

**BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

IN THE MATTER OF: )  
 )  
AMENDMENTS TO 35 ILL. ADM. CODE ) R15-21  
PART 214, SULFUR LIMITATIONS, PART ) (Rulemaking-Air)  
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 Board's Pre-Filed Questions, a copy of which is herewith served upon you.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL  
PROTECTION AGENCY

By: /s/ Dana Vetterhoffer  
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**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY'S  
RESPONSES TO BOARD'S PRE-FILED QUESTIONS**

The Illinois Environmental Protection Agency ("Illinois EPA" or "Agency"), by its attorney, offers the following responses to the "Board Staff Questions for First Hearing," dated June 25, 2015.

**Proposed Fuel Standards**

1. Table 1 shows 2011 allowable sulfur dioxide (SO<sub>2</sub>) emissions at "point and area" sources in Illinois based on existing SO<sub>2</sub> 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.

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

b. Explain why IEPA used 2011 fuel use rather than more recent fuel use data.

RESPONSE: The Illinois EPA used the most recent quality assured data available in the Agency's Periodic Emissions Inventory. The most recent complete Periodic Emissions Inventory is for 2011.

c. Explain how IEPA determined allowable emissions in Table 1.

RESPONSE: The point source emissions were based on the permitted allowable emissions in the Agency's 2011 Periodic Emissions Inventory. When allowable emissions data was unavailable, the Agency used maximum potential emissions data.

- d. Provide IEPA's estimate of annual allowable SO<sub>2</sub> emissions under the proposed limits on sulfur content of fuel.

RESPONSE: The Agency cannot estimate annual allowable SO<sub>2</sub> emissions under the proposed sulfur content limits without knowing the consumption/use of the fuel oils in future years. In general, calculation of an estimate would be based on the difference between the allowable, "on the book" emission limitations based on sulfur contents (0.3% sulfur for distillate fuel oil and 1.0% sulfur for residual fuel oil) and the proposed limits (15ppm sulfur for distillate fuel oil and 1000ppm sulfur for residual fuel oil). Other liquid fuel oils are assumed to be used oils with the same limitation as residual fuel oils.

The reduction can be calculated as the percentage difference between current and proposed rules. From 3000 ppm to 15 ppm:

$$\text{Distillates fuel oils percentage reductions} \rightarrow \frac{(3000-15)ppm}{3000ppm} * 100\% = 99.5\%$$

$$\text{Residuals and other liquid fuel oil percentage reductions} \rightarrow \frac{10000-1000}{10000} * 100\% = 90\%$$

Applying those percentage reductions to the allowable emissions in Table 1 provides new allowable emissions as listed in Table 1-A below.

**Table 1-A SO<sub>2</sub> Emission Reductions from Annual Allowables**

Type of Fuel Oils		Point Sources Allowable Emissions (ton/yr)	Future Point Sources Allowable Emissions (ton/yr)	Reduction in Allowable Emissions (ton/yr)
Distillates	Fuel Oil No. 1	910.07	4.55	905.52
	Fuel Oil No. 2	22,886.52	114.43	22,772.09
Residuals	Fuel Oil No. 4	93.84	9.384	84.46
	Fuel Oil No. 5	14.54	1.454	13.09
	Fuel Oil No. 6	11,544.15	1,154.42	10,389.73
	Waste Fuel Oil	804.46	80.45	724.01
Others	Other Liquid Fuel	2,366.45	236.65	2,129.80

- e. Provide IEPA's estimate of the annual SO<sub>2</sub> reductions that would be achieved under the proposed fuel standards.

RESPONSE: The far right column in Table 1-A above contains the reductions in annual allowable emissions. However, it should be noted that this proposed

rulemaking addresses the hourly SO<sub>2</sub> standard, and as such, annual emissions are not the focus.

- f. If possible, provide IEPA's estimate of annual allowable SO<sub>2</sub> emissions and emission reductions in the Pekin and Lemont nonattainment areas.

RESPONSE: Providing the requested information would require an extensive investigation into the permitted limits for every source located in the nonattainment areas. It would be very difficult for the Illinois EPA to make such an estimate. It should also be noted that this proposed rulemaking addresses the hourly SO<sub>2</sub> standard, and as such, annual emissions are not the focus.

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.

RESPONSE: Data in Table 5 of the TSD was taken from the cited EIA website. The most recent data available from EIA is from 2013.

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 SO<sub>2</sub> emissions achieved by compliant fuel have previously been accounted for in attainment modeling for the one-hour SO<sub>2</sub> National Ambient Air Quality Standards (NAAQS).

RESPONSE: SO<sub>2</sub> emission rates that are consistent with the fuel sulfur content limits in the proposed rule amendments have been used in the modeling that Illinois EPA will submit to USEPA with its State Implementation Plan ("SIP") submittal. Previous modeling efforts of allowable emissions of units burning fuel oil would not have assumed the fuel sulfur content in the proposed rule amendments, unless a permitted limit restricted the sulfur content of fuel oil to similar levels, or restricted emissions consistent with the use of fuel oil with similar sulfur levels.

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).

RESPONSE: It should be noted that USEPA estimated that the transition to ultra low sulfur diesel ("ULSD") would increase the price of all diesel fuel by \$0.04 to \$0.05 per gallon. This is not a price difference between the two fuels. Diesel fuel with sulfur

content of 500 ppm is no longer commonly used. As such, EIA's most recent data shows that 15 ppm diesel is actually less expensive than the higher-sulfur fuel by approximately \$0.04 to \$0.05 per gallon.

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.

RESPONSE: ULSD is widely available in Illinois, and in fact, higher-sulfur diesel fuel may be difficult to find in 2015. Illinois EPA conferred with a number of fuel oil distributors and did not find any that currently offer higher-sulfur diesel fuel for sale; they offer only ULSD. This is likely due to the federal requirement that almost all vehicles use only ULSD. The Agency does not have specific information on any price variability across Illinois, but has no reason to believe such variability would be different from that of gasoline price variability among the dense urban areas and other areas of the State. Any variability in price across the State would be unrelated to the fuel sulfur content.

**Source-Specific SO<sub>2</sub> 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.

RESPONSE: Below is a table showing how the various sources will comply with the proposed rulemaking, to the best of the Agency's knowledge. These are *not* prescriptive, reflect only the Agency's understanding of the source's current plans based on outreach meetings, and do not limit sources' ability to change their control measures in the future. The hourly emission limitation is the necessary requirement for this rulemaking, not any specific type of control.

**Table 3-A: Allowable Emission Rates of Affected Sources**

Facility Name	Unit Description	Control Measure
Aventine Renewable Energy	Boiler A	Natural gas replacement boiler
	Boiler B	Natural gas replacement boiler
	Boiler C	Natural gas replacement boiler
	Cyclone East controlling First Germ Drying System	Can meet new allowable

	Cyclone West controlling First Germ Drying System	Can meet new allowable
	Second Germ Drying System	Can meet new allowable
	Gluten Dryer 4	Can meet new allowable
	Gluten Dryer 9	Can meet new allowable
	Germ Dryer 1	Can meet new allowable
	Germ Dryer 3	Can meet new allowable
	Yeast Dryer	Can meet new allowable
	Scrubber controlling Steep Acid Tower	Additional scrubbing equipment
	Biogas Flare	Can meet new allowable
Illinois Power Holdings E.D. Edwards	Units 1 and 2 combined	Can meet new allowable
	Unit 3	Can meet new allowable
	Unit 3, if both Units 1 and 2 permanently shut down	Can meet new allowable
Ingredion Bedford Park	Feed Transport System	Can meet new allowable
	Wet Milling: Inside In-Process Tanks	Can meet new allowable
	Wet Milling: Molten Sulfur Burner and Absorption System	Can meet new allowable
	Wet Milling: Outside In-Process Tanks	Can meet new allowable
	Germ Processing Facility Channel 1 System	Can meet new allowable
	Germ Processing Facility Channel 2 System	Can meet new allowable
	Germ Processing Facility Channel 3 System	Can meet new allowable
	Germ Processing Facility Channel 4 System	Can meet new allowable
Midwest	Joliet 9: Unit 6	Fuel conversion

Generation Joliet		
	Joliet 29: Unit 7	Fuel conversion
	Joliet 29: Unit 8	Fuel conversion
Midwest Generation Powerton	Boilers 51, 52 (Unit 5) and 61, 62 (Unit 6) combined	Can meet new allowable
Midwest Generation Will County	Unit 3	Fuel conversion
	Unit 4	Can meet new allowable
Owens Corning	Preheater Incinerator System 1, including emissions from: Storage Tanks 9, 9A, 10, 10A, 11, 17, 18, 19, 20, 40, 41, 42, and 43; Loading Racks 1, 2, & 9; and Convertors 10 & 11.	Reconfiguration of units
	Preheater Incinerator System 3, including emissions from: Convertors 8, 9, 12, 13, 14, & 15; and Loading Racks 1, 2, & 9	Reconfiguration of units
	Regenerative Thermal Oxidizer 3 controlling: Storage Tanks 27, 28, 31, 32, 33, 34, 35, & 36	Reconfiguration of units
	Regenerative Thermal Oxidizer 4 controlling: Storage Tank 98; Loading Rack PV-1	Reconfiguration of units
	Coating Operations combined	Reconfiguration of units
Oxbow Midwest Calcining	All Calcining Units combined	Must meet new allowable if operation restarts

- b. State whether each control measure is already being used or will be employed upon adoption of the proposed regulations.

RESPONSE: See Table 3-A above. Units that the table indicates will require additional control strategies must implement them before the compliance deadline in the proposed rule. The Agency does not have further information regarding when various control strategies will be implemented.

- c. Provide any cost information IEPA has pertaining to implementing these control measures.

RESPONSE: The Agency does not have cost information for the various control strategies. The proposed limits were set after extensive outreach with affected sources. These sources agreed that the new limits could be achieved in a cost-effective manner and in concert with their own planning for each source.

- d. Provide cost effectiveness data for each control measure in terms of dollars per pound.

RESPONSE: Estimates for cost effectiveness on a dollar per pound (or ton) basis are not available to the Agency, and would be difficult to ascertain. Some control strategies had been previously planned by sources for economic or environmental reasons, or will be implemented for reasons not solely due to this rulemaking. Obviously, costs associated with units that can currently meet the proposed limits are near zero.

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.

RESPONSE: Modeling demonstrates that these sources are significant contributors to nonattainment in the Lemont area.

- b. Identify whether each source is considered a major source of SO<sub>2</sub> emissions.

RESPONSE: Both sources are considered major sources of SO<sub>2</sub> emissions.

- c. Provide reported annual SO<sub>2</sub> emissions from each source for years 2007 through 2009.

RESPONSE: See Table 8 below.

**Table 8: Emissions of Owens Corning and Ingredion 2007-2009**

Owens Corning; Summit, IL	Annual Reported SO <sub>2</sub> Emissions (Tons)
2007	98.03
2008	85.85
2009	73.37
Ingredion; Bedford Park	
2007	1,942.00
2008	2,203.00
2009	991.00

- d. Comment on whether IEPA included these sources in its June 2, 2011 recommendation to USEPA for SO<sub>2</sub> nonattainment area designations. TSD at 6.

RESPONSE: The Illinois EPA's recommendation did not list specific sources. The Agency did, however, take these sources' emissions into account in its analysis of potential nonattainment areas.

8. Explain why the following SO<sub>2</sub> 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.

RESPONSE: It should be noted that Corn Products International Inc. is now known as Ingredion, which is included in the Agency's proposal. The Agency's new modeling conducted for this rulemaking demonstrated that the other sources were not significantly contributing to nonattainment in the Lemont area.

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.

RESPONSE: See Table 3-A above, in the response to Question 6(a).

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.

RESPONSE: The Agency's analysis did not include sales predictions or generation impacts, beyond Midwest Generation's indication that its converted units are expected to operate less than before their conversion.

11. Provide IEPA's estimate of the overall annual reduction of SO<sub>2</sub> emissions under the proposed Subpart AA limits. Provide the annual reduction of SO<sub>2</sub> emissions in each nonattainment area for Lemont and Pekin.

RESPONSE: Because a number of sources will be reducing allowable emissions rather than actual emissions, while others will be changing both hourly emissions and hours of operation, it would be very difficult for the Agency to estimate overall annual SO<sub>2</sub> reductions. Furthermore, such estimates, if calculated, would not be useful, since the reductions in allowable emissions would be quite large and would not represent a meaningful effect of the proposed rule amendments. It should also be noted that this proposed rulemaking addresses the hourly SO<sub>2</sub> standard, and as such, annual emissions are not the focus.

**Questions on Specific Provisions**

**Section 214.101 Measurement Methods**

12. In subsection (a), a method to measure SO<sub>2</sub> is by “certified” continuous emissions monitoring system. Identify the entity that certifies a continuous emissions monitoring system.

RESPONSE: There is no single, specific entity that certifies a continuous emissions monitoring system (CEMS). Rather, this language refers to a stack testing company with whom the facility contracts to certify that the CEMS is working properly. 40 CFR Part 75 and 35 Ill. Adm. Code 225 both require the stack testing company to be a certified Air Emission Testing Body.

**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)”.

RESPONSE: The Agency agrees that the existing reference to “(60 F)” in Section 214.102 should be removed. The Agency is including this change in its Second Motion to Amend Rulemaking Proposal, which is being filed with the Board concurrent with these responses.

**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.

RESPONSE: The Agency does not believe that the ASTM standards need to be updated at this time.

**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.

RESPONSE: The Caterpillar Technical Center needs to be able to conduct research and test equipment that will be using higher-sulfur fuels. This equipment is intended for sale outside of Illinois, in locations that perhaps do not require the use of ULSD, or where ULSD is unavailable. ULSD has some properties that are slightly different than higher sulfur diesel.

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.

RESPONSE: The Agency does not have information regarding the amount of fuel that will be consumed by these sources. The Agency's modeling analysis demonstrated that, on an hourly basis, allowing these exemptions for the timeframe at issue will not negatively impact attainment. The Agency is unclear regarding the information the Board is requesting in the last sentence of Question 16, but states that the subsections listed above prohibit the purchase of non-ULSD fuel on and after 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<sub>d</sub>" 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)?

RESPONSE: There is an error in the metric version of the limit, which should read "0.0023 kg/MWhr." The limit that reads "0.0015 lb/mmBtu" is correct. The Agency is including this change in its Second Motion to Amend Rulemaking Proposal, which is being filed with the Board concurrent with these responses.

**Section 214.603 Emission Limitations**

18. Proposed Section 214.603(e)(2) requires Midwest Generation's Powerton station to comply with the proposed SO<sub>2</sub> 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 SO<sub>2</sub> limits at the Powerton station.

RESPONSE: Variation in emissions at the Powerton unit, based on the unit type and the control equipment used, can make compliance with an hourly limit difficult. This variability in coal-fired units with dry scrubbers is discussed in the USEPA'S guidance

for the averaging periods, and this is a type of unit that was expected to need a longer averaging time with a more stringent numerical limit. *See USEPA's Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions*, Appendix D, <http://www.epa.gov/oaqps001/sulfurdioxide/pdfs/20140423guidance.pdf>. The Powerton units will have to maintain an emissions average that is well below the hourly emissions that were modeled to determine that this rulemaking would result in the area attaining the SO<sub>2</sub> standard.

USEPA believes that this is an appropriate way to protect the NAAQS, and again, USEPA guidance suggested that units like those at Powerton would likely need provisions for a longer averaging period. *See above; see also USEPA's Guidance for 1-Hour SO<sub>2</sub> Nonattainment Area SIP Submissions*, p. 22.

#### **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.

RESPONSE: All reporting requirements and deadlines are set forth in Section 214.605. Additionally, sources are required to report CEMS data to USEPA; this data is accessed by the Agency through USEPA's website.

#### **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.

RESPONSE: The Agency agrees that the minimum requirements listed should also refer to a description of any exceedance, and a discussion of the possible cause of the exceedance. The Agency is including these changes in its Second Motion to Amend Rulemaking Proposal, which will be filed with the Board concurrent with these responses.

#### **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).

RESPONSE: The Agency prefers that both of these provisions use "such as" rather than "including." The Agency has included this change in its Second Motion to Amend

Rulemaking Proposal, which is being filed with the Board concurrent with these responses.

**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.~~

RESPONSE: Section 225.292 regards the applicability of the Combined Pollutant Standard, and is not an ideal location for a continuing reporting obligation. While the Agency recognizes that Section 225.293 is not ideal either, it is more suitable as it sets forth notification requirements.

The Agency opposes the Board's suggested revisions. The Agency's proposed language requires that sources notify the Agency of certain changes that occur after January 1, 2015. If sources are required to provide such notification within 30 days of the completion of such changes, some sources might already be out of compliance. The Agency's proposal therefore sets a future notification deadline of January 1, 2017.

**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 SO<sub>2</sub> National Ambient Air Quality Standard (AQPSTR 11-02).

RESPONSE: The Agency's June 2, 2011, letter is attached as Exhibit 1. The requested Technical Support Document is attached as Exhibit 2.

- 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 SO<sub>2</sub> Primary National Ambient Air Quality Standard."

RESPONSE: The USEPA's February 6, 2013, letter is attached as Exhibit

3. The requested Draft Technical Support Document is attached as Exhibit 4.

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 SO<sub>2</sub> monitors.

RESPONSE: The Agency attaches a map of the Pekin nonattainment area as Exhibit 5, and a map of the Lemont nonattainment area as Exhibit 6. The Board should note that these maps were created in the beginning stages of the Agency's rulemaking efforts, and therefore contain the names and locations of some sources that are not subject to Subpart AA.

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 SO<sub>2</sub> 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 SO<sub>2</sub> emissions from this CITGO facility. Explain why it is not addressed in proposed Part 214 Subpart AA.

RESPONSE: The Agency directs the Board to Table 9 below. The analysis the Agency undertakes for a nonattainment area recommendation is different from the analysis needed for a rulemaking and attainment demonstration. In developing this rulemaking, the Agency conducted more detailed modeling to determine which sources were significantly contributing to nonattainment in the Lemont area. CITGO was not identified as a significant contributor and therefore was not included in Subpart AA.

**Table 9: CITGO Petroleum Corporation**

<u>Unit Description</u>	<u>Modeled Emission Rate (lbs/hour)</u>
111B-1A: Atmospheric Heater	7.76
111B-1B: Atmospheric Heater	7.76
111B-2: Crude Vacuum Heater	4.53
113B-1: Coker 1 Charge Heater	1.83
113B-3: Coker 1 Charge Heater	1.83
114B-1,2,3: Fd Prehtr, Strpr Trm Reblr, Re	3.81
115B-1,2: Feed Htr & Stripper Reboiler	1.97
116B-1 - 16B-4: Chrg Htr, Stab Reblr, Intrh	9.63
118B-1: Hot Oil Heater	2.07
119A-Train: Afterburner	9.02
122B-1: ARU (clay) Tower Furnace	0.15
123B-1: Feed Preheater	1.02
125B-1,2: Feed Heater & Stripper Reboilr	4.21

431B-20: Auxiliary Boiler	9.25
121C-Train: Sulfur Recovery	15.48
108B-41,42: Proc Htr & Steam Superhtr	1.33
109B-62: Steam HC Reformer Heater	9.40
106B-1: Vacuum Heater	0.82
107B-21: Recycle Gas Heater	0.35
120-1: HF Alkylation Unit and Flare	0.07
103B-1: Hydrotreater Feed Heater	0.19
122B-2: Reactor Charge Heater	0.13
121D-Train: Sulfur Recovery	15.48
123B-2: Feed Preheater	0.89
123B-3: Reheat Furnace	1.22
123B-4: Reheat Furnace	0.83
123B-5: Reheat Furnace	0.93
118B-51: Reactor Charge Heater	0.20
113B-2: Coker 1 Charge Heater	1.83
119B-Train: Afterburner	9.02
112B-2: FCCU CO Boiler	105.71
431B-20: North Plant Boiler	5.82
102B-2: FCCU Gasoline Hydrotreater ISAL	1.03
123B-2-Ctr: Feed Preheater	0.89
123B-2-S: Feed Preheater	0.89
590H-1: ULSD Reactor Charge Heater	0.80
590H-2: ULSD Stripper Reboiler Heater	0.68
844C-1: Flare	0.11
844C-2: South Plant Flare	0.11
844C-4: Coker 2 Flare Gas Recov Sys & Flr	0.11
Loading Rack Flare	0.09

26. Midwest Generation's Joliet facility is located outside the Lemont nonattainment area and is not listed as one of the culpable sources of SO<sub>2</sub> 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.

RESPONSE: See the Agency's response to Question 25 above. The Agency's modeling indicated that the Joliet facility was significantly contributing to nonattainment in the Lemont area.

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 SO<sub>2</sub> emission reductions expected from these fuel conversions.

RESPONSE: See the Agency's TSD, pp. 16-17.

- b. Explain any emissions impact of these conversions on estimated emissions for Will County 4 without FGD equipment.

RESPONSE: The Agency is unaware of the emissions impact, if any, of the conversions of Joliet 6, 7, and 8, and Will County 3 on estimated emissions for Will County 4. Will County 4 will continue to be subject to the limitations in the CPS (or the conditions imposed by any variance to which the unit is subject), and will be subject to an hourly SO<sub>2</sub> emission limitation under the proposed Subpart AA.

- 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.

RESPONSE: The Agency does not have a cost estimate. Converting Will County 4, however, is not necessary to demonstrate attainment of the SO<sub>2</sub> standard at this time.

- d. Explain whether the emissions impact of a fuel conversion at Will County 4 would be similar to that of the above fuel conversions.

RESPONSE: The Agency has not analyzed the emissions impact of a fuel conversion at Will County 4, but believes the impact would be similar.

- e. Describe future plans for Will County 4 including its expected lifespan.

RESPONSE: The Agency does not have the requested information.

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 SO<sub>2</sub> standard." SR at 7. Further, IEPA notes, "USEPA intends to engage in at least two additional rounds of attainment designations for the SO<sub>2</sub> 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.

RESPONSE: USEPA proposed a Data Requirements Rule on May 13, 2014. See 79 FR 27446. USEPA entered into a Consent Decree with the Sierra Club on March 2, 2015, attached as Exhibit 7. USEPA issued two Technical Assistance

Documents regarding modeling and monitoring for purposes of attainment designations. *See* <http://www.epa.gov/oaqps001/sulfurdioxide/pdfs/SO2ModelingTAD.pdf> and <http://www.epa.gov/oaqps001/sulfurdioxide/pdfs/SO2MonitoringTAD.pdf>.

Up to three additional rounds of designations are possible. Modeling and/or monitoring will need to occur to determine which areas may become nonattainment, with modeling as the default. The expected implementation timeline is as follows:

- September 2015: Deadline for states to make recommendations for areas covered by the Consent Decree between USEPA and the Sierra Club.
  - January 2016: States will provide modeling protocols to USEPA and identify areas/sources that will monitor.
  - July 2016: USEPA will finalize designations for areas covered by the Consent Decree.
  - January 2017: Any new monitoring sites will be operational for areas that will monitor. For areas that are using modeling, States will submit modeling analyses and nonattainment boundary recommendations.
  - December 2017: USEPA designates new areas based on modeling.
  - 2020: Submit nonattainment area boundary recommendations for monitored areas.
  - December 2020: USEPA designates new areas based on monitors.
- 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.

RESPONSE: The Illinois EPA plans to submit recommendations based upon the timeline described above. The proposed statewide fuel standards will aid in these planning efforts by establishing maximum allowable SO<sub>2</sub> emissions for sources using these fuels. These values can be used in modeling to determine new nonattainment areas, and will reduce the allowable emissions modeled in any newly-designated nonattainment area.

29. IEPA proposes changes to Section 225.298 relating to restrictions under the Combined Pollutant Standard on transferring SO<sub>2</sub> emission allowances. Similarly, the Multi-Pollutant Standard prohibits certain transfers of SO<sub>2</sub> emission allowances. 35 Ill. Adm. Code 225.233(f)(2).

- a. Explain whether the proposed changes to Section 225.298 will impact SO<sub>2</sub> emissions in Illinois or in the Lemont nonattainment area.

RESPONSE: No, the proposed changes will not impact SO<sub>2</sub> 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 SO<sub>2</sub> NAAQS in the future.

RESPONSE: These restrictions were not intended to address the 1-hour SO<sub>2</sub> standard, but rather intended to address pollution transport issues.

- c. Comment on whether the reductions in SO<sub>2</sub> 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 SO<sub>2</sub> NAAQS in the future.

RESPONSE: See the Agency's response to Question 29(b) above.

- d. Explain whether IEPA relied on, or plans to rely on, SO<sub>2</sub> allowances surrendered pursuant to Section 225.233(f)(2) to address attainment of the one-hour SO<sub>2</sub> NAAQS.

RESPONSE: No, the Agency did not rely upon them, and does not intend to rely upon them.

- e. If not, explain why IEPA does not intend to rely upon SO<sub>2</sub> allowances surrendered pursuant to Section 225.233(f)(2) to address attainment of the one-hour SO<sub>2</sub> NAAQS.

RESPONSE: The Illinois EPA is required to demonstrate to USEPA through modeling that the SO<sub>2</sub> NAAQS will be met in the nonattainment areas. Since this must be done using hourly emissions for an hourly standard, surrendered allowances (in tons per year or per season) would not be useful.

- 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.

RESPONSE: The Agency may determine at some point that such restrictions should be reevaluated, but it did not do so in the context of this rulemaking. These trading restrictions are unrelated to the Agency's current efforts to demonstrate attainment of the 2010 SO<sub>2</sub> standard.

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.

RESPONSE: The Agency intends to make its submittal after hearings in this rulemaking have taken place and any proposed changes to the rule have been discussed.

#### 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.

RESPONSE: The Agency provided draft amendments to Part 214 to the Illinois Environmental Regulatory Group ("IERG") for comment. On three occasions, the Agency included an article in the Small Business Environmental Assistance Program's "Clean Air Clips," an electronic newsletter sent to associations, legislators, etc., explaining the proposed statewide fuel sulfur content limitations. The Agency also solicited comments on its proposed fuel standards in the August 2014 issue of the *Small Business Connection*, a publication provided to certain small businesses, chambers of commerce, business associations, trade groups, and legislators. The Agency also gave presentations to groups such as IERG and local chambers of commerce regarding the proposed fuel sulfur content limitations.

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.

RESPONSE: See the Agency's response to Question 31 above. Further, in its research regarding the availability of ULSD fuel, the Agency found that nearly all sources have been using ULSD for a number of years. The Agency also found that storage of diesel fuel for more than a year requires additional maintenance, and that such maintenance efforts would likely only be conducted by sources that had an investment in a relatively large existing stock of fuel. These few sources would most likely be aware of the Agency's outreach efforts.

#### 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.

RESPONSE: The Agency agrees that it does not appear to contain any statutory text. The citation references Section 10 of the Illinois Environmental Protection Act, which regards the Board's authority to promulgate regulations. This statutory citation does not appear to be necessary.

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).

RESPONSE: The Agency recommends leaving subsection (b) as it is. Subsections (a) and (b) currently function together; while the contents of subsection (b) could be added to subsection (a) with an accompanying "where" statement, this revision would entail relettering subsection (c) and ensuring such changes do not impact cross-references.

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.

RESPONSE: The Agency agrees that subsection (c) is poorly worded, and recommends the following clarifying amendments.

Section 214.201            Alternative Standards for Sources in Metropolitan Areas

.....

- c)     No owner or operator of an existing fuel combustion emission source shall seek ~~such an alternate emission rate under this Section, exemption~~ or comply with an alternate emission rate granted under this Section, the emission standard so granted by the use of dispersion enhancement techniques referred to in Section 214.202.

36. Section 214.300 refers to "Subparts N et seq." There is no Subpart N. Comment on if this reference should be deleted.

RESPONSE: The Agency believes the Board already addressed this in its First Notice version of the proposal, and agrees with the Board's clarifying revisions.

37. In Section 225.298(a)(1), comment on deleting "of any vintage" or otherwise clarify what "vintage" means in this context.

RESPONSE: "Vintage" is the year an allowance is issued. The Agency recommends keeping the language, as it specifies that allowances of any vintage may be sold, traded, or transferred.

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.

RESPONSE: The Illinois EPA understands that Midwest Generation, LLC remains the operator of all of the facilities referenced in Section 214.161. The reference to Midwest Generation is thus appropriate.

ILLINOIS ENVIRONMENTAL  
PROTECTION AGENCY

By: /s/ Dana Vetterhoffer  
Assistant Counsel

DATED: July 7, 2015

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PAT QUINN, GOVERNOR

June 2, 2011

Ms. Cheryl A. Newton, Director  
 Office of the Air and Radiation Division  
 U.S. Environmental Protection Agency, Region V (R18J)  
 77 West Jackson Boulevard  
 Chicago, Illinois 60604-3507

Dear Ms. Newton:

On behalf of Governor Quinn and pursuant to the U.S. Environmental Protection Agency's revision to the National Ambient Air Quality Standards (NAAQS) for SO<sub>2</sub> dated June 2, 2010, I am submitting our recommendations for attainment and nonattainment designations for the State of Illinois. Included with these recommendations is supporting documentation prepared by the Illinois Environmental Protection Agency (Illinois EPA). The Illinois EPA is also providing this documentation to your staff in electronic format to facilitate your timely review.

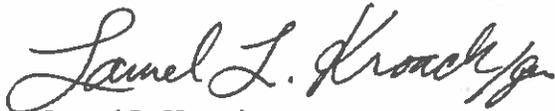
Specifically, the following designations are recommended for Illinois:

County (Partial)	Designation	Name of Area
<u>Tazewell County:</u> <ul style="list-style-type: none"> <li>• Pekin and Cincinnati Townships</li> <li>• Remainder of Tazewell County</li> </ul>	Nonattainment Unclassifiable	Tazewell County
<u>La Salle County:</u> <ul style="list-style-type: none"> <li>• La Salle Township</li> <li>• Remainder of La Salle County</li> </ul>	Nonattainment Unclassifiable	La Salle County
<u>Cook County:</u> <ul style="list-style-type: none"> <li>• Lemont Township</li> <li>• Remainder of Cook County</li> </ul>	Nonattainment Unclassifiable	Cook County
<u>Will County:</u> <ul style="list-style-type: none"> <li>• Lockport and DuPage Townships</li> <li>• Remainder of Will County</li> </ul>	Nonattainment Unclassifiable	Will County
<u>Madison County:</u> <ul style="list-style-type: none"> <li>• Chouteau and Wood River</li> <li>• Remainder of Madison County</li> </ul>	Nonattainment Unclassifiable	Madison
All Other Counties	Unclassifiable	Illinois

We are recommending that portions of the following counties be designated as nonattainment for the 2010 primary 1-hour SO<sub>2</sub> NAAQS: Tazewell (Pekin and Cincinnati Townships), La Salle (La Salle Township), Cook (Lemont Township), Will (Lockport and DuPage Townships) and Madison (Chouteau and Wood River Townships). As violations of the revised SO<sub>2</sub> standard have been measured in these areas during 2008-2010, designating them as nonattainment is appropriate. We recommend that the remainder of Illinois be designated as unclassifiable.

If there are any questions, please feel free to contact Rob Kaleel (217-524-4343), or myself.

Sincerely,

A handwritten signature in cursive script that reads "Laurel L. Kroack".

Laurel L. Kroack  
Chief, Bureau of Air

Attachment

**Technical Support Document:**  
**Recommended Attainment/Nonattainment Designations**  
**in Illinois for the 2010 Revised Primary 1-Hour SO<sub>2</sub>**  
**National Ambient Air Quality Standard**

**AQPSTR 11-02**

**June 2, 2011**

**Illinois Environmental Protection Agency  
Division of Air Pollution Control  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, IL 62794-9276**

**[www.epa.state.il.us](http://www.epa.state.il.us)**

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## Introduction

On June 2, 2010, the U.S. Environmental Protection Agency (U.S. EPA) revised the primary Sulfur Dioxide (SO<sub>2</sub>) National Ambient Air Quality Standard (NAAQS) in response to current scientific evidence which links short-term exposure to SO<sub>2</sub> with adverse health effects in humans. U.S. EPA health studies show that short-term exposure to SO<sub>2</sub>, ranging from 5-minutes to 24-hours, results in adverse respiratory effects and increased asthma symptoms, particularly in children, the elderly, and asthmatics. According to U.S. EPA, there is currently little evidence suggesting a relationship between long-term exposure to SO<sub>2</sub> and health effects. As a result, U.S. EPA revoked both the previous 24-hour and annual primary SO<sub>2</sub> standards and established a new primary 1-hour SO<sub>2</sub> standard at a level of 75 parts per billion (ppb) (75 FR 35520; June 22, 2010). As part of the 2010 revised primary SO<sub>2</sub> NAAQS (further referenced as the revised SO<sub>2</sub> standard), U.S. EPA also modified how attainment is determined. The revised SO<sub>2</sub> standard is attained when the three-year average of the annual 99<sup>th</sup> percentile 1-hour daily maximum concentrations does not exceed 75 ppb (75 FR 35520; June 22, 2010). U.S. EPA will address the secondary SO<sub>2</sub> standard as part of a separate review.

Section 107(d) of the Clean Air Act (CAA) governs the process for area designations, and directs states to submit their SO<sub>2</sub> designation recommendations to U.S. EPA by June 3, 2011.

Following the promulgation of a new or revised air quality standard, the Clean Air Act (CAA) requires the Governor to recommend initial designations of the attainment status for all areas of the State. Areas can be classified as *nonattainment* (does not meet, or contributes to a nearby area that does not meet the NAAQS), *attainment* (meets the NAAQS), or *unclassifiable* (cannot be classified based on available data). Illinois is, therefore, required to provide recommendations for attainment/nonattainment area boundaries for the 2010 revised primary SO<sub>2</sub> standard. The U.S. EPA will act on the State's recommendations by both affirming and promulgating the recommended designation boundaries, or by promulgating new designations. U.S. EPA stated in its preamble to the 2010 NAAQS, that in addition to air monitoring data, refined dispersion modeling information may be used as part of an analytical approach to designations. However, according to the U.S. EPA March 24, 2011 memorandum entitled, *Area Designations for the*

*2010 Revised Primary Sulfur Dioxide National Ambient Air Quality Standards*, the U.S. EPA does not believe it would be “realistic or appropriate to expect states to complete modeling for all significant sources of SO<sub>2</sub> and assess the results in time for the June 2011 designation recommendations”. States would instead present modeling to address additional violations in the course of developing State Implementation Plan (SIP) revisions under Section 110(a) of the Clean Air Act as a, “basis for re-designation of nonattainment and unclassifiable areas to attainment” (75 FR at 35570). Illinois does not intend to submit dispersion modeling in support of designations at this time. Rather, IEPA will complete dispersion modeling in the course of developing SIP revisions.

### **Federal Guidance**

The Illinois Environmental Protection Agency (IEPA) relied on guidance identified in a memorandum issued by U.S. EPA on March 24, 2011 which referenced pages in the preamble of the lead NAAQS final rule regarding criteria for developing this recommendation and for establishing the geographic boundaries of nonattainment areas (NAA) for the 2010 revised SO<sub>2</sub> standard. In this guidance, U.S. EPA recommended that states designate areas with air quality data showing violations of the SO<sub>2</sub> NAAQS, and nearby areas that cause or contribute to NAAQS violations, be designated nonattainment. Due to the localized nature of SO<sub>2</sub> impacts, U.S. EPA also recommends that the “county line” associated with the violating monitor(s) serve as the starting point, or presumptive boundary, for new SO<sub>2</sub> nonattainment areas. U.S. EPA provides states with the ability to depart from county boundaries based on area-specific analyses. States may request nonattainment area boundaries that are smaller than the existing violating county boundaries where counties, or portions of counties, do not contribute to nonattainment based on an examination of five factors. States may also request nonattainment area boundaries that are larger than the current county to include adjacent counties when those counties contain emission sources and other factors that may contribute to the nonattainment problem. This report provides the basis for recommendations by the IEPA for attainment/nonattainment designation boundaries for all areas in the State of Illinois for the revised SO<sub>2</sub> standard.

## Five Factor Analysis

The U.S. EPA recommends that states consider the following five factors in assessing whether to depart from county boundaries as the designated nonattainment area boundary:

1. **Air Quality Data:** an evaluation of the design value calculations for each monitor in the State. This calculation consists of the 3-year average of the annual 99th percentile daily maximum 1-hour SO<sub>2</sub> concentrations collected at each monitor. A detailed discussion of air quality in Illinois is provided in the sections below.
2. **Emissions-Related Data:** an evaluation of SO<sub>2</sub> emissions from sources located in and around the violating area which may potentially contribute to observed or modeled violations of the NAAQS. The emissions data used in this analysis are based on actual SO<sub>2</sub> emissions reported to the IEPA for 2007 through 2009.
3. **Meteorology:** an evaluation of weather conditions, including wind speed and direction that affect the plume of sources contributing to ambient and monitored SO<sub>2</sub> concentrations. Pollution roses are derived from IEPA sites in the proposed NAA areas, and all sites use either collocated wind measurements, or the nearest IEPA monitoring site with wind direction measurements, along with hourly SO<sub>2</sub> concentrations. The pollution roses show the frequency of wind directions at the monitor when 1-hour concentrations of SO<sub>2</sub> that exceed the standard are occurring. Detailed meteorology used in IEPA's analysis is discussed in the following sections.
4. **Geography/Topography:** Includes an evaluation of the physical features of the land that might have an effect on the airshed and, therefore, on the distribution of SO<sub>2</sub> at and near the monitors. Due to the fact that none of the recommended SO<sub>2</sub> nonattainment areas in Illinois have any geographical or topographical barriers that significantly limit air

pollution transport within the airsheds, the geography/topography factor did not play a significant role in determining the nonattainment boundaries in Illinois.

5. **Jurisdictional Boundaries:** Includes an analysis of areas that provide clearly defined legal boundaries including landmarks or geographic coordinates to carry out air quality planning and enforcement functions for the nonattainment area. The Illinois EPA is responsible for air quality regulatory programs for every county in the state. Jurisdictional boundaries considered in this analysis are consistent with recommended geographic boundaries, or “county line” definitions, outlined in U.S. EPA’s guidance documentation. Sub-county boundaries in this study reflect 2009 Political Township boundaries provided by Property Tax Division of the Illinois Department of Revenue.

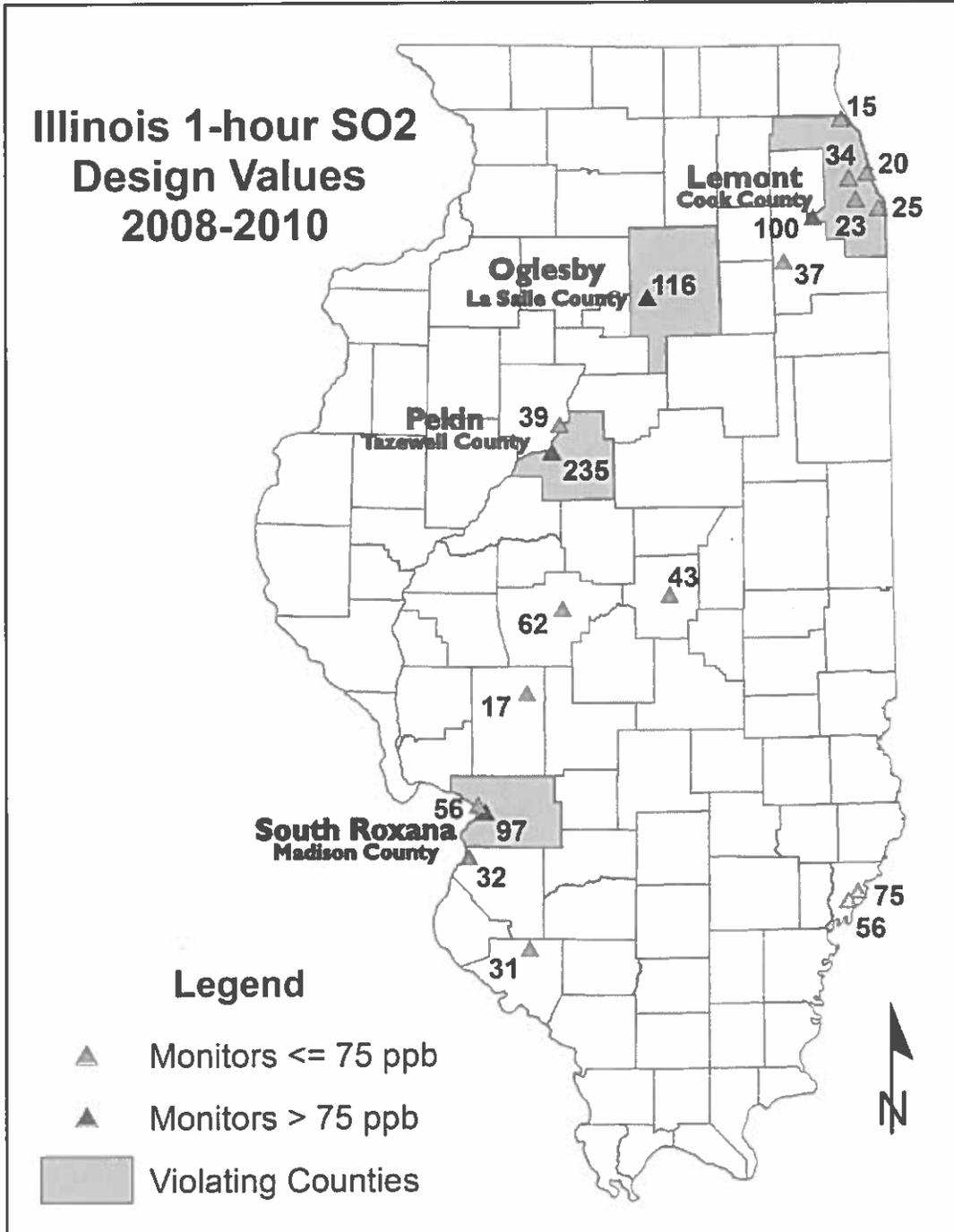
## Illinois Air Quality

As recommended by U.S. EPA, the first step in identifying areas that are in violation of the revised SO<sub>2</sub> NAAQS is to evaluate the most recent three years of ambient air monitoring data. Table 1 shows the most recent three consecutive years of quality assured air monitoring data for 2008 through 2010, along with the resulting design values. The design value is defined as the 3-year average of the annual 99<sup>th</sup> percentile daily maximum 1-hour SO<sub>2</sub> concentrations collected at each monitor (which is generally the fourth highest daily maximum 1-hour concentration, averaged over three consecutive years). The general trend in annual 1-hour 99<sup>th</sup> percentile values statewide has been downward. Overall, 16 of the 19 Illinois SO<sub>2</sub> monitoring sites had 99<sup>th</sup> percentile values in 2010 that were lower than those same values in 2008. Despite the significant improvement in air quality statewide, four monitoring sites currently violate the revised SO<sub>2</sub> NAAQS. These four monitors are located in Tazewell, La Salle, Cook, and Madison counties (see Figure 1). The remaining fifteen monitoring sites are attaining the revised SO<sub>2</sub> NAAQS, most by a considerable margin.

**Table 1**  
**2008-2010 Illinois SO<sub>2</sub> Design Values (ppb)**

AQS Code	County	Site	Annual 99 <sup>th</sup> Percentiles			Design Value
			2008	2009	2010	
170310050	Cook	Chicago - SE Police	35	19	21	25
170310063	Cook	Chicago - CTA	26	21	14	20
170310076	Cook	Chicago - Com Ed	26	24	20	23
170311601	Cook	Lemont	97	114	90	100
170314002	Cook	Cicero	43	29	31	34
170314201	Cook	Northbrook	13	17	15	15
170990007	La Salle	Oglesby	326	8	14	116
171150013	Macon	Decatur	44	36	49	43
171170002	Macoupin	Nilwood	20	16	15	17
171191010	Madison	South Roxana	152	81	57	97
171193007	Madison	Wood River WTP	67	46	54	56
171430024	Peoria	Peoria	52	21	43	39
171570001	Randolph	Houston	35	26	31	31
171630010	St. Clair	East St. Louis	35	30	31	32
171670006	Sangamon	Springfield	131	24	31	62
171790004	Tazewell	Pekin	243	233	228	235
171850001	Wabash	Mount Carmel	90	69	66	75
171851001	Wabash	Rural Wabash Co.	57	53	59	56
171970013	Will	Joliet	56	32	24	37

Figure 1



## Illinois 5 Factor Analysis

The U.S. EPA recommends that states consider the following five factors in assessing whether to depart from county boundaries as the designated nonattainment area boundary. As previously mentioned, Illinois has four counties where monitored violations of the revised SO<sub>2</sub> NAAQS are occurring. The information in the following sections provides boundary recommendations based on the five factors outlined in U.S. EPA guidance within each violating county or adjacent county.

### Tazewell County

#### Air Quality

There are two SO<sub>2</sub> monitors in the Peoria area. The first monitor is located west of the Illinois River in Peoria, while the second monitor is located east of the Illinois River in Pekin (see Figure 2). Monitoring data for both sites is listed below in Table 2. The 2008-2010 design value for the Peoria monitor is below the revised 1-hour NAAQS, while the design value for the Pekin monitor is well above the revised 1-hour NAAQS. The 2008 through 2010 annual 99<sup>th</sup> percentiles show a small decrease at the Peoria site and consistently high values at the Pekin site.

**Table 2 – Peoria Area Air Quality Data for 2008-2010 (ppb)**

AQS Code	County	Site	Annual 99 <sup>th</sup> Percentiles			Design Value
			2008	2009	2010	
171430024	Peoria	Peoria	52	21	43	39
171790004	Tazewell	Pekin	243	233	228	235

#### Emissions

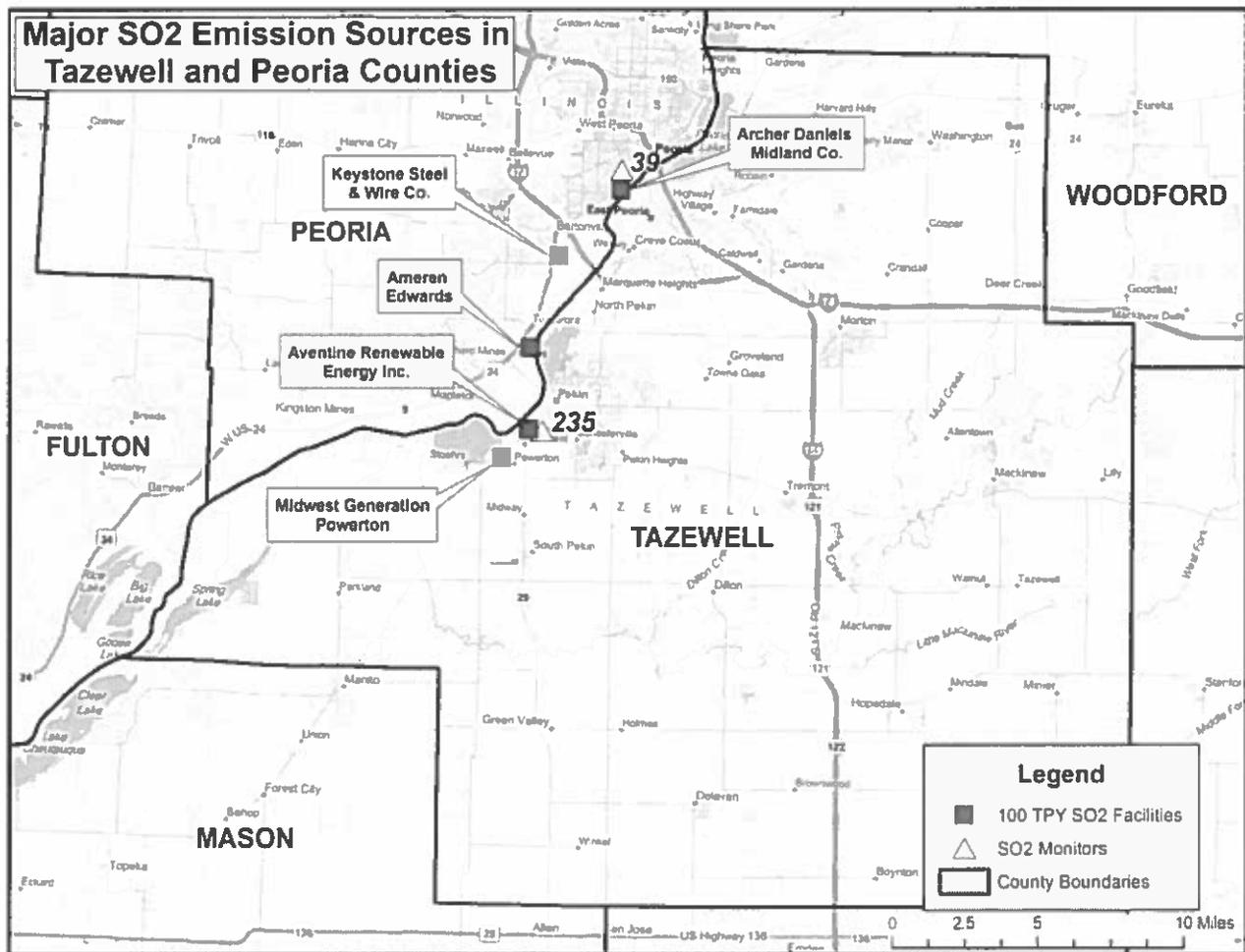
Table 3 lists the major SO<sub>2</sub> emission sources (reported SO<sub>2</sub> emissions over 100 tons per year for at least one of the years from 2007 through 2009) within both Tazewell and Peoria counties. The locations of these sources are shown in Figure 2. From Figure 2, there are two sources in the vicinity of the violating monitor in Pekin: Aventine Renewable Energy, and Midwest Generation – Powerton. Overall, there has been a small decrease in SO<sub>2</sub> emissions within the Peoria area

during the period, however Aventine and Midwest Generation-Powerton, have shown either steady or increasing emissions trends during this period.

**Table 3 – Tazewell and Peoria County Reported SO<sub>2</sub> Emissions for 2007-2009**

County	ID Number	Facility Name	Reported SO <sub>2</sub> Emissions (Tons per Year)		
			2007	2008	2009
Tazewell	179060ACR	Aventine Renewable Energy Inc	12239.93	11830.31	11819.57
Tazewell	179801AAA	Midwest Generation – Powerton	20543.67	22355.08	22125.00
Peoria	143065AJE	Archer Daniels Midland Co	3140.00	3049.00	2587.00
Peoria	143805AAG	Ameren – Edwards	14535.90	11224.10	11734.40
Peoria	143808AAA	Keystone Steel & Wire Co	109.26	137.53	86.61

**Figure 2 – Location of Major SO<sub>2</sub> Emission Sources in Tazewell and Peoria Counties**



### Meteorology

The closest National Weather Service (NWS) meteorological monitoring site to the Pekin area is located at the Greater Peoria Airport. The IEPA considers the meteorological characteristics of the airport site to generally be representative of the Tazewell County area, although it is possible that some local-scale differences may occur within the Illinois River valley, where Pekin is located. Figure 3 shows the climatological wind rose, or wind frequency distribution, for the Peoria Airport. The figure shows that southerly winds are most frequent in the Peoria area, with a secondary maximum from the northwest.

**Figure 3 - Greater Peoria Airport Climatological Wind Rose**

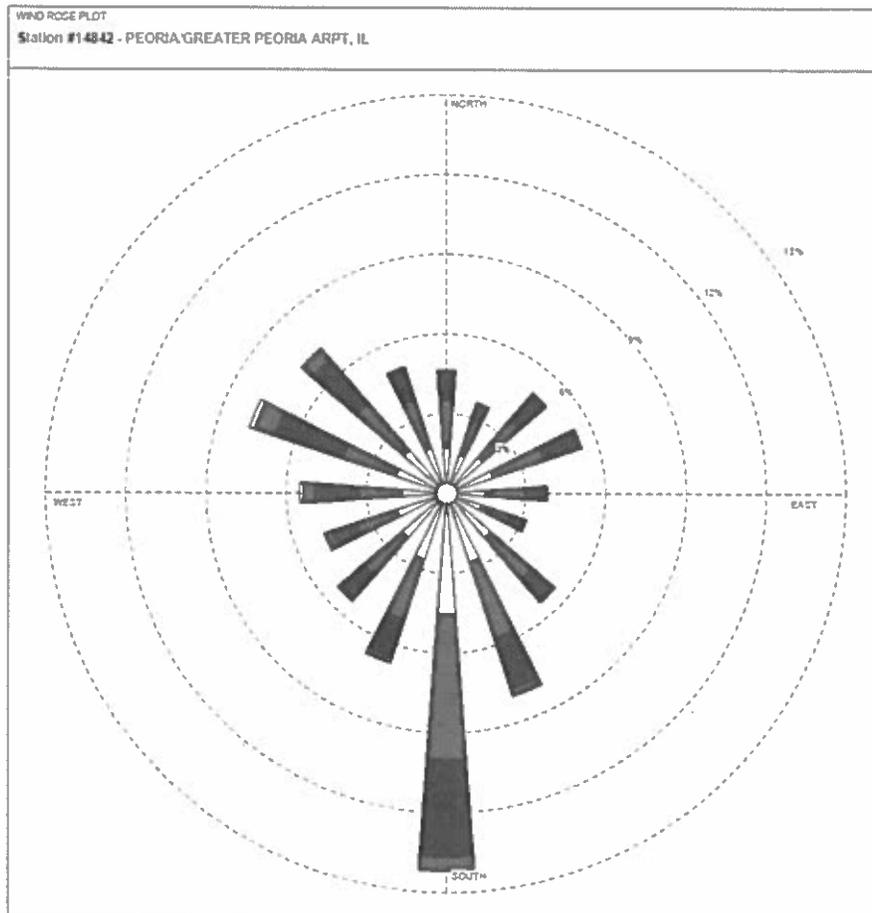
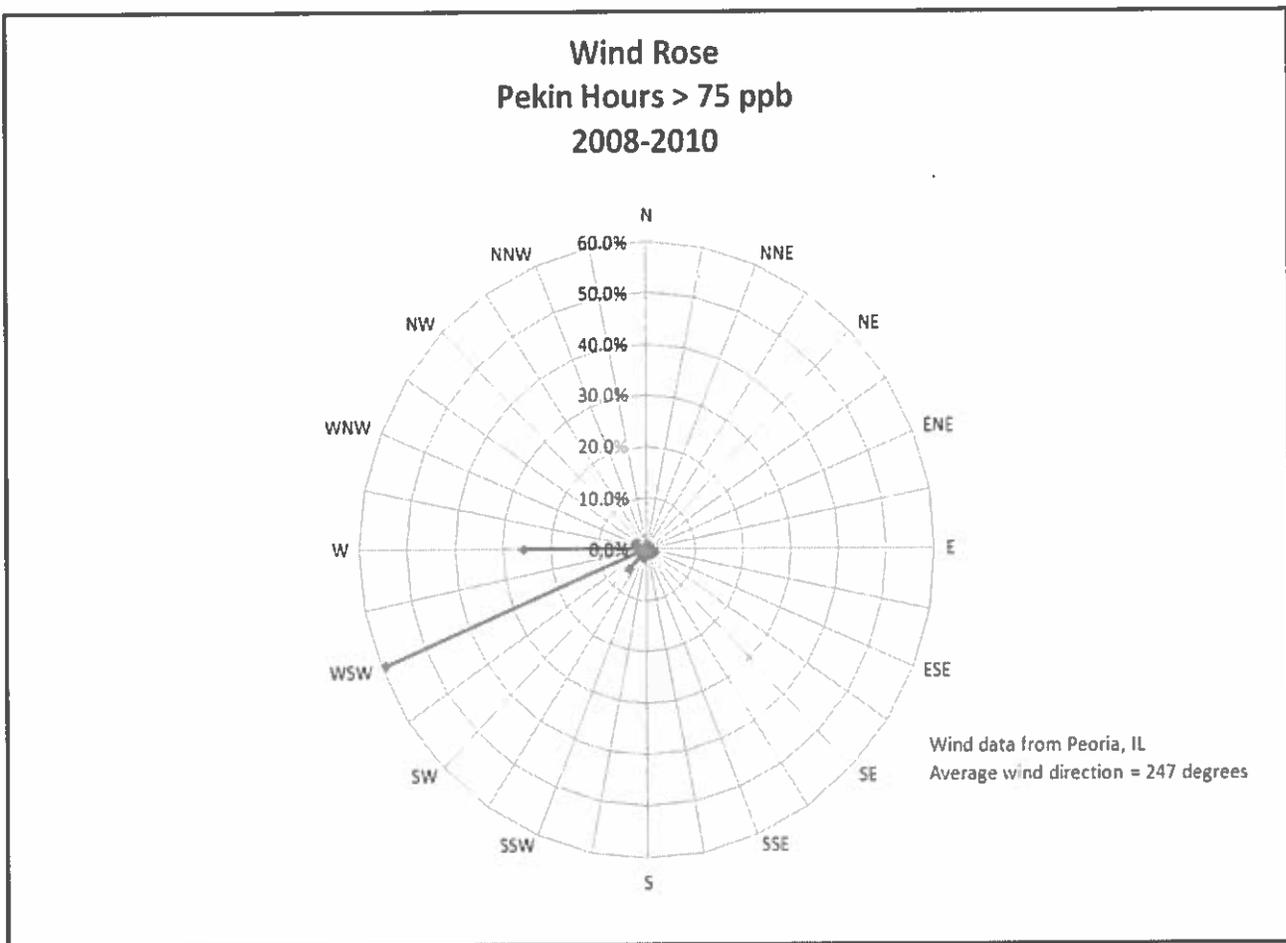


Figure 4 shows the pollution rose for the Pekin monitor, which depicts the wind directions associated with measured SO<sub>2</sub> concentrations exceeding 75 ppb at this location. Comparing the pollution rose in Figure 4 to Figure 5, which shows the locations of major SO<sub>2</sub> emission sources with respect to the Pekin monitor, it is apparent that the wind direction during exceedance hours is either from the west or west-southwest, which aligns the nearby Aventine facility, and, to a lesser extent, Midwest Generation – Powerton with the monitor location.

Figure 4 – Pekin Pollution Rose



**Figure 5 - Aerial Photo of the Pekin Monitor and nearby Facilities**



Since the Pekin monitor is at a slightly higher elevation than the two facilities to the west-southwest, IEPA believes that the high concentrations that are occurring at this monitor are primarily due to emissions from these local sources.

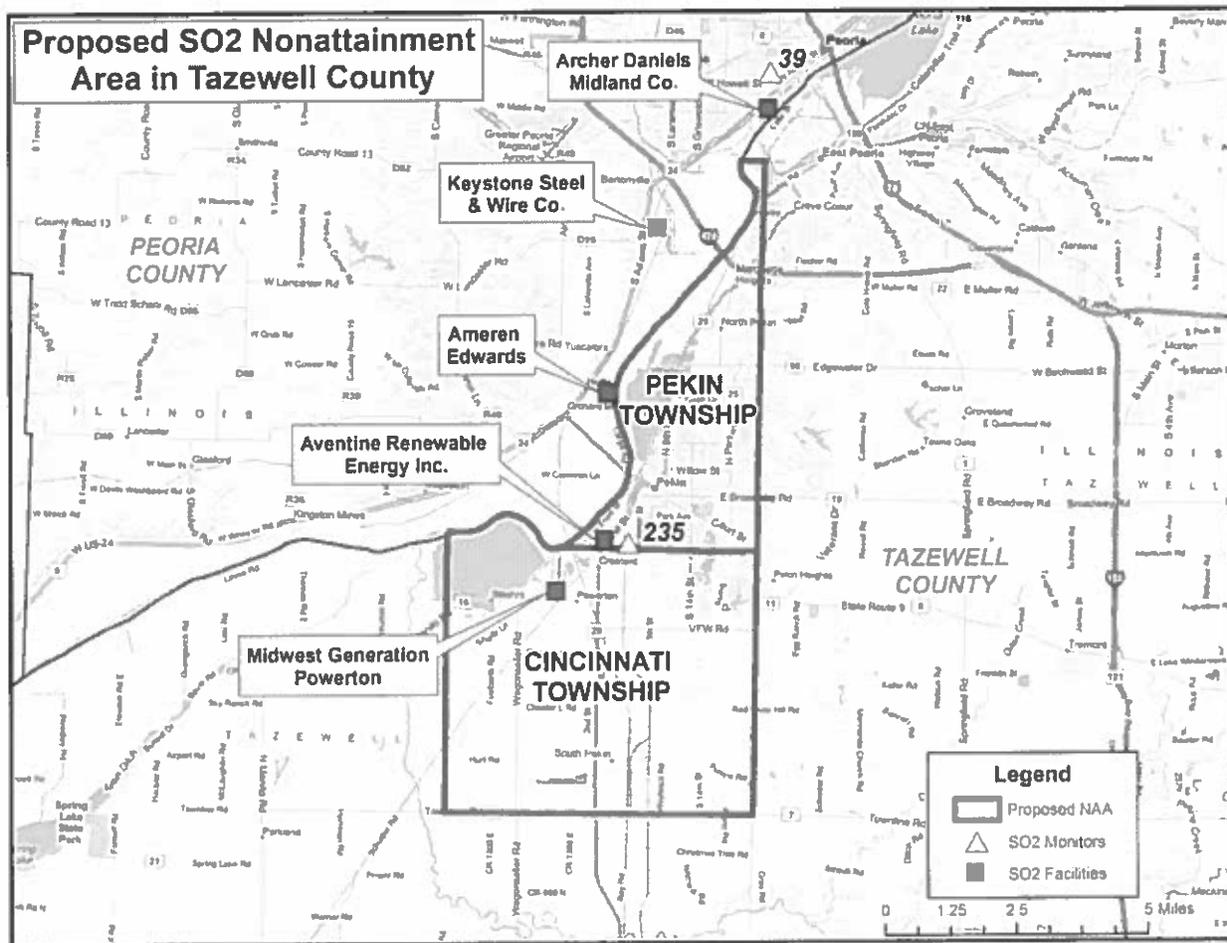
### **Jurisdictional Boundaries**

The Illinois EPA is responsible for air quality regulatory programs for every county in the state. Jurisdictional boundaries considered in this analysis are consistent with recommended geographic boundaries, or “presumptive boundary” definitions, outlined in U.S. EPA’s guidance documentation. Boundaries in this study reflect the 2009 political township boundaries provided by the Property Tax Division of the Illinois Department of Revenue. Based on the geographic location of Pekin and the individual sources, it is expected that the coordination of planning activities required to address the nonattainment designation can be carried out in a cohesive manner.

**Recommendation**

Based on the factors discussed above, Illinois recommends that Pekin and Cincinnati Townships in Tazewell County be designated as nonattainment for the 2010 1-hour SO<sub>2</sub> NAAQS (see Figure 6). These two townships contain both the violating monitor and the two most culpable emission sources.

**Figure 6 – Proposed SO<sub>2</sub> Nonattainment Area Boundary for Tazewell County**



**La Salle County****Air Quality**

There is one SO<sub>2</sub> monitor in La Salle County located in Oglesby. Monitoring data for this site is listed below in Table 4. The 2008-2010 design value for the Oglesby monitor currently exceeds the revised 1-hour NAAQS. However, the 2008 through 2010 annual 99<sup>th</sup> percentiles show a large decline in SO<sub>2</sub> values measured at the Oglesby site related to the suspension of operations at the Lone Star Industries cement plant in 2008. The 99<sup>th</sup> percentiles for both 2009 and 2010 were the lowest values in the state and the Oglesby monitor is expected to attain the revised 1-hour NAAQS by the end of 2011.

**Table 4 – La Salle County Air Quality Data for 2008-2010 (ppb)**

AQS Code	County	Site	Annual 99 <sup>th</sup> Percentiles			Design Value
			2008	2009	2010	
170990007	La Salle	Oglesby	326	8	14	116

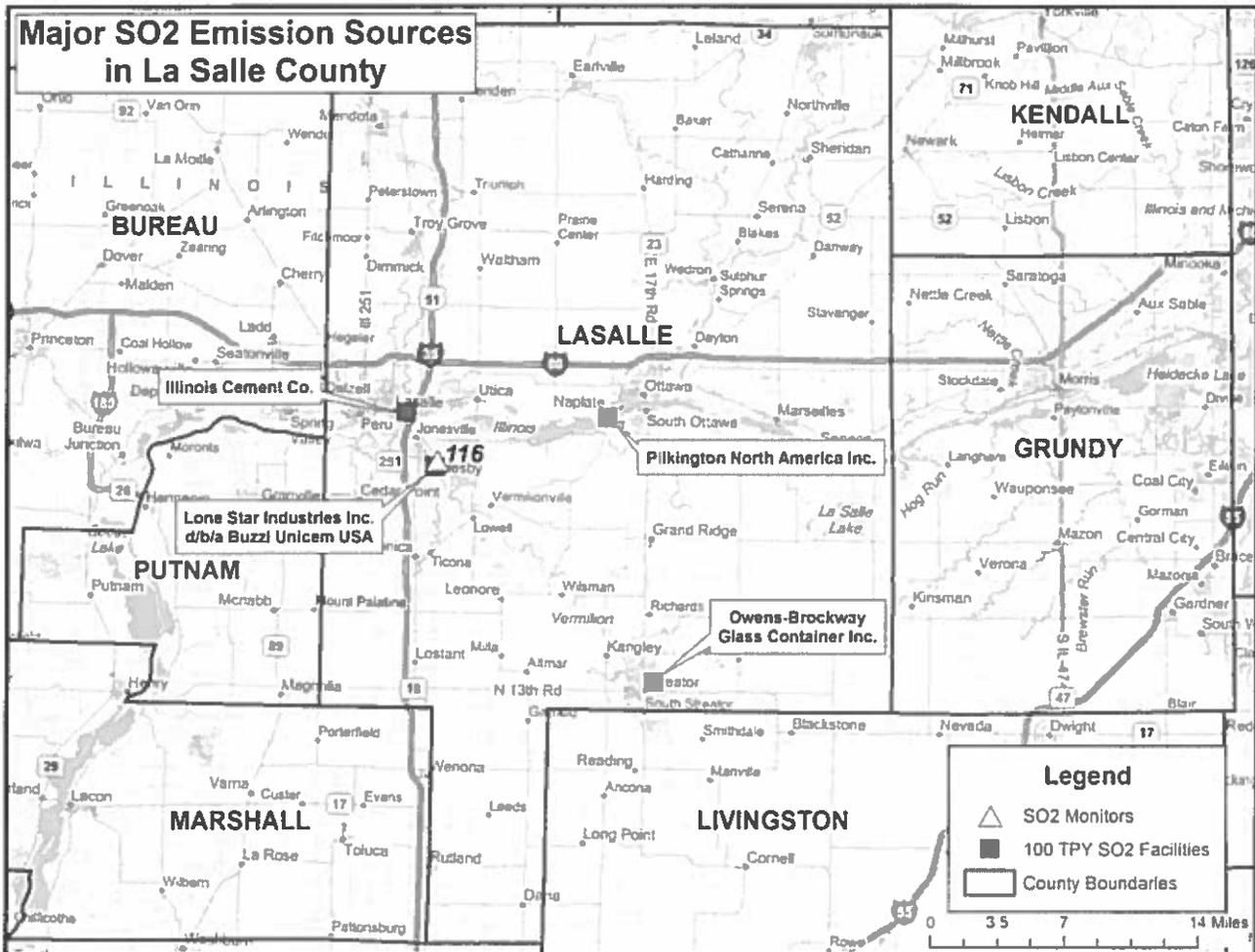
**Emissions**

Table 5 lists the major SO<sub>2</sub> emission sources (reported SO<sub>2</sub> emissions over 100 tons per year for at least one of the years from 2007 through 2009) in La Salle County. The locations of these sources are shown in Figure 7. From Figure 7, there is only one source in the vicinity of the violating monitor in Oglesby: Lone Star Industries. This facility has been closed since 2008, which is reflected in the large decrease in SO<sub>2</sub> emissions shown in Table 5. There has also been a significant reduction in SO<sub>2</sub> emissions at the Illinois Cement Company plant in La Salle, although this facility remains operational.

**Table 5 – La Salle County Reported SO<sub>2</sub> Emissions for 2007-2009**

County	ID Number	Facility Name	Reported SO <sub>2</sub> Emissions (Tons per Year)		
			2007	2008	2009
La Salle	099030AAZ	Illinois Cement Co	167.8	160.34	90.17
La Salle	099490AAD	Owens-Brockway Glass Container Inc	228.24	221.72	208.69
La Salle	099816AAF	Lone Star Industries Inc	2937.16	2241.18	0.00
La Salle	099825AAG	Pilkington North America Inc	293.66	255.1	308.22

Figure 7 – Location of Major SO<sub>2</sub> Emission Sources in La Salle County



**Meteorology**

The Oglesby monitor is in north-central Illinois, roughly the same distance from NWS stations at the Rockford Airport and at the Peoria Airport. Figure 8 shows the climatological wind rose for the Rockford airport. The Rockford wind rose looks very similar to the Peoria wind rose, presented previously in Figure 3. There is a pronounced maximum frequency of southerly winds at Rockford, as at Peoria, with a secondary maximum from the northwest. The IEPA considers these NWS stations to generally be representative of conditions occurring in La Salle County, although it is recognized that the Vermillion River valley, where the Lone Star facility is located, may cause localized meteorological influences.

Figure 8 - Greater Rockford Airport Climatological Wind Rose

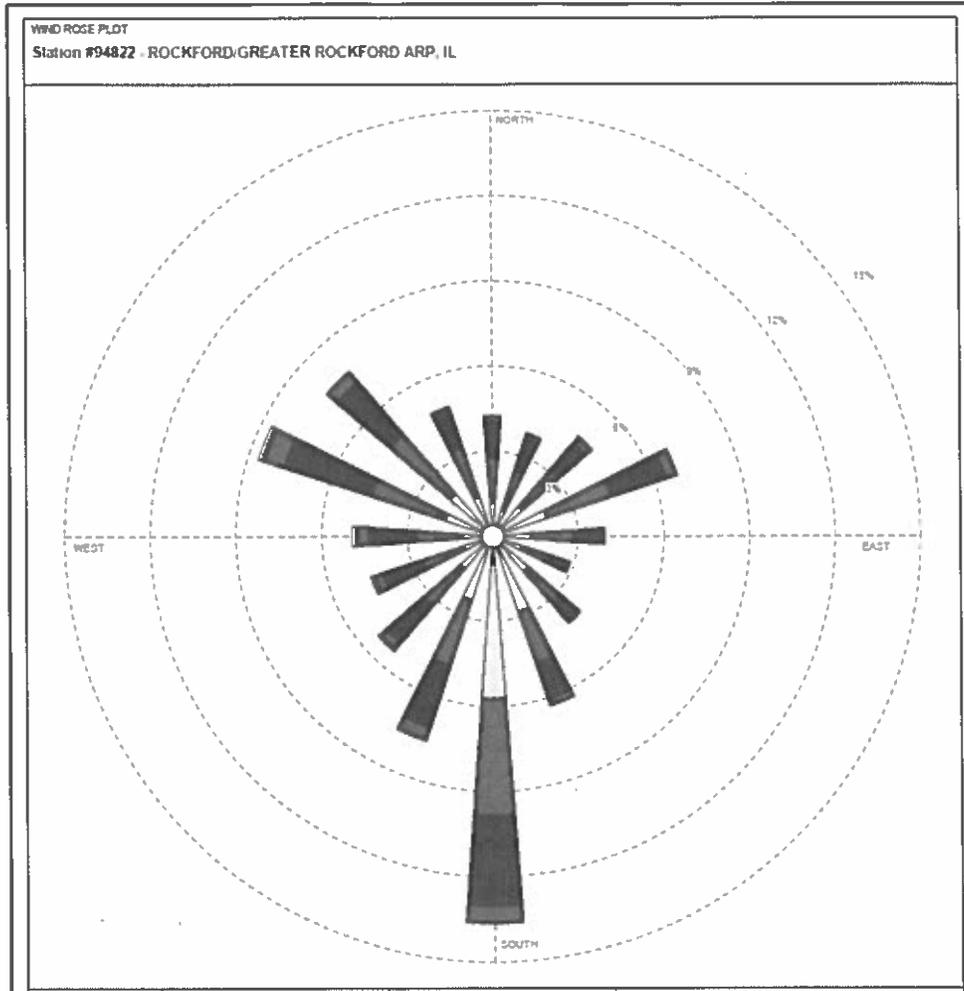
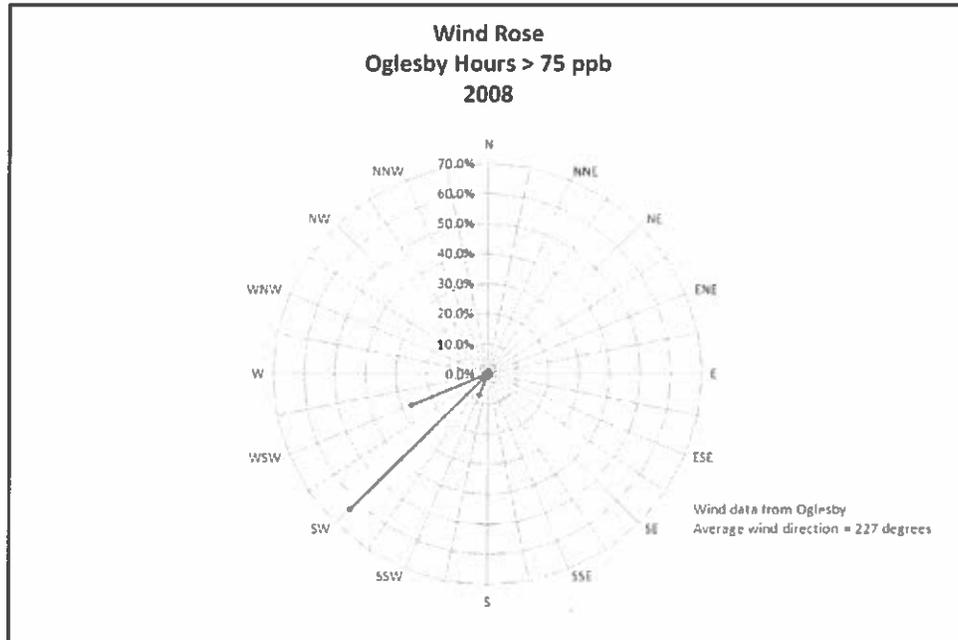


Figure 9 shows the pollution rose for the Oglesby monitor, while Figure 10 is an aerial photo that shows the relationship of the one large source to the monitor. The pollution rose shows that the wind direction during exceedance hours is primarily from the southwest, which corresponds well with the location of Lone Star Industries, which is located to the south and southwest of the monitor. Based on this analysis, the IEPA concludes that exceedances of the revised 1-hour SO<sub>2</sub> NAAQS at Oglesby are due primarily to emissions from the Lone Star facility.

**Figure 9 – Oglesby Pollution Rose**



**Figure 10 - Aerial photo of the Oglesby Monitor and nearby Facility**



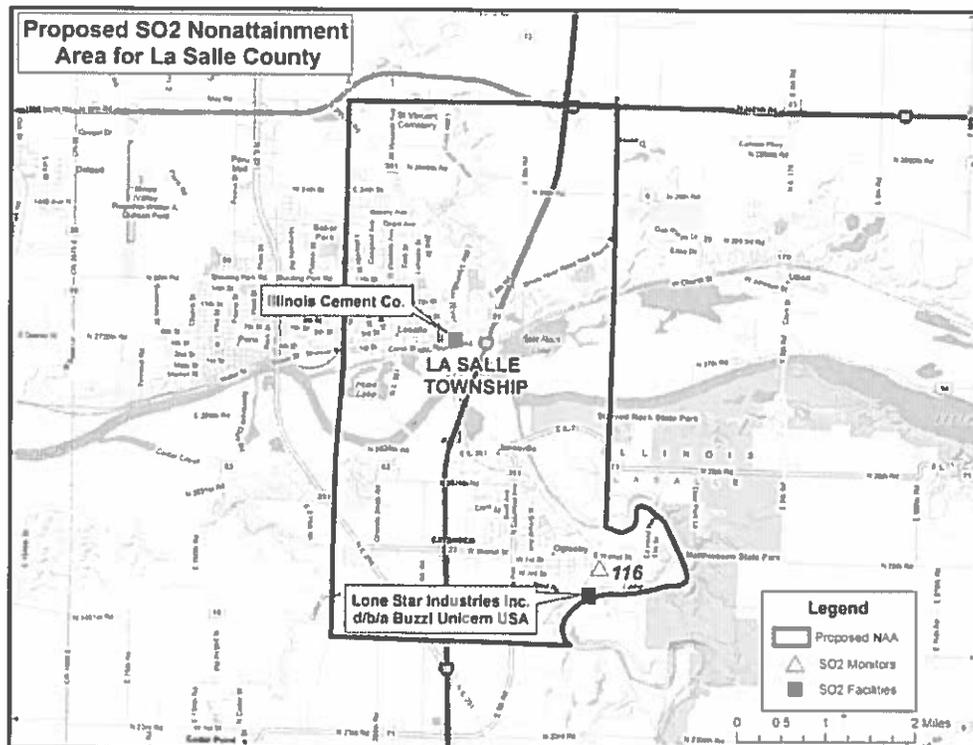
### Jurisdictional Boundaries

The Illinois EPA is responsible for air quality regulatory programs for every county in the state. Jurisdictional boundaries considered in this analysis are consistent with recommended geographic boundaries, or “presumptive boundary” definitions, outlined in U.S. EPA’s guidance documentation. Boundaries in this study reflect the 2009 political township boundaries provided by the Property Tax Division of the Illinois Department of Revenue. Based on the geographic location of Oglesby and the individual sources, it is expected that the coordination of planning activities required to address the nonattainment designation can be carried out in a cohesive manner.

### Recommendation

Based on the factors discussed above, Illinois recommends that La Salle Township in La Salle County be designated as nonattainment for the 2010 1-hour SO<sub>2</sub> NAAQS (see Figure 11). This township contains both the violating monitor and the most culpable source of SO<sub>2</sub> emissions.

Figure 11 – Proposed SO<sub>2</sub> Nonattainment Area Boundary for La Salle County



**Cook and Will Counties****Air Quality**

There are seven SO<sub>2</sub> monitors located in Cook and Will Counties. Monitoring data for these sites are listed below in Table 6. The 2008-2010 design values for all of the sites are well below the revised 1-hour NAAQS, except for the monitor at Lemont. As can be seen in Figure 12, the distribution of design values across northeastern Illinois indicates that the Lemont monitor represents a “hot spot” due to impacts from local emission sources.

**Table 6 – Cook and Will County Air Quality Data for 2008-2010 (ppb)**

AQS Code	County	Site	Annual 99 <sup>th</sup> Percentiles			Design Value
			2008	2009	2010	
170310050	Cook	Chicago - SE Police	35	19	21	25
170310063	Cook	Chicago – CTA	26	21	14	20
170310076	Cook	Chicago - Com Ed	26	24	20	23
170311601	Cook	Lemont	97	114	90	100
170314002	Cook	Cicero	43	29	31	34
170314201	Cook	Northbrook	13	17	15	15
171970013	Will	Joliet	56	32	24	37

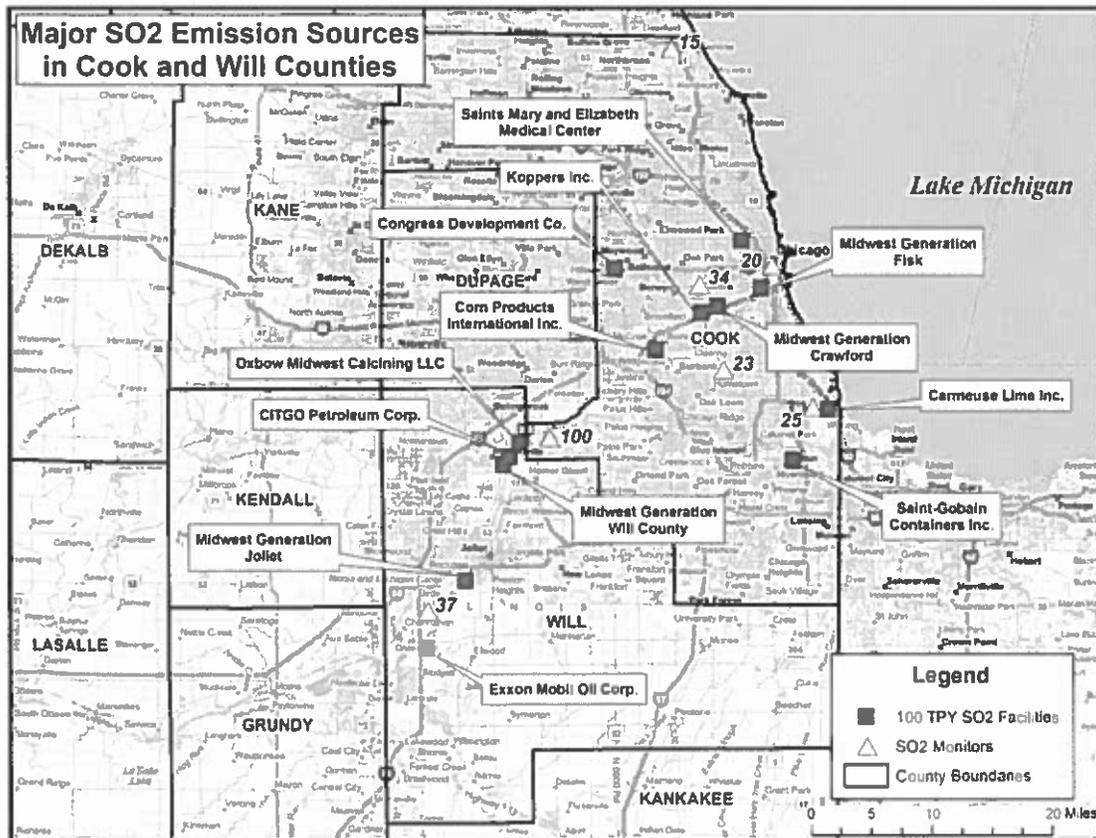
**Emissions**

Table 7 lists the major SO<sub>2</sub> emission sources (reported SO<sub>2</sub> emissions over 100 tons per year for at least one of the years from 2007 through 2009) within Cook and Will counties. The locations of these sources are shown in Figure 12. From Figure 12, there are three sources in the vicinity of the violating monitor in Lemont: Oxbow Midwest Calcining, CITGO Petroleum, and Midwest Generation – Will County. It should be noted that all three nearby sources are located in Will County, although the Lemont monitor is located in Cook County. Overall, SO<sub>2</sub> emissions in Cook and Will counties have dropped by almost 50% since 2007, with the most significant reductions occurring at the two oil refineries (CITGO and Exxon Mobil).

Table 7 – Cook and Will County Reported SO<sub>2</sub> Emissions for 2007-2009

County	ID Number	Facility Name	Reported SO <sub>2</sub> Emissions (Tons per Year)		
			2007	2008	2009
Cook	031012ABI	Corn Products International Inc	1942.00	2203.00	991.00
Cook	031069AAI	Saint-Gobain Containers Inc	354.05	344.84	300.30
Cook	031123ABP	Congress Development Co	57.43	81.33	204.00
Cook	031300AAJ	Koppers Inc	846.80	823.17	705.38
Cook	031600ADY	Carmeuse Lime Inc	359.57	321.46	0.00
Cook	031600AIN	Midwest Generation - Crawford	8881.90	6626.90	7107.50
Cook	031600AMI	Midwest Generation - Fisk	4954.51	4485.561	4217.56
Cook	031600CTF	Saints Mary and Elizabeth Med. Center	0.07	0.10	125.01
Will	197090AAI	CITGO Petroleum Corp	14170.75	6135.86	336.62
Will	197800AAA	Exxon Mobil Oil Corp	22095.05	16404.03	1914.79
Will	197803AAK	Oxbow Midwest Calcining LLC	7153.21	6204.85	4990.62
Will	197809AAO	Midwest Generation – Joliet	20265.72	18281.72	17996.87
Will	197810AAK	Midwest Generation - Will County	17310.81	16496.78	12602.53

Figure 12 – Location of Major SO<sub>2</sub> Emission Sources in Cook and Will Counties



**Meteorology**

The Lemont monitor is located in Cook County, so the nearest NWS site is at Chicago's O'Hare Airport. Since the Lemont site is a similar distance from Lake Michigan as O'Hare airport, the effect of Lake Michigan on local wind directions should be comparable. Figure 13 shows the climatological wind rose for O'Hare Airport. Unlike the Peoria and Rockford wind roses shown previously, a higher frequency of wind directions occur at O'Hare from southerly through westerly, with a secondary maximum from the northeast.

**Figure 13 – Chicago-O'Hare Airport Climatological Wind Rose**

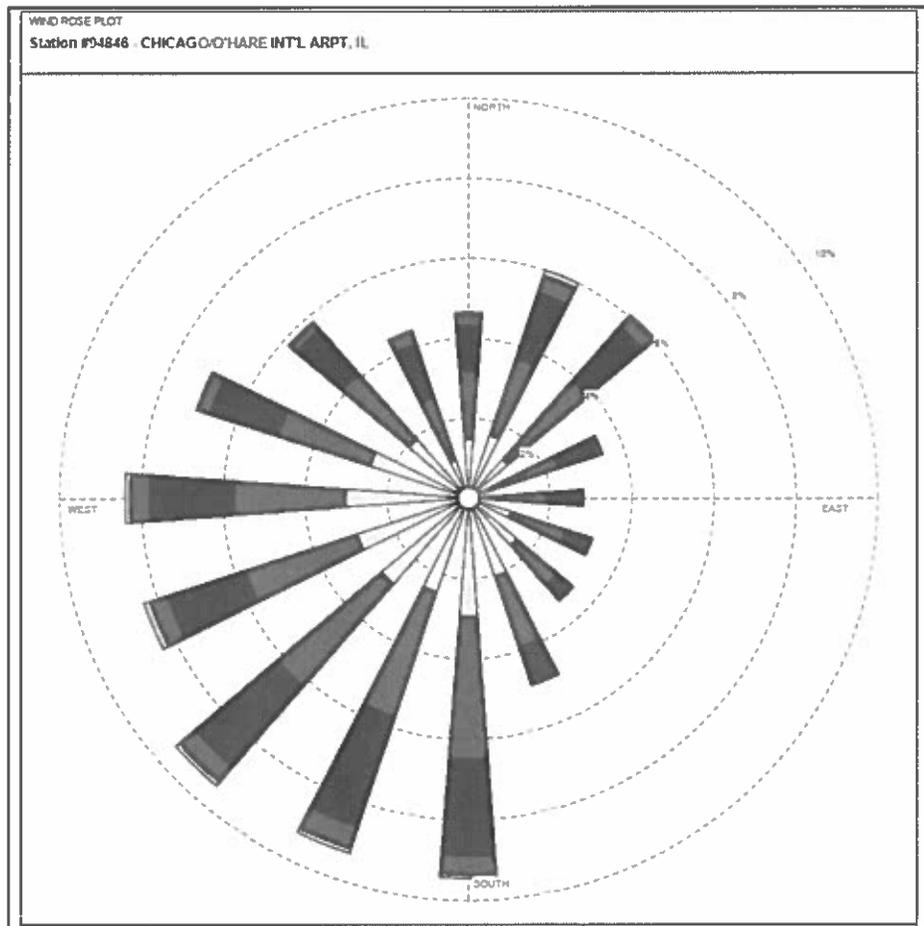
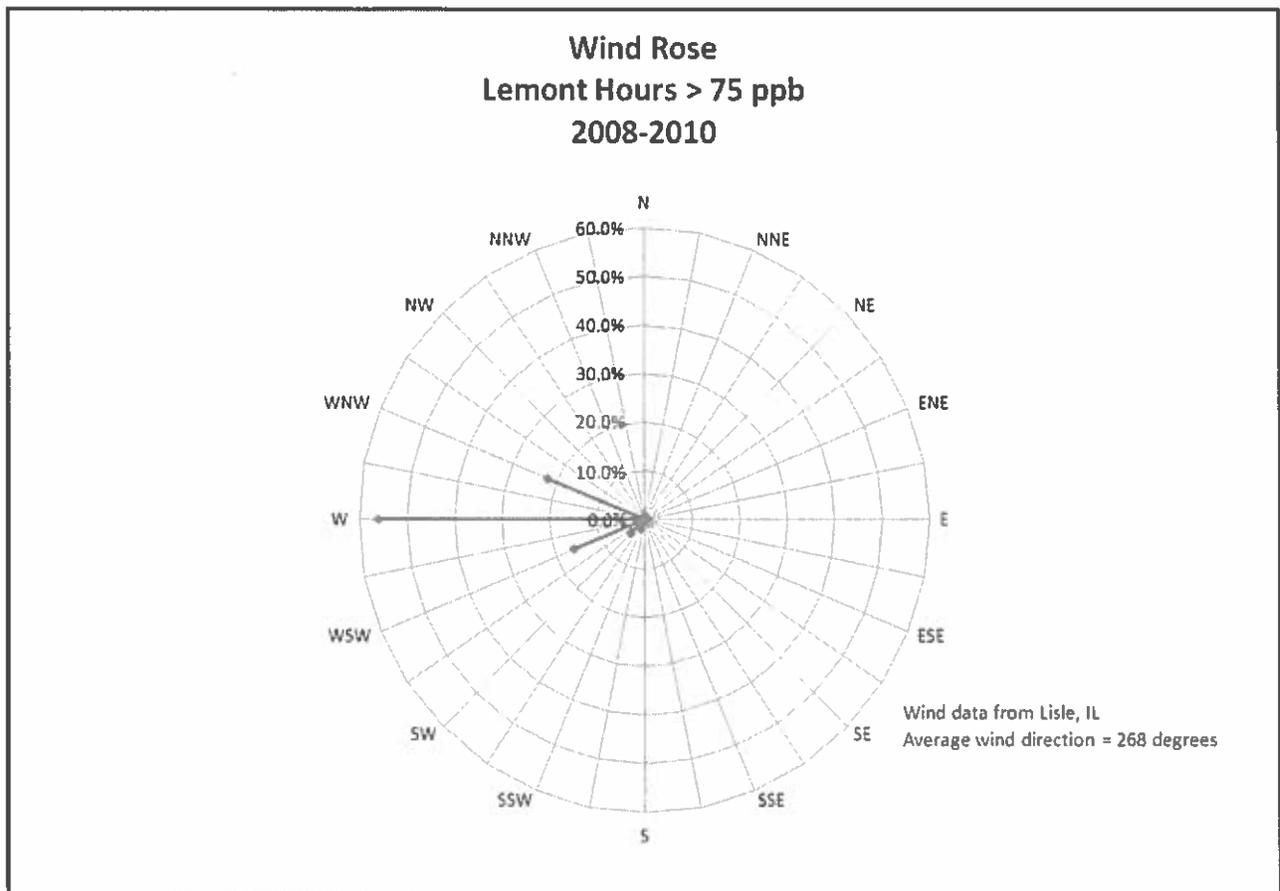


Figure 14 shows the pollution rose for the Lemont monitor, while Figure 15 is an aerial photo that shows the spatial relationship of major emission sources to the monitor. The pollution rose shows that the wind direction during exceedance hours is mostly from the west, which indicates likely contributions from Oxbow Midwest Calcining, and, to a lesser extent, CITGO Petroleum. With the close proximity of major sources upwind from the monitor on high concentration days, IEPA believes that nonattainment at the Lemont monitor is primarily due to these local sources.

**Figure 14 - Lemont Pollution Rose**



**Figure 15 - Aerial photo of the Lemont monitor and nearby Facilities**



### **Jurisdictional Boundaries**

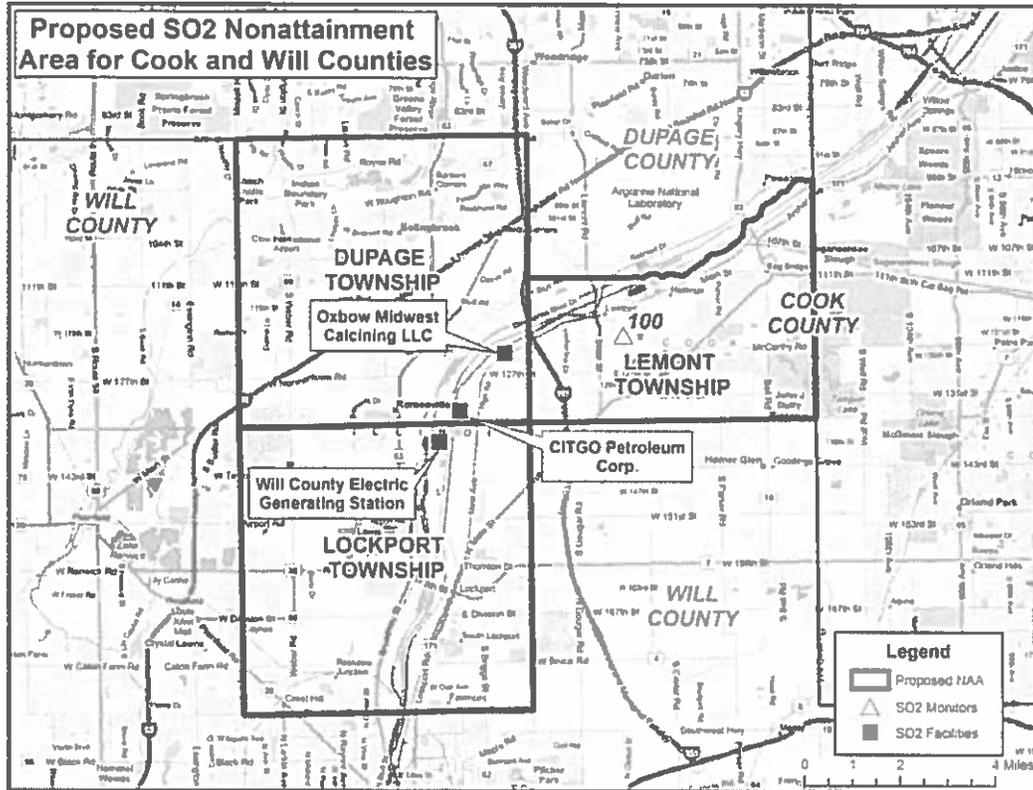
The Illinois EPA is responsible for air quality regulatory programs for every county in the state. Jurisdictional boundaries considered in this analysis are consistent with recommended geographic boundaries, or “presumptive boundary” definitions, outlined in U.S. EPA’s guidance documentation. Boundaries in this study reflect the 2009 political township boundaries provided by the Property Tax Division of the Illinois Department of Revenue. Based on the geographic location of Lemont and the individual sources, it is expected that the coordination of planning activities required to address the nonattainment designation can be carried out in a cohesive manner.

### **Recommendation**

Based on the factors discussed above, Illinois recommends that Lemont Township in Cook County and DuPage and Lockport Townships in Will County be designated as nonattainment for the 2010 1-hour SO<sub>2</sub> NAAQS (see Figure 16). These three townships contain both the violating

monitor and the most culpable sources of SO<sub>2</sub> emissions impacting the Lemont monitor.

Figure 16 – Proposed SO<sub>2</sub> Nonattainment Area Boundary for Cook and Will Counties



**Madison County**

**Air Quality**

There are three SO<sub>2</sub> monitors in the Metro-East area. Two of the monitors are located in western Madison County, while the third monitor is located in East St. Louis in St. Clair County. Monitoring data for all three sites is listed in Table 8. The 2008-2010 design values for the Wood River and East St. Louis monitors are well below the revised 1-hour NAAQS, while the design value for the South Roxana monitor exceeds the revised 1-hour NAAQS. The 2008 through 2010 annual 99<sup>th</sup> percentiles decreased at all three sites, with the most significant improvement occurring at the South Roxana monitor.

**Table 8 – Metro-East Area Air Quality Data for 2008-2010 (ppb)**

AQS Code	County	Site	Annual 99 <sup>th</sup> Percentiles			Design Value
			2008	2009	2010	
171191010	Madison	South Roxana	152	81	57	97
171193007	Madison	Wood River WTP	67	46	54	56
171630010	St. Clair	East St. Louis	35	30	31	32

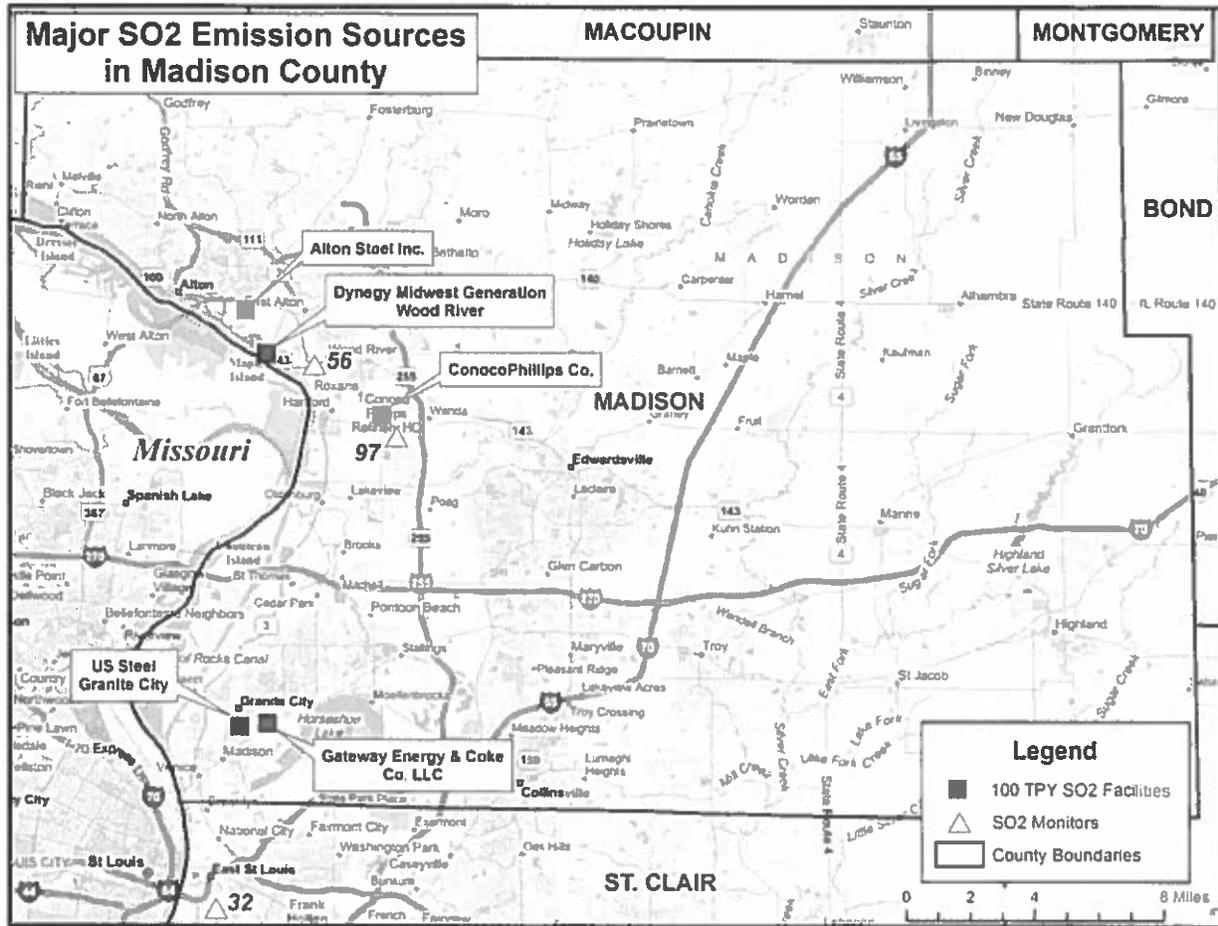
**Emissions**

Table 9 lists the major SO<sub>2</sub> emission sources (reported SO<sub>2</sub> emissions over 100 tons per year for at least one of the years from 2007 through 2009) in Madison County. The locations of these sources are shown in Figure 17. From Figure 17, there is only one source in proximity to the violating monitor in South Roxana: ConocoPhillips. SO<sub>2</sub> emissions in Madison County have decreased significantly during the 2007-2009 period. The largest reductions occurred at the ConocoPhillips oil refinery, which is located near the South Roxana monitor, and US Steel's Granite City Works.

**Table 9 – Madison County Reported SO<sub>2</sub> Emissions for 2007-2009**

County	ID Number	Facility Name	Reported SO <sub>2</sub> Emissions (Tons per Year)		
			2007	2008	2009
Madison	119010AAE	Alton Steel Inc	121.43	142.88	63.25
Madison	119020AAE	Dynegy Midwest Gen. – Wood River	6462.30	6873.20	9089.10
Madison	119040ATN	Gateway Energy & Coke Co LLC	0.00	0.00	580.34
Madison	119090AAA	ConocoPhillips Co	13629.96	12273.72	5761.00
Madison	119813AAI	US Steel - Granite City	6187.15	5612.67	1428.31

Figure 17 – Location of Major SO<sub>2</sub> Emission Sources in Madison County



### Meteorology

The nearest NWS site to Madison County is Lambert Field in St. Louis. Figure 18 shows the climatological wind rose for Lambert Field. Unlike the wind roses previously shown, the most frequent wind directions are from the south through southeast, with a strong secondary maximum from the northwest. The IEPA considers the meteorological conditions at Lambert Field to generally be representative of conditions occurring in Madison County, although it is recognized that the South Roxana monitor is located on the flood plain of the Mississippi River and may experience some localized differences.

Figure 18 - St. Louis-Lambert Field Climatological Wind Rose

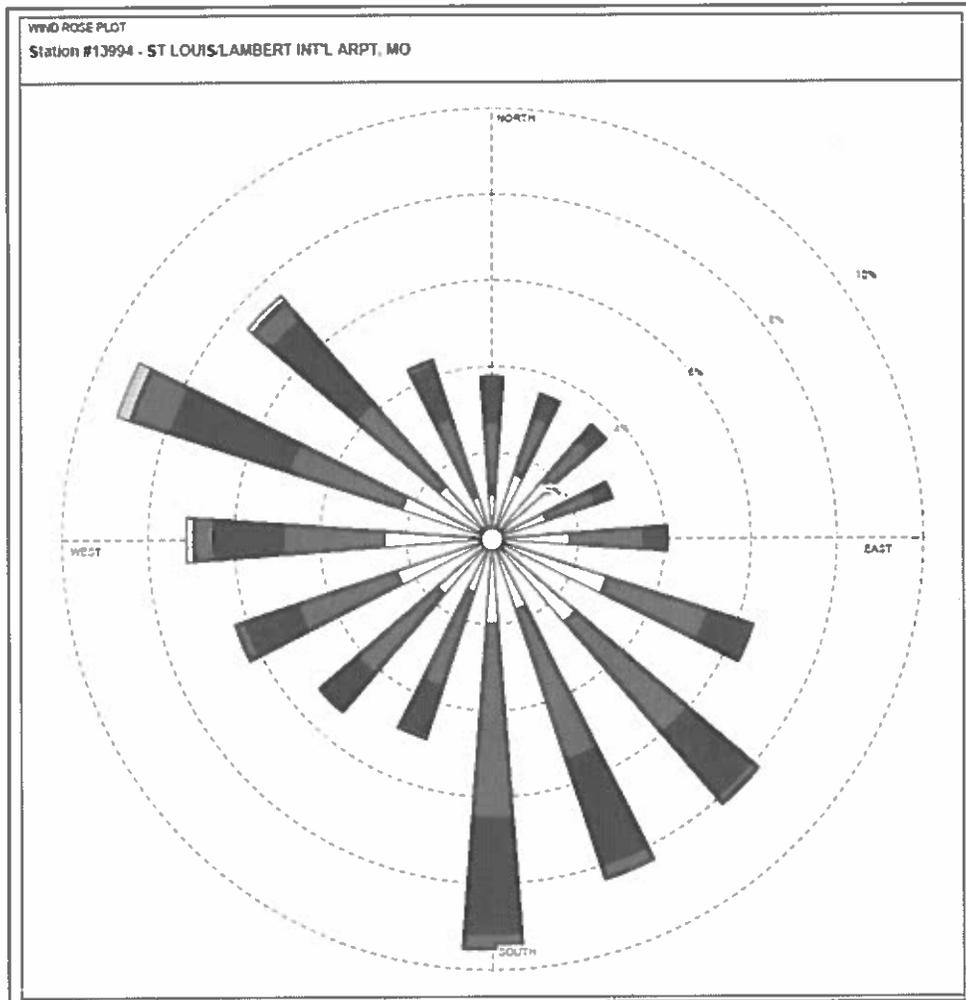
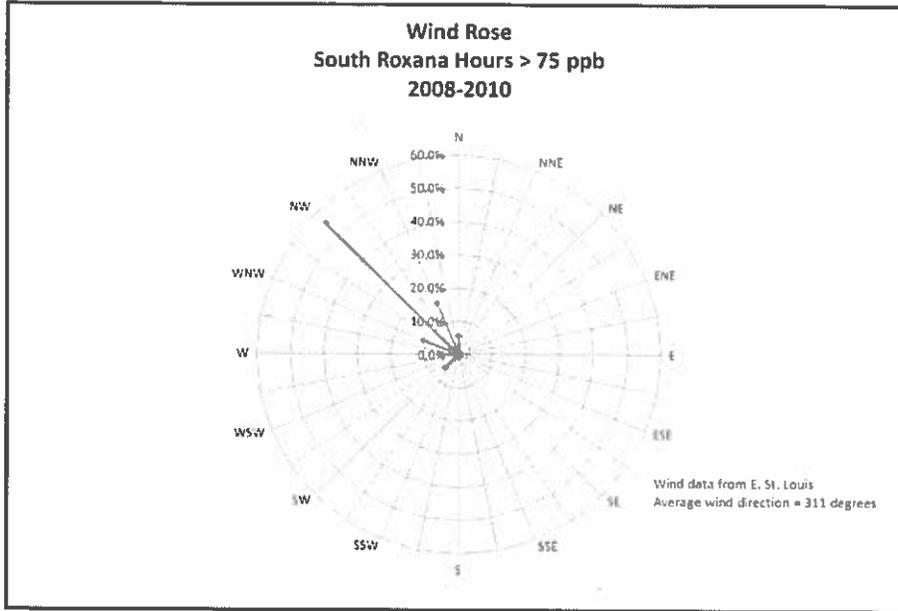


Figure 19 shows the pollution rose for the South Roxana monitor, while Figure 20 is an aerial photo that shows the relationship of the one large source to the monitor. The pollution rose shows that the wind direction during exceedance hours is primarily from the northwest which aligns the nearby ConocoPhillips refinery with the monitor location. With the proximity of this major nearby source to the monitor, IEPA concludes that emissions from this facility are primarily responsible for exceedances of the revised 1-hour SO<sub>2</sub> NAAQS at South Roxana.

**Figure 19 - South Roxana Pollution Rose**



**Figure 20 - Aerial photo of the South Roxana Monitor and nearby Facility**



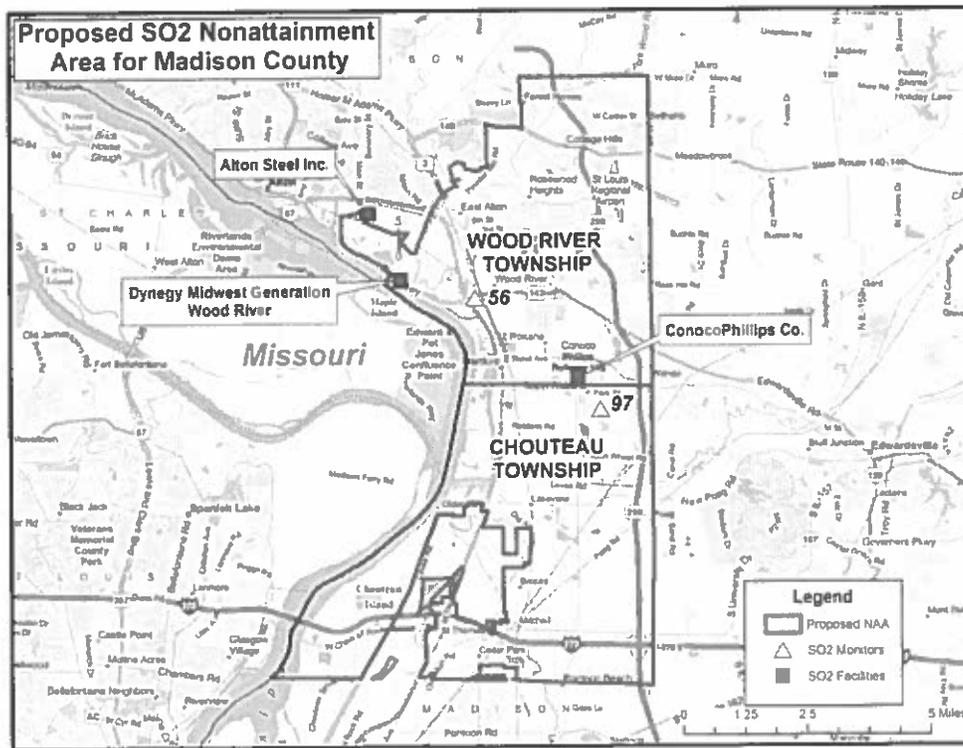
**Jurisdictional Boundaries**

The Illinois EPA is responsible for air quality regulatory programs for every county in the state. Jurisdictional boundaries considered in this analysis are consistent with recommended geographic boundaries, or “presumptive boundary” definitions, outlined in U.S. EPA’s guidance documentation. Boundaries in this study reflect the 2009 political township boundaries provided by the Property Tax Division of the Illinois Department of Revenue. Based on the geographic location of Roxana and the individual sources, it is expected that the coordination of planning activities required to address the nonattainment designation can be carried out in a cohesive manner.

**Recommendation**

Based on the factors discussed above, Illinois recommends that Chouteau and Wood River Townships in Madison County be designated as nonattainment for the 2010 1-hour SO<sub>2</sub> NAAQS (see Figure 21). These two townships contain both the violating monitor and the most culpable source of SO<sub>2</sub> emissions impacting the South Roxana monitor.

**Figure 21 – Proposed SO<sub>2</sub> Nonattainment Area Boundary for Madison County**



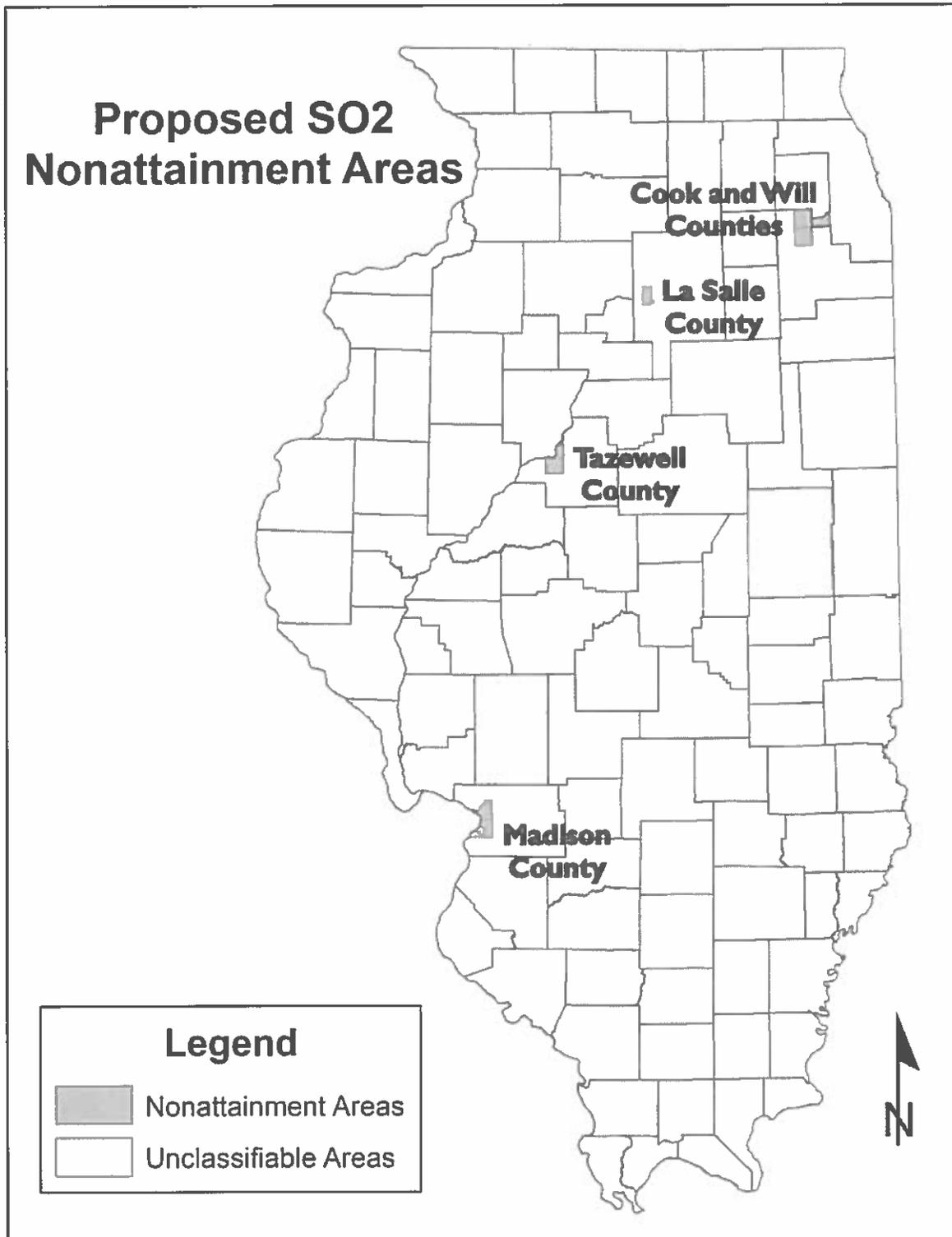
## **Recommendations**

IEPA's recommendations for attainment/nonattainment boundary designations in Illinois for the 2010 revised 1-hour SO<sub>2</sub> national ambient air quality standard are contained in Table 10.

Current air quality data collected by the IEPA indicates that the 2010 revised primary SO<sub>2</sub> NAAQS is not being met in the areas listed in Table 10, and that they should be designated as nonattainment areas. The locations of IEPA's recommended SO<sub>2</sub> nonattainment areas for the State of Illinois are shown in Figure 22.

The Clean Air Act does not specify the geographic boundaries, size, or the extent to which source contributions would require that an area be designated as nonattainment for the 2010 revised primary SO<sub>2</sub> standard, nor has U.S. EPA promulgated rules prescribing such. IEPA's recommendations are consistent with the guidance memorandum provided by U.S. EPA and are based on an evaluation of current air quality, the location and magnitude of SO<sub>2</sub> emission sources, and other factors. The IEPA recognizes that each of the factors considered in this evaluation, when evaluated individually, are not necessarily conclusive. Rather, IEPA's recommendations are based on consideration of all of the factors taken together. It is expected that the coordination of planning activities required to address the nonattainment designations can be carried out in a cohesive manner. The data sources utilized in the preparation of this report are summarized in Table 11.

Figure 22



**Table 10**

**Recommended Attainment/Nonattainment Designations in Illinois for the 2010  
Revised Primary 1-hour SO<sub>2</sub> National Ambient Air Quality Standard**

<b>County (Partial)</b>	<b>Designation</b>	<b>Name of Area</b>
<u>Tazewell County:</u> <ul style="list-style-type: none"> <li>• Pekin and Cincinnati Townships</li> <li>• Remainder of Tazewell County</li> </ul>	Nonattainment Unclassifiable	Tazewell County
<u>La Salle County:</u> <ul style="list-style-type: none"> <li>• La Salle Township</li> <li>• Remainder of La Salle County</li> </ul>	Nonattainment Unclassifiable	La Salle County
<u>Cook County:</u> <ul style="list-style-type: none"> <li>• Lemont Township</li> <li>• Remainder of Cook County</li> </ul>	Nonattainment Unclassifiable	Cook County
<u>Will County:</u> <ul style="list-style-type: none"> <li>• Lockport and DuPage Townships</li> <li>• Remainder of Will County</li> </ul>	Nonattainment Unclassifiable	Will County
<u>Madison County:</u> <ul style="list-style-type: none"> <li>• Chouteau and Wood River Townships</li> <li>• Remainder of Madison County</li> </ul>	Nonattainment Unclassifiable	Madison County
All Other Counties	Unclassifiable	Illinois

**Table 11**  
**SO<sub>2</sub> NAA Five Factor Documentation**

<b>Factor</b>	<b>Data Analysis</b>	<b>Data Source</b>	<b>Date of Study</b>
1. Air Quality	SO <sub>2</sub> 2008-2010 Design Values at individual monitors (statewide)	IEPA BOA Database, Air Monitoring Section	2008-2010
2. Emissions	Emission inventory information for SO <sub>2</sub>	IEPA 2007-2009 Reported Emissions,	2009
3. Geography/Topography	Statewide elevations	Google Maps Data	2008
4. Jurisdictional Boundaries	Illinois Department of Revenue, Political Townships	Illinois Department of Revenue, Property Tax Division, Springfield, Illinois	2009
5. Meteorology	Weather patterns – Wind Roses and Pollution Roses. 1961 – 1990	National Weather Service, Illinois State Climatologist Office	October 7, 2004



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590  
**FEB 06 2013**

The Honorable Pat Quinn  
Governor of Illinois  
207 State House  
Springfield, Illinois 62706

REPLY TO THE ATTENTION OF

Dear Governor Quinn:

I am writing to inform you of the U.S. Environmental Protection Agency's response to the State of Illinois' air quality designation recommendations for the 2010 revision to the primary National Ambient Air Quality Standard for sulfur dioxide (SO<sub>2</sub>). As you may know, the Clean Air Act requires EPA to set National Ambient Air Quality Standards for pollutants considered harmful to public health and the environment. Reducing SO<sub>2</sub> emissions is an important part of EPA's commitment to a clean, healthy environment. Exposure to SO<sub>2</sub> can cause a range of adverse health effects, including difficulty breathing and increased asthma symptoms.

On June 3, 2010, EPA strengthened the health-based or "primary" standard for SO<sub>2</sub> by establishing a standard for 1-hour average SO<sub>2</sub> concentrations at a level of 75 parts per billion. The Clean Air Act requires EPA to complete the initial designations process within two years of promulgating a new or revised standard. If EPA has insufficient information to make these designations, EPA has the authority to extend the designation process by up to one year. On July 27, 2012, EPA announced that it had insufficient information to complete the designations for the 1-hour SO<sub>2</sub> standard within two years and extended the designations deadline to June 3, 2013.

At this time, EPA is proceeding with nonattainment designations for most areas where 2009-2011 monitoring data indicate violations of the 1-hour SO<sub>2</sub> standard. EPA intends to address the designations for all other areas in separate future actions. After carefully considering Illinois' recommendations and the associated technical information, including air quality data from 2009-2011, EPA intends to designate the following areas, including the following counties or portions of counties, as nonattainment for the 2010 SO<sub>2</sub> standard:

<u>Nonattainment Area</u>	<u>County</u>
Lemont	Cook County, IL (Lemont Township) Will County, IL (DuPage and Lockport Townships)
Pekin*	Tazewell County, IL (Cincinnati and Pekin Townships) Peoria County, IL* (Hollis Township)

The asterisk (\*) indicates that the boundary for this intended nonattainment area represents a modification to the boundary that the state recommended. The enclosed Technical Support Document provides a detailed analysis that supports these preliminary nonattainment area decisions.

With input from a diverse group of stakeholders, EPA has also developed a comprehensive strategy for implementing the 1-hour SO<sub>2</sub> standard that focuses resources on identifying and addressing unhealthy levels of SO<sub>2</sub>. The strategy is available at: <http://www.epa.gov/airquality/sulfurdioxide/implement.html>. EPA will continue to work closely with our partners at the state, tribal, and local levels to ensure health-protective, commonsense implementation of the 1-hour SO<sub>2</sub> standard.

EPA will continue to work with the state regarding the appropriate boundaries for the areas in Illinois. If the state has additional information for EPA to consider, please submit it by April 8, 2013. We also will be publishing a Federal Register notice announcing a 30-day period for the public to provide input on EPA's preliminary nonattainment designation decisions. We intend to promulgate these designations for areas with monitored violations of the 2010 SO<sub>2</sub> standard by June 2013. We are not yet prepared to propose designations action or seek public comment on other areas.

We look forward to a continued dialogue with the state as we work to implement the 2010 primary SO<sub>2</sub> standard. For additional information regarding initial designations on the SO<sub>2</sub> standard, please visit [www.epa.gov/so2designations](http://www.epa.gov/so2designations). If you have any questions, please contact me at 312-886-3000, or your staff may contact George Czerniak, Director of EPA Region 5's Air and Radiation Division, at 312-353-2212 or [czerniak.george@epa.gov](mailto:czerniak.george@epa.gov).

Sincerely,



Susan Hedman  
Regional Administrator

Enclosure

cc: John J. Kim  
Director, Illinois Environmental Protection Agency

Laurel Kroack  
Chief, Bureau of Air,  
Illinois Environmental Protection Agency

**Draft Technical Support Document**

**Illinois  
Area Designations For the  
2010 SO<sub>2</sub> Primary National Ambient Air Quality Standard**

**Summary**

Pursuant to section 107(d) of the Clean Air Act, EPA must initially designate areas as either “unclassifiable”, “attainment”, or “nonattainment” for the 2010 one-hour sulfur dioxide (SO<sub>2</sub>) primary national ambient air quality standard (NAAQS). The Clean Air Act defines a nonattainment area as one that does not meet the NAAQS or that contributes to a violation in a nearby area.

Illinois submitted recommendations on June 2, 2011. Table 1 below lists Illinois’s recommendations and identifies the counties or portions of counties in Illinois that EPA intends to designate “nonattainment” based on monitored violations.

**Table 1. Nonattainment Area Designations for Illinois**

<b>Area</b>	<b>Illinois Recommended Designation of Areas/ Counties</b>	<b>EPA's Intended Designation of Areas/ Counties</b>
<b>Pekin, IL</b> Tazewell County (partial) - Cincinnati Township, - Pekin Township	Nonattainment	Nonattainment
Peoria County (partial) - Hollis Township	Unclassifiable	Nonattainment
<b>Lemont, IL</b> Cook County (partial) - Lemont Township	Nonattainment	Nonattainment
Will County (partial) - Dupage Township - Lockport Township	Nonattainment	Nonattainment

### **Background**

On June 3, 2010, EPA revised the primary SO<sub>2</sub> NAAQS (75 FR 35520, published on June 22, 2010). EPA revised the primary SO<sub>2</sub> standard by establishing a new one-hour standard at a level of 75 parts per billion (ppb) which is attained when the three-year average of the 99<sup>th</sup> percentile of one-hour daily maximum concentrations does not exceed 75 ppb. EPA has determined that this is the level necessary to provide protection of public health with an adequate margin of safety, especially for children, the elderly and those with asthma. These groups are particularly susceptible to the health effects associated with breathing SO<sub>2</sub>. EPA is revoking the two prior primary standards of 140 ppb evaluated over 24 hours, and 30 ppb evaluated over an entire year because they will not add additional public health protection given a one-hour standard at 75 ppb. Accordingly, EPA is not designating areas in this process on the basis of either of these two primary standards. Similarly, the secondary standard for SO<sub>2</sub> has not been revised, so EPA is not designating areas in this process on the basis of the secondary standard.

### **EPA's SO<sub>2</sub> Designation Approach**

Section 107(d) of the Clean Air Act requires that not later than one year after promulgation of a new or revised NAAQS, state Governors must submit their recommendations for designations and boundaries to EPA by June 2011. Section 107(d) also requires EPA to provide notification to states no less than 120-days prior to promulgating an initial area designation that is a modification of a state's recommendation. EPA was to promulgate initial area designations within two years of promulgation of the revised primary standard, although EPA has extended this deadline for one additional year due to having insufficient information to promulgate the designations. If a state did not submit designation recommendations, EPA will promulgate the designations that it deems appropriate. If a state or tribe disagrees with EPA's intended designations, they have an opportunity to demonstrate why any proposed modification is inappropriate.

Designations guidance was issued by EPA through a March 24, 2011, memorandum from Stephen D. Page, Director, U.S. EPA, Office of Air Quality Planning and Standards, to Air Division Directors, U.S. EPA Regions I-X. This memorandum identifies factors EPA intends to evaluate in determining boundaries for areas designated nonattainment. These five factors include: 1) air quality data; 2) emissions and emissions-related data (location of sources and potential contribution to ambient SO<sub>2</sub> concentrations); 3) meteorology (weather/transport patterns); 4) geography/topography (mountain ranges or other air basin boundaries); and 5) jurisdictional boundaries (e.g., counties, air districts, pre-existing nonattainment areas, reservations, metropolitan planning organization), among any other criteria deemed to be relevant to establishing appropriate area designations and boundaries for the one-hour SO<sub>2</sub> NAAQS.

The March 24, 2011, memo recommended that area boundaries default to the county boundary unless information provided by the state or tribe justifies a larger or smaller boundary than that of the county. EPA believes it is appropriate to evaluate each potential area on a case-by-case basis, and to recognize that area-specific analyses conducted by states, tribes and/or EPA may support a differing boundary than a county boundary.

In this technical support document, EPA discusses its review and technical analysis of the recommendations regarding areas with monitored violations submitted by Illinois for designations for the one-hour SO<sub>2</sub> standard and any modifications from these recommendations.

*Definition of important terms used in this document:*

- 1) **Designated nonattainment area** – an area which EPA has determined, based on a state recommendation and/or on the technical analysis included in this document, has violated the 2010 SO<sub>2</sub> NAAQS, based on the most recent three years of air quality monitoring data, or contributes to a violation in a nearby area.
- 2) **Recommended nonattainment area** – an area a state or tribe has recommended that EPA designate as nonattainment.
- 3) **Violating monitor** – an ambient air monitor meeting all methods, quality assurance and siting criteria and requirements whose valid design value exceeds 75 ppb, as described in Appendix T of 40 CFR part 50.
- 4) **2010 SO<sub>2</sub> NAAQS** – The NAAQS for SO<sub>2</sub> promulgated in 2010. This NAAQS is 75 ppb, based on the three year average of the 99th percentile of the annual distribution of daily maximum one-hour average concentrations. See 40 CFR Part 50.17.
- 5) **Design Value** - a statistic computed according to the data handling procedures of the NAAQS (in 40 CFR 50 Appendix T) that, by comparison to the level of the NAAQS, indicates whether the area is violating the NAAQS.

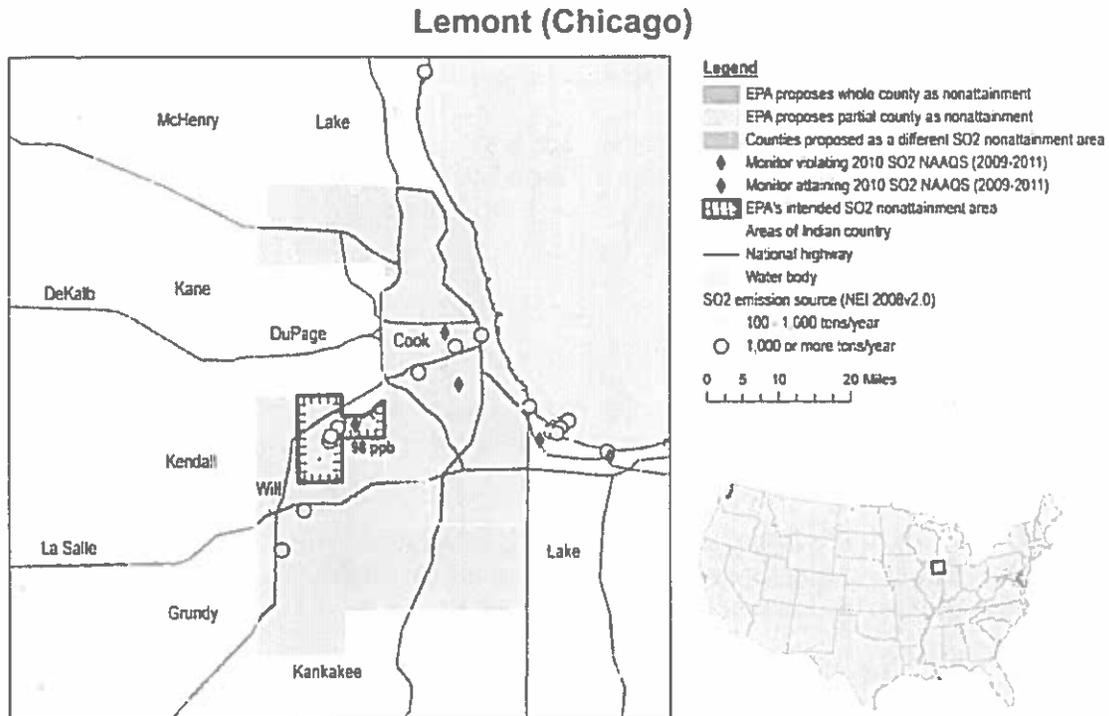
**Technical analysis for the Lemont, IL Area**

**Introduction**

This technical analysis for the Lemont, IL area identifies Cook County with a monitor, in Lemont, that violates the 2010 SO<sub>2</sub> NAAQS, and evaluates nearby counties for contributions to SO<sub>2</sub> concentrations in the area. EPA has evaluated this county and nearby counties based on the evidence for the factors recommended in the March 24, 2011 EPA guidance.

Figure 1 is a map of the area showing the locations and design values of air quality monitors in the area, and the counties surrounding any violating air quality monitors. Notably, a monitor in Lemont Township in Cook County recorded a 2009 to 2011 design value of 98 ppb. Multiple other monitors in Cook County and a monitor in Will County showed design values below the standard, with values ranging from 18 to 30 ppb.

Figure 1. Map of sources and monitors in the Chicago area and the intended Lemont, IL nonattainment area



Illinois analyzed the sources that might be contributing to the monitored violation in Lemont. Based on this assessment, Illinois recommends that an area consisting of DuPage and Lockport Townships in Will County and Lemont Township in Cook County be designated as nonattainment. This recommendation reflects Illinois' view that no significant sources are located in Cook County near Lemont but that three significant sources are located nearby in Will County.

Based on EPA's technical analysis described below, EPA is intending to designate a Lemont nonattainment area consisting of Lemont Township in Cook County and DuPage and Lockport Townships in Will County as nonattainment for the 2010 SO<sub>2</sub> NAAQS.

**Detailed Assessment**

***Air Quality Data***

This factor considers the SO<sub>2</sub> air quality monitoring data, including the design values (in ppb) calculated for all air quality monitors in the Chicago metropolitan area based on data for the 2009-2011 period.

The 2010 SO<sub>2</sub> NAAQS design values for the Chicago area within Illinois are shown in Table 2.

**Table 2. Air Quality Data in the Chicago Area**

County	State Recommended Nonattainment?	Monitor Air Quality System ID	Monitor Location	SO <sub>2</sub> Design Value, 2009-2011 (ppb)
Cook	No	17-031-0050	41.7076, 87.5686	20
	No	17-031-0063	41.877, 87.6343	18
	No	17-031-0076	41.7514, 87.7135	24
	Yes	17-031-1601	41.6681, 87.9906	98
	No	17-031-4002	41.8552, 87.7525	30
	No	17-031-4201	42.1400, 87.7992	18*
Will	No	17-197-0013	41.46, 88.182	28

\*Data are incomplete. Value is determined from available data for instrument identified as POC 2. Monitors in Bold have the highest 2009-2011 design value in the respective county.

The Lemont monitor in Cook County shows a violation of the 2010 SO<sub>2</sub> NAAQS.

#### ***Emissions and Emissions-Related Data***

Evidence of SO<sub>2</sub> emissions sources in the vicinity of a violating monitor is an important factor for determining whether a nearby area is contributing to a monitored violation. For this factor, EPA evaluated county level emission data for SO<sub>2</sub> and any growth in SO<sub>2</sub> emitting activities since the date represented by those emissions data.

#### **Emissions**

The most recent year for which national emissions information was compiled was 2008. Illinois did not provide more recent emissions information. Therefore, EPA relied on the 2008 National Emissions Inventory (NEI) emissions data (NEI08V2).

Table 3 shows total emissions of SO<sub>2</sub> (given in tons per year) for Cook County and for adjoining Will County. Table 3 also shows pertinent information for sources in these counties emitting greater than 100 tons per year of SO<sub>2</sub> according to the 2008 NEI.

**Table 3. SO<sub>2</sub> Emissions in the Chicago Area (NEI08V2)**

County	Facility in State Recommended N.A. Area?	Facility	Emissions NEI08V15 (tons per year)	Facility Location	Distance to Lemont Monitor (km)	Total County SO <sub>2</sub> Emissions (tons per year)
Cook	No	Crawford Station	6,627 tpy	41.8278, 87.7236	28	20,562
	No	Fisk Station	4,486 tpy	41.8408, 87.6533	34	
	No	Corn Products	2,203 tpy	41.7751, 87.8224	18	
	No	Koppers	823 tpy	41.8206, 87.7487	26	
	No	O'Hare Airport	511 tpy	41.9772, 87.9044	35	
	No	Saint-Gobain Containers	345 tpy	41.6439, 87.6003	32	
	No	Carmeuse Lime	321 tpy	41.7056, 87.5438	37	
	No	Midway Airport	114 tpy	41.785, 87.7519	24	
Will	No	MWG Joliet Station	18,281 tpy	41.4947, 88.125	22	64,126
	Yes	MWG Will County Station	16,497 tpy	41.6344, 88.0592	7	
	No	Exxon Mobil	16,404 tpy	41.4138, 88.1835	33	
	Yes	Oxbow Midwest Calcining	6,205 tpy	41.6622, 88.0379	4	
	Yes	CITGO Petroleum	6,137 tpy	41.6444, 88.0559	6	

The sources in Cook County are at considerable distances from the violating monitor. For example, the closest source is Corn Products Corporation, at about 18 kilometers from the monitor, with emissions of about 2,300 tons per year, and the highest emitting source in Cook County, Midwest Generation's Crawford Station, is about 28 kilometers away, emitting about 6,600 tons per year. These sources are at sufficient distance from the monitor, with sufficiently low emissions, for EPA to judge, as recommended by Illinois, that these sources do not contribute significantly to the monitored violation at the Lemont monitor.

Three of the sources in Will County are relatively close to the Lemont monitor and have sufficient emissions that Illinois recommended including the townships containing these sources in the Lemont nonattainment area. Midwest Generation's Joliet Station and the Exxon-Mobil refinery are sufficient distance and do not have sufficiently high emissions to warrant being included in this nonattainment area based on the monitored violation.

#### Emissions Controls

The emissions data used by EPA in this technical analysis and provided in Table 3 represent emissions levels taking into account any control strategies implemented on stationary sources in this area up to and including 2008. EPA has not received any additional information on emissions reductions resulting from controls put into place after 2008.

*Meteorology (weather/transport patterns)*

When considering a one-hour standard, violations can occur at anytime, even when weather patterns are varied from the normal trends of the area. For this area, winds can be from any direction. Therefore, for a one-hour standard, it is useful to consider all directions to have potential contribution. Nevertheless, according to wind information provided with Illinois' recommendations, winds in this area come from the west and southwest more frequently than from other quadrants, particularly when concentrations are high at the Lemont monitor, so sources to the west and southwest of the Lemont monitor are most likely to contribute to violations at this monitor.

*Geography/topography (mountain ranges or other air basin boundaries)*

The Chicago area does not have any geographical or topographical barriers significantly limiting air pollution transport within its airshed. Therefore, this factor did not play a significant role in determining the nonattainment boundary.

*Jurisdictional boundaries*

Illinois does not have any current SO<sub>2</sub> nonattainment areas. Townships in Illinois have well established boundaries and are a suitable basis for defining nonattainment areas.

*Other Relevant Information*

EPA did not receive additional information relevant to establishing a nonattainment area boundary for this area.

**Conclusion**

Illinois has adequately justified a nonattainment area, based on the violating monitor in Cook County, that includes the township that contains the monitoring site and two townships in Will County, DuPage and Lockport Townships, that are judged to contribute to the monitored violation. In judging the area to be included in the Lemont nonattainment area based on the violation recorded at the Lemont monitor, EPA judged that sources in Cook County outside Lemont Township, as well as the Midwest Generation Joliet plant and the Exxon-Mobil refinery in Will County, are sufficiently distant from the violating monitor to warrant being excluded from this nonattainment area.

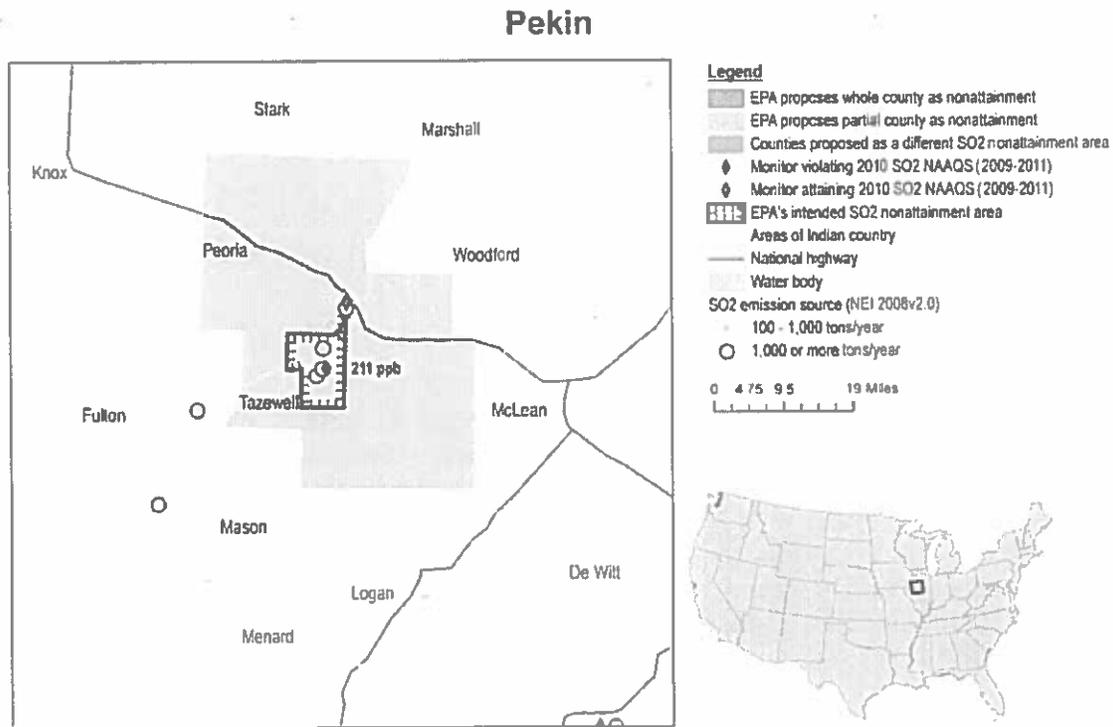
**Technical analysis for the Pekin, IL Area**

**Introduction**

This technical analysis for the Pekin, IL area identifies a Tazewell County monitor that violates the 2010 SO<sub>2</sub> NAAQS. EPA has evaluated this county and nearby counties based on the evidence for the factors recommended in the March 24, 2011 EPA guidance.

Figure 2 is a map of the area showing the location and the design value of the air quality monitor in the area, and the counties surrounding this air quality monitor. The monitor in Pekin (Tazewell County) recorded a 2009 to 2011 design value of 211 ppb. A monitor in Peoria County recorded a 2009 to 2011 design value of 36 ppb, based on incomplete data. No other SO<sub>2</sub> monitor is located in these or any neighboring counties.

Figure 2. Map of sources, monitors, and intended nonattainment area boundaries in the Pekin, IL area



Illinois analyzed the sources that might be contributing to the monitored violation in Pekin. Based on this assessment, Illinois recommended that an area consisting of Cincinnati and Pekin Townships in Tazewell County be designated as nonattainment.

EPA believes that Hollis Township in Peoria County also contributes to the violation monitored in Tazewell County. E.D. Edwards Station, a power plant operated by Ameren, is located in this

township. This source emits approximately 11,000 tons of SO<sub>2</sub> per year, in a location that is about 4.5 kilometers in a direction that is periodically upwind of the Pekin monitor.

Based on EPA's technical analysis described below, and based on a monitored violation, EPA is intending initially to designate a Pekin nonattainment area consisting of Cincinnati and Pekin Townships in Tazewell County and Hollis Township in Peoria.

**Detailed Assessment**

***Air Quality Data***

This factor considers the SO<sub>2</sub> air quality monitoring data, including the design value (in ppb) calculated for the air quality monitor in Tazewell County based on data for the 2009-2011 period. The only other monitor in this part of Illinois is located in Peoria County. The 2010 SO<sub>2</sub> NAAQS design values for the Tazewell and Peoria County monitors are shown in Table 4.

**Table 4. Air Quality Data in the Pekin Area**

County	State Recommended Nonattainment?	Monitor Air Quality System ID	Monitor Location	SO <sub>2</sub> Design Value, 2009-2011 (ppb)
Peoria	No	17-143-0024	40.6874, 89.6069	36
Tazewell	Yes	17-179-0004	40.5565, 89.654	211

The Tazewell County monitor shows a violation of the 2010 SO<sub>2</sub> NAAQS. Therefore, some area in this county and possibly additional areas in surrounding counties must be designated nonattainment. The absence of a violating monitor alone is not a sufficient reason to eliminate nearby counties as candidates for nonattainment status.

***Emissions and Emissions-Related Data***

Evidence of SO<sub>2</sub> emissions sources in the vicinity of a violating monitor is an important factor for determining whether a nearby area is contributing to a monitored violation. For this factor, EPA evaluated county level emission data for SO<sub>2</sub> and any growth in SO<sub>2</sub> emitting activities since the date represented by those emissions data.

**Emissions**

The most recent year for which national emissions information was compiled was 2008. Illinois reported data indicating that emissions from pertinent sources in 2007 and 2009 were similar to emissions in 2008. Therefore, EPA relied on the 2008 National Emissions Inventory (NEI) emissions data (NEI08V2).

Table 5 shows total emissions of SO<sub>2</sub> (given in tons per year) for Tazewell County and for adjoining Peoria County. Table 5 also shows pertinent information for sources in these counties emitting greater than 100 tons per year of SO<sub>2</sub> according to the 2008 NEI.

**Table 5. SO<sub>2</sub> Emissions in the Pekin Area (NEI08V2)**

County	Facility Located in State Recommended Nonattainment Area?	Facility – Total SO <sub>2</sub> Air Emissions NEI08V2 (tons per year)	Facility Location	Distance to Pekin Monitor (km)	Total County SO <sub>2</sub> Emissions (tons per year)
Peoria	No*	Ameren – E.D. Edwards Stn – 11,224 tpy	40.5958, 89.6631	4	14,677
	No	ADM – 3049 tpy	40.6756, 89.6073	14	
	No	Keystone Steel & Wire – 138 tpy	40.6420, 89.6467	10	
Tazewell	Yes	MWG – Powerton Stn. – 22,355 tpy	40.5408, 89.6786	3	34,415
	Yes	Aventine Renewable Energy – 11,830 tpy	40.5553, 89.6629	1	

\*This source is included in the nonattainment area that EPA intends to promulgate

The two significant sources in Tazewell County are located in Cincinnati and Pekin Townships, respectively, which Illinois has recommended including in the Pekin nonattainment area. Illinois does not recommend including any of Peoria County in this nonattainment area. However, EPA finds that Ameren’s E.D. Edwards power plant is only 4 kilometers from the monitor and has significant emissions with potential to have significant impact on concentrations at the monitor. This source is located in Hollis Township, and so this township warrants being considered an area that contributes to the violation measured in Pekin.

**Emissions Controls**

The emissions data used by EPA in this technical analysis and provided in Table 5 represent emissions levels taking into account any control strategies implemented on stationary sources in this area up to and including 2008. EPA has not received any additional information on emissions reductions resulting from controls put into place after 2008.

***Meteorology (weather/transport patterns)***

When considering a one-hour standard, violations can occur at anytime, even when weather patterns are varied from the normal trends of the area. For this area, wind patterns can be from any direction. Therefore, for a one-hour standard, it is useful to consider all directions to have potential contribution. The wind rose provided by Illinois suggests that winds come most frequently from the south, and somewhat frequently from the northwest, but winds come from all directions with sufficient frequency to suggest that meteorology is not a significant factor in defining this nonattainment area.

***Geography/topography (mountain ranges or other air basin boundaries)***

The Pekin area does not have any geographical or topographical barriers significantly limiting air pollution transport within its airshed. Therefore, this factor did not play a significant role in determining the nonattainment boundary.

***Jurisdictional boundaries***

Illinois does not have any current SO<sub>2</sub> nonattainment areas. Townships in Illinois have well established boundaries and are a suitable basis for defining nonattainment areas.

***Other Relevant Information***

EPA did not receive additional information relevant to establishing a nonattainment area boundary for this area.

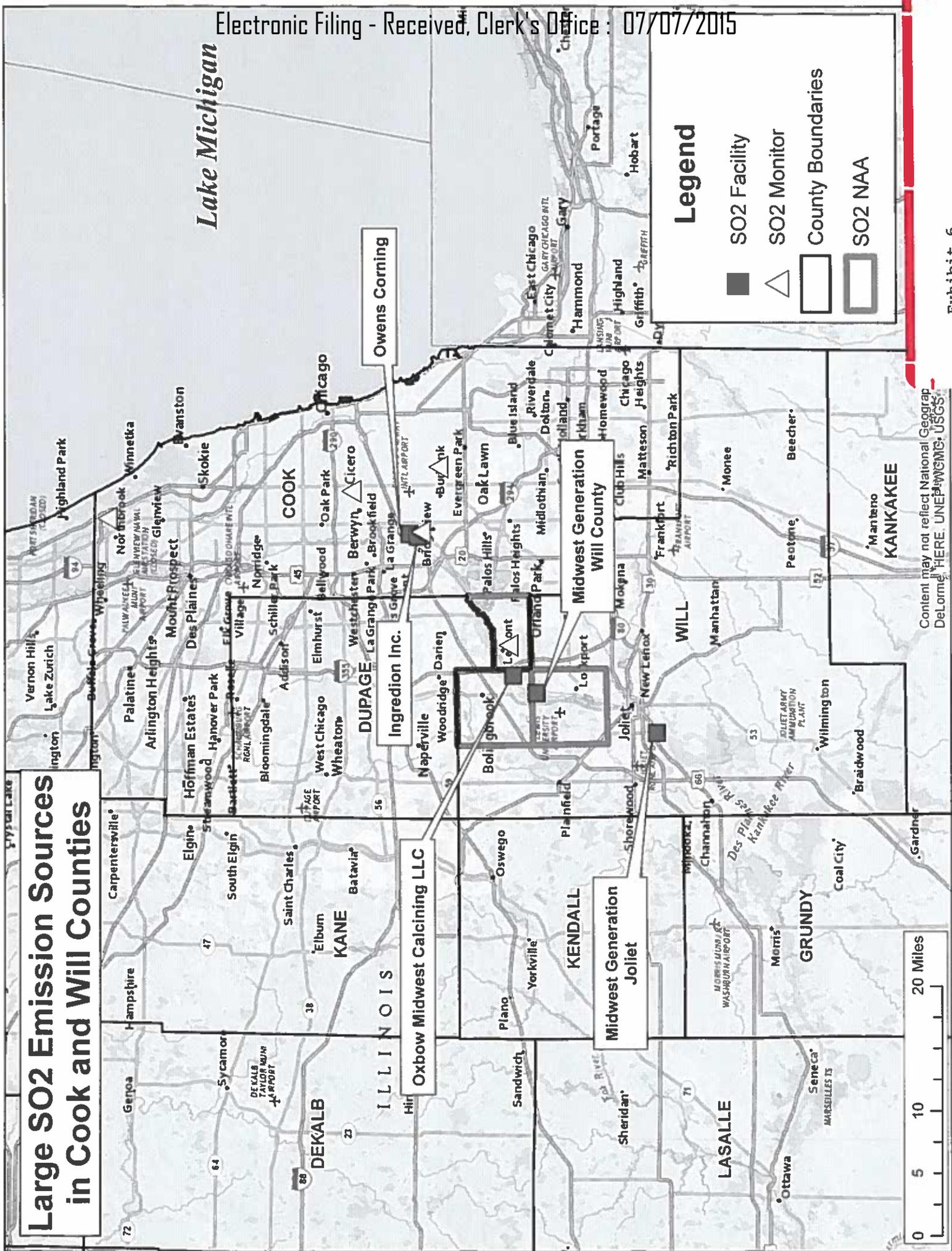
**Conclusion**

Illinois' recommendation to define the Pekin, IL nonattainment area to include Cincinnati and Pekin Townships of Tazewell County appropriately includes the portions of Tazewell County that are contributing to the measured violation and the area known to be violating the standard. However, EPA believes that the initial nonattainment area based on monitored violations should also include Hollis Township in Peoria County, which includes Ameren's E.D. Edwards Station. This source has substantial emissions relatively close to the monitor measuring a violation. Therefore, EPA believes that Hollis Township of Peoria County warrants inclusion in the Pekin nonattainment area. Thus, after considering the factors described above, EPA intends initially to designate an area that includes Cincinnati and Pekin Townships in Tazewell County and Hollis Township in Peoria County as the Pekin, IL nonattainment area for the 2010 SO<sub>2</sub> NAAQS.



Lake Michigan

# Large SO2 Emission Sources in Cook and Will Counties



Content may not reflect National Geograph  
 DeLorme HERE, UNEP-WGMC, USGS

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16 **IN THE UNITED STATES DISTRICT COURT**  
17 **FOR THE NORTHERN DISTRICT OF CALIFORNIA**  
18 **SAN FRANCISCO DIVISION**

19 SIERRA CLUB and NATURAL  
20 RESOURCES DEFENSE COUNCIL,

21 Plaintiffs,

22 v.

23 GINA MCCARTHY, in her official  
24 capacity as Administrator of the United  
25 States Environmental Protection Agency,

26 Defendant.

Case No.: 3:13-cv-3953-SI

~~[PROPOSED]~~ CONSENT DECREE

1 WHEREAS, on August 26, 2013, Plaintiffs Sierra Club and Natural Resources Defense  
2 Council ("Plaintiffs") filed the complaint ("Complaint") in the above-captioned matter against  
3 Defendant Regina McCarthy in her official capacity as Administrator of the United States  
4 Environmental Protection Agency ("EPA") alleging that EPA has failed to undertake a certain  
5 nondiscretionary duty under the Clean Air Act ("CAA"), 42 U.S.C. §§ 7401-7671q, and that  
6 such alleged failure is actionable under section 304(a)(2) of the CAA, 42 U.S.C. § 7604(a)(2);

7 WHEREAS, within one year after promulgation of a revised national ambient air  
8 quality standard ("NAAQS"), section 107(d)(1)(A) of the CAA directs states to submit lists of  
9 initial designations of all areas, or portions thereof, as attainment, nonattainment, or  
10 unclassifiable for the revised NAAQS, 42 U.S.C. § 7407(d)(1)(A);

11 WHEREAS, EPA is required to promulgate designations for all areas of the country  
12 (including tribal areas and certain U.S. territories) within two years of promulgation of the  
13 revised NAAQS, or within three years if EPA has insufficient information to promulgate the  
14 designations within two years, pursuant to section 107(d)(1)(B) of the CAA, 42 U.S.C.  
15 § 7407(d)(1)(B);

16 WHEREAS, EPA is required to publish a notice in the Federal Register promulgating  
17 designations, pursuant to section 107(d)(2)(A) of the CAA, 42 U.S.C. § 7407(d)(2)(A);

18 WHEREAS, EPA revised the primary NAAQS for sulfur dioxide ("SO<sub>2</sub>") on June 2,  
19 2010, *see* 75 Fed. Reg. 35,520 (June 22, 2010);

20 WHEREAS, states were directed to submit their area designations for the 2010 revised  
21 primary SO<sub>2</sub> NAAQS by June 2, 2011, *see* 75 Fed. Reg. at 35,385/col. 2;

22 WHEREAS, on August 3, 2012, EPA invoked the additional year to issue designations,  
23 *see* 77 Fed. Reg. 46,295 (Aug. 3, 2012);

24 WHEREAS, on August 5, 2013, EPA published designations under the 2010 revised  
25 primary SO<sub>2</sub> NAAQS for twenty-nine areas in sixteen states, thus removing such areas from  
26 the potential scope of the above-captioned matter, *see* 78 Fed. Reg. 47,191 (Aug. 5, 2013);

27 WHEREAS, the Complaint alleges that EPA has a nondiscretionary duty to promulgate  
28 and publish the remaining area designations for the 2010 revised primary SO<sub>2</sub> NAAQS within

1 the time lines set forth in section 107(d)(1)(B) of the CAA, 42 U.S.C. § 7407(d)(1)(B),  
2 (d)(2)(A);

3 WHEREAS, on October 29, 2013, Plaintiffs filed a Motion for Summary Judgment on  
4 the issue of liability in the above-captioned matter, reserving for future briefing the issue of  
5 remedy;

6 WHEREAS, on November 12, 2013, EPA filed its response to Plaintiffs' Motion for  
7 Summary Judgment and did not dispute the claim of liability;

8 WHEREAS, on December 6, 2013, the Court granted Plaintiffs' Motion for Summary  
9 Judgment, and directed the parties to meet and confer on the remedy;

10 WHEREAS, the Plaintiffs and EPA have agreed to a settlement of this action;

11 WHEREAS, the Plaintiffs and EPA, by entering into this Consent Decree, do not waive  
12 or limit any claim or defense, on any grounds, related to any EPA final action;

13 WHEREAS, the Plaintiffs and EPA consider this Consent Decree to be an adequate and  
14 equitable resolution of all the claims in this matter;

15 WHEREAS, it is in the interest of the public, the Plaintiffs and EPA, and judicial  
16 economy to resolve this matter without unnecessary protracted litigation;

17 WHEREAS, the Administrator has proposed and anticipates promulgating a  
18 rulemaking that would direct states to conduct additional information collection and analyses  
19 regarding certain stationary sources of SO<sub>2</sub>, for purposes of informing future area designations  
20 under the 2010 revised primary SO<sub>2</sub> NAAQS, *see* 79 Fed. Reg. 27,449 (May 13, 2014);

21 WHEREAS, the Plaintiffs and EPA agree that this Court has jurisdiction over this  
22 matter pursuant to the citizen suit provision of section 304(a)(2) of the CAA, 42 U.S.C.  
23 § 7604(a)(2);

24 WHEREAS, the Court, by entering this Consent Decree, finds that the Consent Decree  
25 is fair, reasonable, in the public interest, and consistent with the CAA;

26 NOW THEREFORE, before the taking of testimony, without trial or determination of  
27 any additional issue of fact or law that the Court has not already addressed in this matter, and  
28 upon consent of the Plaintiffs and EPA, it is hereby ordered, adjudged and decreed, that:

1           1.       EPA shall sign for publication in the Federal Register no later than sixteen (16)  
2 months from the date of this Court's entry of this Order a notice of EPA's promulgation of  
3 designations for the 2010 revised primary SO<sub>2</sub> NAAQS pursuant to section 107(d) of the CAA,  
4 and within ten (10) business days following such signature deliver the notice to the Office of  
5 the Federal Register for review and prompt publication, for remaining undesignated areas  
6 which:

7           (a) based on air quality monitoring in the three (3) full calendar years preceding  
8 such deadline have monitored violations of the 2010 revised primary SO<sub>2</sub>  
9 NAAQS; or

10          (b) contain any stationary source that has not been "announced for retirement"  
11 pursuant to subparagraph (c) by the date of this Consent Decree, and that,  
12 according to the data in EPA's Air Markets Database, either (1) emitted more  
13 than 16,000 tons of SO<sub>2</sub> in 2012, or (2) emitted more than 2,600 tons of SO<sub>2</sub> and  
14 had an annual average emission rate of 0.45 lbs SO<sub>2</sub>/Mmbtu or higher in 2012;  
15 where

16          (c) "announced for retirement" means any stationary source in the United States  
17 with a coal-fired unit that as of January 1, 2010, had a capacity of over five (5)  
18 megawatts (MW) and that has announced that it will cease burning coal at that  
19 unit through a company public announcement, public utilities commission  
20 filing, consent decree, public legal settlement, final state or federal permit filing,  
21 or other similar means of communication.

22           2.       EPA shall sign for publication in the Federal Register no later than December  
23 31, 2017, a notice of EPA's promulgation of designations for the 2010 revised primary SO<sub>2</sub>  
24 NAAQS pursuant to section 107(d) of the CAA, and within ten (10) business days following  
25 such signature deliver the notice to the Office of the Federal Register for review and prompt  
26 publication, for remaining undesignated areas in which, by January 1, 2017, states have not  
27 installed and begun operating a new SO<sub>2</sub> monitoring network meeting EPA specifications  
28

1 referenced in EPA's anticipated rulemaking directing states to collect and analyze additional  
2 information regarding SO<sub>2</sub> emissions concentrations.

3           3.       EPA shall sign for publication in the Federal Register no later than December  
4 31, 2020, a notice of EPA's promulgation of designations for the 2010 revised primary SO<sub>2</sub>  
5 NAAQS pursuant to section 107(d) of the CAA, and within ten (10) business days following  
6 such signature deliver the notice to the Office of the Federal Register for review and  
7 publication, for all remaining undesignated areas.

8           4.       After EPA's obligations under Paragraphs 1 through 3 have been completed,  
9 and after the notices required by Paragraphs 1 through 3 have been published in the Federal  
10 Register, EPA may move to terminate the Consent Decree. The Plaintiffs shall have fourteen  
11 (14) days in which to respond to such motion.

12           5.       Following delivery of the notices of promulgation of designations described in  
13 Paragraphs 1 through 3 to the Office of the Federal Register, EPA shall not take any action  
14 (other than is necessary to correct any typographical errors or other errors in form) to delay or  
15 otherwise interfere with publication of such notices in the Federal Register. EPA shall make  
16 available to the Plaintiffs copies of the notices within five (5) business days following  
17 signature by the Administrator.

18           6.       The Plaintiffs and EPA may extend the deadlines established in Paragraphs 1  
19 through 3 for a period of sixty (60) days or less by written stipulation executed by counsel for  
20 the Plaintiffs and EPA and filed with the Court. In addition, the deadlines established in  
21 Paragraphs 1 through 3 may be extended by the Court upon motion by any party to this  
22 Consent Decree for good cause shown, after consideration of any response by the non-moving  
23 party to this Consent Decree. Any party to this Consent Decree seeking to extend deadlines by  
24 motion and without stipulation must provide written notice to all other parties to this Consent  
25 Decree of the deadlines the party is seeking to extend at least ten (10) business days prior to  
26 filing with the Court such motion. No motion to extend a deadline shall be considered properly  
27 filed unless notice pursuant to this Paragraph is provided, or the moving party demonstrates  
28 why it could not have provided the advance written notice.

1           7.       Nothing in this Consent Decree shall be construed to limit or modify the  
2 discretion accorded EPA by the CAA and by general principles of administrative law,  
3 including the discretion to alter, amend or revise any response and/or final action contemplated  
4 by this Consent Decree. EPA's obligations to take the actions set forth in Paragraphs 1 through  
5 3 by the dates specified do not constitute limitations or modifications of EPA's discretion  
6 within the meaning of this paragraph.

7           8.       Nothing in this Consent Decree shall be construed to confer upon the District  
8 Court jurisdiction to review any final decision made by EPA pursuant to this Consent Decree.  
9 Nothing in this Consent Decree shall be construed to confer upon the District Court jurisdiction  
10 to review any issues that are within the exclusive jurisdiction of the United States Court of  
11 Appeals pursuant to section 307(b)(1) of the CAA, 42 U.S.C. § 7607(b)(1). Nothing in the  
12 terms of this Consent Decree shall be construed to waive any remedies or defenses the parties  
13 may have under CAA section 307(b)(1), 42 U.S.C. § 7607(b)(1).

14           9.       This Court shall retain jurisdiction to enforce the terms of this Consent Decree  
15 and to consider any requests for costs of litigation, including attorneys' fees.

16           10.       In the event of a dispute between the parties to this Consent Decree  
17 concerning the interpretation or implementation of any aspect of this Consent Decree, the  
18 disputing party shall provide the other party with a written notice outlining the nature of the  
19 dispute and requesting informal negotiations. If the parties cannot reach an agreed-upon  
20 resolution within ten (10) business days after receipt of notice, any party may move the Court  
21 to resolve the dispute.

22           11.       No motion or other proceeding seeking to enforce this Consent Decree shall  
23 be considered properly filed, unless the Plaintiffs have followed the procedure set forth in  
24 Paragraph 10.

25           12.       The United States, on behalf of EPA, agrees that the Plaintiffs are entitled to  
26 recover their costs of litigation (including reasonable attorneys' fees) ("litigation costs")  
27 incurred in this matter pursuant to 42 U.S.C. § 7604(d). The deadline for filing a motion for  
28 litigation costs is hereby extended until 120 days after entry of this Consent Decree by the

1 Court. During this time, the Plaintiffs and EPA shall seek to resolve informally any claim for  
2 litigation costs, and if they cannot reach a resolution, the Plaintiffs may seek such litigation  
3 costs from the Court. The Court shall retain jurisdiction to resolve any request for litigation  
4 costs.

5 13. The obligations imposed upon EPA by this Consent Decree may only be  
6 undertaken using appropriated funds. No provisions of this Consent Decree shall be  
7 interpreted as or constitute a commitment or requirement that EPA obligate or pay funds in  
8 contravention of the Anti-Deficiency Act, 31 U.S.C. § 1341, or any other applicable federal  
9 law.

10 14. The parties recognize that the possibility exists that a lapse in the  
11 appropriations that fund EPA could delay compliance with the timetables contained in this  
12 Consent Decree. Should a delay occur due to a lapse in appropriations, any deadlines  
13 occurring within ninety (90) days of the termination of the delay shall be extended one day for  
14 each day of the delay. EPA will provide Plaintiffs with notice as soon as is reasonably possible  
15 under the circumstances in the event that EPA invokes this Paragraph of the Consent Decree  
16 and will provide Plaintiffs with an explanation of EPA's basis for invoking this Paragraph.  
17 Plaintiffs may challenge the invocation of this Paragraph of the Consent Decree under the  
18 dispute resolution terms of this Consent Decree, and EPA shall bear the burden of justifying its  
19 invocation of this Paragraph.

20 15. The Plaintiffs and EPA shall not challenge the terms of this Consent Decree or  
21 this Court's jurisdiction to enter this Consent Decree.

22 16. The Plaintiffs and EPA agree and acknowledge that before this Consent  
23 Decree is entered by the Court, EPA must provide notice of this Consent Decree in the Federal  
24 Register and provide an opportunity for public comment pursuant to section 113(g) of the  
25 CAA, 42 U.S.C. § 7413(g). After this Consent Decree has undergone notice and comment, the  
26 Administrator and/or the Attorney General, as appropriate, shall promptly consider any such  
27 written comments in determining whether to withdraw or withhold their consent to the Consent  
28 Decree, in accordance with section 113(g) of the CAA. If the Administrator and/or the

1 Attorney General do not elect to withdraw and withhold their consent, EPA shall promptly file  
2 a motion that requests the Court to enter this Consent Decree.

3 17. Any notices required or provided by this Consent Decree shall be made in  
4 writing, via facsimile, e-mail, or other means, and sent to the following:

5 For Plaintiffs:

6 Nicholas Morales  
7 David S. Baron  
8 Earthjustice  
9 1625 Massachusetts Ave., STE 702  
10 Washington, DC 20036  
11 nmorales@earthjustice.org  
12 dbaron@earthjustice.org  
13 Fax: 202-667-2356

14 Zachary M. Fabish  
15 The Sierra Club  
16 50 F Street, NW – 8th Floor  
17 Washington, DC 20001  
18 zachary.fabish@sierraclub.org  
19 Fax: 202-547-6009

20 Emily K. Davis  
21 Natural Resources Defense Council  
22 1152 15th Street, NW, Suite 300  
23 Washington, DC 20005  
24 edavis@nrdc.org  
25 Fax: 202-289-1060

26 For Defendant:

27 Martha C. Mann  
28 United States Department of Justice  
Environmental Defense Section  
P.O. Box 7611  
Washington, DC 20044  
martha.mann@usdoj.gov  
Fax: 202-514-8865

1 Michael Thrift  
2 United States Environmental Protection Agency  
3 Office of General Counsel  
4 Air and Radiation Law Office (2344-A)  
5 1200 Pennsylvania Avenue NW  
6 Washington, DC 20460  
7 thrift.mike@epa.gov

8 18. The undersigned representatives of each party to this Consent Decree certify  
9 that they are fully authorized by the party that they represent to bind that party to the terms of  
10 this Consent Decree.

11 COUNSEL FOR PLAINTIFFS:

12 Dated: 8/8/2014

  
13 NICHOLAS MORALES, Admitted Pro Hac Vice

14 DAVID S. BARON, Admitted Pro Hac Vice  
15 Earthjustice  
16 1625 Massachusetts Ave, STE 702  
17 Washington, DC 20036  
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20 Tel: 202-667-4500/Fax: 202-667-2356

21 PAUL R. CORT, State Bar No. 184336  
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24 San Francisco, CA 94111  
25 [pcort@earthjustice.org](mailto:pcort@earthjustice.org)  
26 [igutierrez@earthjustice.org](mailto:igutierrez@earthjustice.org)  
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28 ZACHARY M. FABISH, State Bar No. 247535  
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[zachary.fabish@sierraclub.org](mailto:zachary.fabish@sierraclub.org)  
Tel: 202-675-7917/Fax: 202-547-6009

1 COUNSEL FOR DEFENDANT:

2 Dated: August 8, 2014



SAM HIRSCH  
Acting Assistant Attorney General  
Environment & Natural Resources Division

MARTHA C. MANN  
United States Department of Justice  
Environment & Natural Resources Division  
P.O. Box 7611  
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Tel: (202) 514-2664  
E-mail: [martha.mann@usdoj.gov](mailto:martha.mann@usdoj.gov)

*Counsel for Defendant EPA*

10  
11  
12  
13  
14 SO ORDERED on this 2nd day of March, 2014.



SUSAN ILLSTON  
United States District Judge

**BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

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

**CERTIFICATE OF SERVICE**

I, the undersigned, an attorney, affirm that I have served the attached Illinois Environmental Protection Agency's Responses to the Board'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 86; 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

1021 N. Grand Ave. East  
P.O. Box 19276  
Springfield, IL 62794-9276  
(217) 782-5544

Service List R15-21

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One Natural Resources Way  
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