



Illinois Environmental Regulatory Group
An Affiliate of the Illinois Chamber of Commerce

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United States Environmental Protection Agency
Air Docket
Attention Docket ID No. EPA-HQ-OAR-2012-0233
Mail Code 6102T
1200 Pennsylvania Ave., NW
Washington, DC 20460

Re: Comments on EPA Responses to Illinois' 2010 Sulfur Dioxide Recommendations

Dear Sir/Madam:

Thank you for the opportunity to provide these comments regarding U.S. EPA's February 6, 2013 response to Illinois' June 2, 2011 recommendations identifying specific areas of Illinois that it believed met the criteria for being designated as nonattainment for the 2010 sulfur dioxide National Ambient Air Quality Standard. U.S. EPA has accepted Illinois' recommendation that the nonattainment area in Tazewell County consist of Cincinnati and Pekin Townships. However, U.S. EPA is also proposing to include Hollis Township in Peoria County. We believe that U.S. EPA has overlooked important and relevant information contained in Illinois' submittal in proposing this change. Specifically, we do not believe that U.S. EPA gave ample consideration to all of the meteorological information provided by Illinois supporting its recommendation to not include Hollis Township. Further, analysis of more recent data than the 2007-2009 data provided by Illinois also supports the conclusion that sources located in Hollis Township do not impact the monitored exceedences of the standard that serve as the basis for the nonattainment designation.

The Illinois Environmental Regulatory Group ("IERG") is a not-for-profit Illinois corporation affiliated with the Illinois Chamber of Commerce. IERG is composed of fifty (50) member companies throughout the State of Illinois, including major industrial facilities in the chemical, food, pharmaceutical, transportation equipment, energy, heavy manufacturing, steel, oil, cement and power generation sectors, that are regulated by governmental agencies that promulgate, administer or enforce environmental laws, regulations, rules or other policies. The nonattainment designations contained in U.S. EPA's response will ultimately impact the permitting and operation of IERG members with facilities located in the geographic areas identified for designation.

The five factor analysis used by Illinois pursuant to guidance issued by the U.S. EPA includes consideration of emissions-related data (location and sources of potential contribution to ambient SO₂ concentrations) and meteorology (weather/transport patterns) “as well as other relevant information.”¹ The Illinois recommendation identified 5 emission sources in Peoria and Tazewell Counties that are in the general vicinity of the violating monitor and have emitted over 100 tons per year for at least one of the years from 2007 through 2009. Two of these sources are in Tazewell County, with one being in Cincinnati Township and the other in Pekin Township. The Ameren-Edwards Station facility is located in Hollis Township approximately 4.5 km (~2.8 miles) north of the violating monitor. U.S. EPA’s analysis states the following:

“...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.”²

In evaluating the meteorological conditions in the Pekin area, Illinois compiled a wind frequency distribution that showed, “...that southerly winds are most frequent in the Peoria area, with a secondary maximum from the northwest.”³ U.S. EPA acknowledged Illinois’ conclusion but added that “...winds come from all directions with sufficient frequency to suggest that meteorology is not a significant factor in defining this nonattainment area.”⁴ The following Figure A graphically illustrates the wind patterns at the violating monitor in Pekin. Figure A is a composite of two figures presented in Illinois’ Technical Support Document included with its June 2, 2011 recommendation to U.S. EPA. One of the figures in the composite is Illinois’ Figure 2 (Location of Major SO₂ Emission Sources in Tazewell and Peoria Counties) and the second figure is Illinois’ Figure 3 (Greater Peoria Airport Climatological Wind Rose).

¹ Designations guidance memorandum from Stephen D. Page, Director, U.S. EPA Office of Air Quality Planning and Standards, Attachment 2, Page 1-2.

² Draft Technical Support Document Illinois Area Designations For the 2010 SO₂ Primary National Ambient Air Quality Standard, U.S. EPA, February 2013. (“U.S. EPA TSD”) at 10.

³ Technical Support Document: Recommended Attainment/Nonattainment Designations in Illinois for the 2010 Revised Primary 1-Hour SO₂ National Ambient Air Quality Standards, AQPSTR 11-02, June 2, 2011. (“IL TSD”) at 13.

⁴ U.S. EPA TSD at 10.

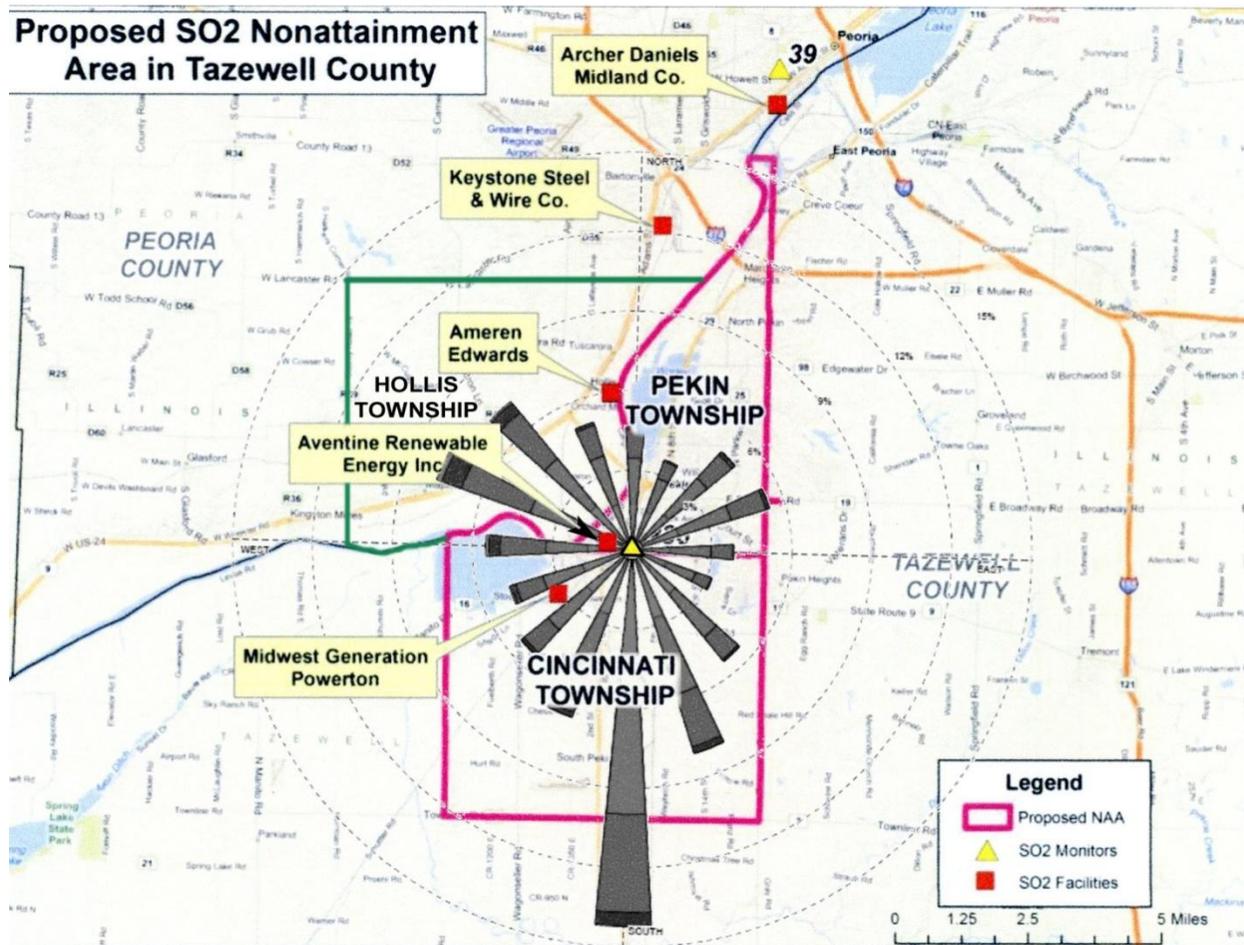
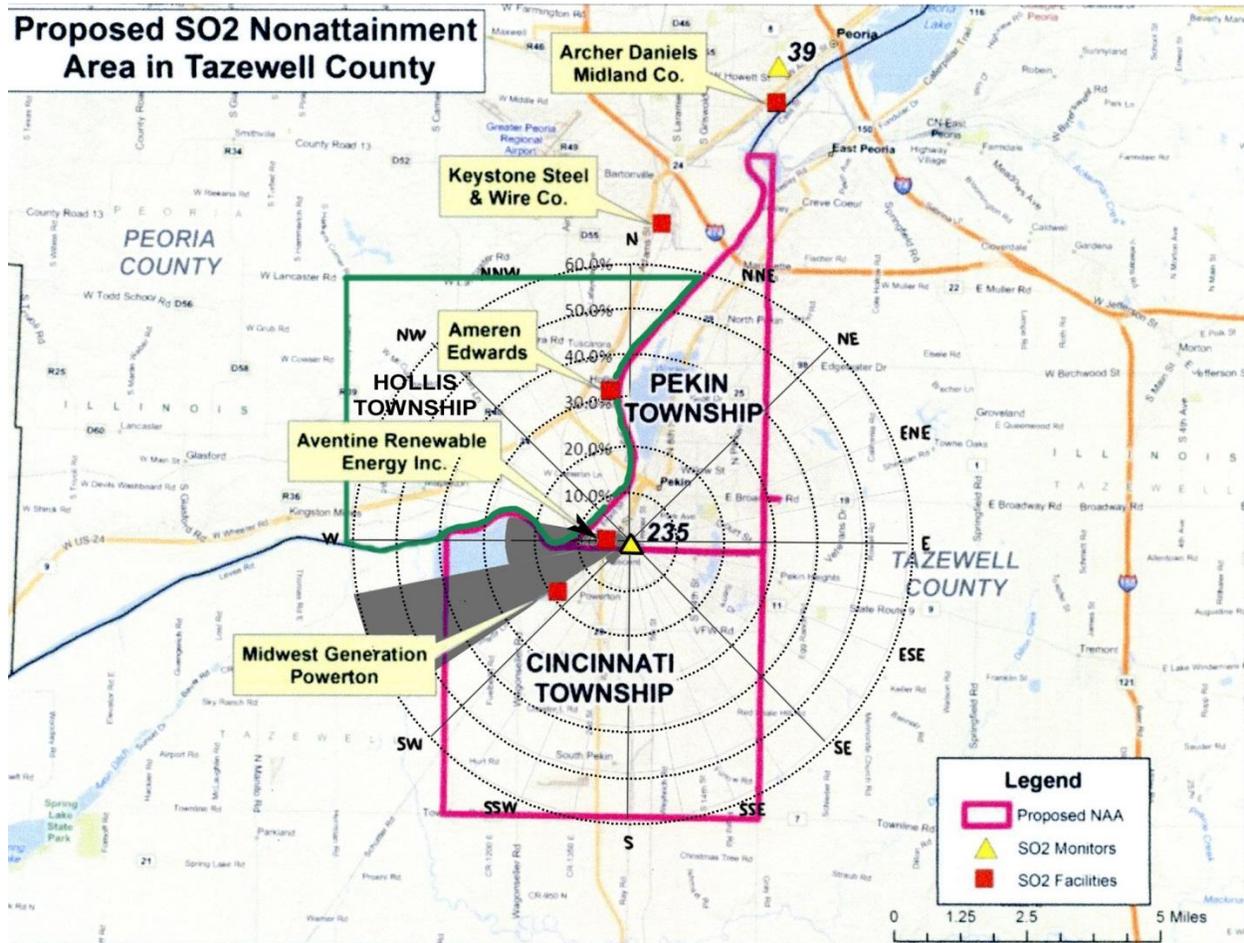
Figure A: Map of Pekin Area SO₂ Emissions Sources with Climatological Wind Rose

Figure A shows that the wind flow in the Peoria area would be capable of blowing emissions from any of the 5 major sulfur dioxide sources to the Pekin monitor. However, Illinois also evaluated the meteorological data in concert with hourly readings from its Pekin sulfur dioxide monitor from 2007 – 2009 to identify wind directions associated with measured SO₂ concentrations exceeding 75 ppb. Since the Ameren facility is north of the Pekin monitor, Illinois' analysis shows that the Ameren facility is not contributing to violations measured at that monitor.

The following Figure B graphically illustrates this conclusion and shows the wind directions associated with hourly values of sulfur dioxide greater than 75 ppb at the Pekin monitor. This Figure is a composite of two figures presented in Illinois' Technical Support Document included with its June 2, 2011 recommendation to U.S. EPA. One of the figures in the composite is Illinois' Figure 2 (Location of Major SO₂ Emission Sources in Tazewell and Peoria Counties) and the second figure is derived from Illinois' Figure 4 (Pekin Pollution Rose).

Figure B: Map of Pekin Area SO₂ Emissions Sources with Graphical Depiction of Wind Directions Associated with SO₂ Values >75ppb



U.S. EPA did not make comment, or refer in any way, to Illinois' analysis of the relationship between wind direction and elevated sulfur dioxide levels when it concluded that Hollis Township should be considered nonattainment due to its potential impact at the Pekin monitor. U.S. EPA did make note of the same type of analysis conducted for the Lemont area. U.S. EPA stated the following in its analysis of Illinois' meteorological assessment:

“For this area [Lemont], 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 monitor are most likely to contribute to violations at this monitor.”⁵

⁵ U.S. EPA TSD at 7.

IERG extended the analysis conducted by Illinois to include quality assured sulfur dioxide data for the years 2007 – 2011. Hourly wind speed and direction data⁶ from the Greater Peoria Regional Airport was paired with hourly sulfur dioxide data from the Pekin monitor that was greater than 75 ppb. Table 1 shows the results of this analysis which further supports the conclusion, demonstrated by Illinois' analysis, that the Ameren-Edwards Station facility does not impact the Pekin sulfur dioxide monitor when hourly readings exceed 75 ppb.

Table 1. Wind Directions Associated with Hourly 2007-2011 SO₂ Values > 75 ppb

WIND DIRECTION	SO ₂ VALUES > 75 PPB	PERCENT OF TOTAL	AVERAGE SO ₂ (PPB)	AVERAGE WIND DIRECTION
N				
NNE				
NE				
ENE				
E				
ESE				
SE				
SSE				
S	1	0.2%	114	190°
SSW	8	1.8%	127	210
SW	13	2.8%	116	227
WSW	98	21.4%	131	248
W	304	66.5%	136	267
WNW	14	3.1%	117	291
NW	2	0.4%	103	310
NNW				
VARIABLE	17	3.7%	102	

The data provided by Illinois and the additional data provided in Table 1 by IERG shows that Ameren's Peoria County facility has not been implicated in any of the 457 hours over the last 5 years where sulfur dioxide values exceeded 75 ppb.

⁶ National Oceanic and Atmospheric Administration, National Climatic Data Center, Local Climatological Data from Greater Peoria Regional Airport (14842/PIA), Final Edited (VER3) Data, Hourly Observations

IERG encourages U.S. EPA to reconsider its proposal to include Hollis Township as a designated nonattainment area. The evaluation of wind frequency coupled with high monitored sulfur dioxide values at the Pekin monitor clearly show that the Ameren facility is not a contributor to the monitored sulfur dioxide violations. Hollis Township should be designated unclassifiable as recommended by Illinois. Once Illinois completes its dispersion modeling for the Pekin area, that information can be used to verify the attainment status of Hollis Township and the Peoria and Tazewell Counties in general.

Thank you for your consideration of these comments.

Cordially,

A handwritten signature in black ink, appearing to read "Alec Messina". The signature is fluid and cursive, with a long horizontal stroke at the end.

Alec Messina
Executive Director