, any provision that would require it to ignore CEMS data that indicates a violation of an emission limitation, in favor of less-accurate and less-timely stack test results. A

CEMS is clearly more accurate as it shows continuous compliance, as opposed to intermittent stack tests that would not capture information about, for example, a malfunction or intermittent release of emissions. Stack tests are an adequate estimate for units with relatively stable emissions. They are not as effective at predicting emissions from a unit that has a relatively high emission rate or a unit that could potentially have a wide variability in emission rate depending on the proper operation of the unit and emission control equipment.

Regarding USEPA's guidance addressed above, it appears that the question that prompted USEPA's response was in reference to making limits for stack-tested units more stringent. USEPA's response acknowledges that a stack test, when properly performed, is still an adequate estimate for a unit's emission rate, but USEPA does *not* indicate that a stack test is an appropriate method of demonstrating compliance for units with CEMS.

11. The 214.301 rule was promulgated and the level of 2000ppm standard set for existing Illinois sulfuric acid plants. (See page 4-335 of Board Opinion and Order of April 13, 1972 in 1971-023).

a) Has the Agency identified the emission sources that are subject to this rule?

RESPONSE: This Section currently applies to all process emission sources, "[e]xcept as further provided in [Part 214]." The Agency has not listed every source that is subject to Section 214.301, and it would be difficult to do so without a full review of permits for every source that emits SO_2 statewide, which is unnecessary for this rulemaking.

b) Have you evaluated whether emission units subject to this rule are also subject to more stringent Federal or State rules?

RESPONSE: The Agency has not made an evaluation in relation to this rulemaking, but believes generally that most of the larger SO_2 sources are subject to more stringent rules.

c) How has the SIP demonstration/modeling incorporated the fact that some of the units subject to the 2000ppm rule are also subject to the more stringent NSPS for flares?

RESPONSE: The Agency modeled the most stringent allowable emission limitation applicable, by rule or by permit.

d) If the SIP demonstration/modeling will be based on a more stringent standard, what is the point of the 2000ppm standard?

RESPONSE: It is a catch-all for sources that are not subject to a more stringent limit. Additionally, the 2000 ppm limit is a concentration limit, and may be more stringent than other applicable SO_2 emission limitations. Attempting to remove this requirement would present backsliding issues for USEPA, and would require an in-depth anti-backsliding analysis of every source, both existing and new. Such actions fall outside the scope of this rulemaking.

e) Should this rule only apply to process emission units for which no other Federal or State sulfur dioxide emission limit applies?

RESPONSE: No. The 2000 ppm limit is a concentration limit, and may be more stringent than other applicable SO_2 emission limitations. Further, as explained above, restricting its applicability would require an in-depth anti-backsliding analysis.

f) Has the Agency considered whether this rule is obsolete?

RESPONSE: See the Agency's responses to Question 11(d) and (e) above.

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY

By: /s/ Dana Vetterhoffer
Assistant Counsel

DATED: July 7, 2015
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CERTIFICATE OF SERVICE

I, the undersigned, an attorney, affirm that I have served the attached Illinois Environmental Protection Agency's Responses to IERG's Pre-Filed Questions upon the following person(s) by e-mailing it to the e-mail address(es) indicated below:

Daniel Robertson, Hearing Officer
Illinois Pollution Control Board
daniel.robertson@illinois.gov

I affirm that my e-mail address is dana.vetterhoffer@illinois.gov; the number of pages in the e-mail transmission is 15; and the e-mail transmission took place today before 5:00 p.m.

I also affirm that I am mailing the attached by first-class mail from Springfield, Illinois, with sufficient postage affixed, to the following persons:

SEE ATTACHED SERVICE LIST

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY

By: /s/ Dana Vetterhoffer
Assistant Counsel

DATED: July 7, 2015

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