BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

ILLINOIS POWER HOLDINGS, LLC and AMERENENERGY MEDINA VALLEY COGEN, LLC,	)	
Petitioners,	)	
AMEREN ENERGY RESOURCES, LLC,	)	PCB 2014-010
Co-Petitioner,	)	(Variance – Air)
v.	)	
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,	)	
Respondent.	)	

NOTICE OF ELECTRONIC FILING

To: Attached Service List

PLEASE TAKE NOTICE that on September 24, 2013, I electronically filed with the Clerk of the Illinois Pollution Control Board of the State of Illinois the attached Responses By Steven Klafka to Petitioner IPH's Questions at Hearing on behalf of the Sierra Club and Environmental Law and Policy Center, a copy of which is attached hereto and herewith served upon you.

Respectfully submitted,

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Dated: September 24, 2013

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RESPONSES BY STEVEN KLAFKA
TO PETITIONER IPH'S QUESTIONS AT HEARING

I, Steven Klafka, hereby provide the following responses to questions posed by Petitioner Illinois Power Holdings, LLC at the September 17, 2013 hearing before the Illinois Pollution Control Board.

1. How is the one-hour NAAQS analysis relevant to this MPS variance proceeding that involves annual emission rate limits?

RESPONSE:

If existing power plant emissions are not capable of complying with the 1-hour National Ambient Air Quality Standard ("NAAQS") adopted for sulfur dioxide ("SO2") in 2010, then any delay in implementing planned emission reductions will further delay compliance with the NAAQS. I also note that, during my over 30 years of air modeling experience, I have observed that regulatory agencies across the nation routinely use site-specific air dispersion modeling to

determine whether a source is causing exceedances of a newly-adopted National Ambient Air Quality Standard ("NAAQS").

2. Did you use the latest modeling guidance in your analysis filed on September 16, 2013 for the energy centers other than the Joppa Energy Center?

Yes, the modeling analyses were conducted using the most current modeling guidance available at the time of each analysis. The analysis for the Edwards Power Station was finalized on December 10, 2012. The analysis for the Joppa Steam Electric Station and the Newton Power Station were both finalized on September 13, 2013. Between December 10, 2012 and September 13, 2013, U.S. EPA did not finalize any new modeling guidance that would have had a material impact on my report's conclusions regarding the Edwards Power Station. The only notable new modeling guidance finalized during this period that I consulted for the Joppa and Newton analyses was U.S. EPA's March 8, 2013 memorandum, *Use of ASOS Meteorological Data in AERMOD Dispersion Modeling* If Petitioners have specific questions regarding my use of any particular guidance document, I am available to answer.

3. Explain why the Peoria Airport meteorological data is appropriate for the area around Edwards Energy Center in light of the significant differences in site elevations.

The Illinois Environmental Protection Agency ("Illinois EPA") has confirmed that use of the Peoria Airport meteorological data is appropriate for the area around the Edwards Power Station. First, Illinois EPA provided me with AERMOD modeling files used in a separate and independent modeling analysis conducted for the Edwards Power Station in 2012; this analysis also had used Peoria Airport meteorological data.

Following the Board hearing on September 17, 2013, I again inquired with Illinois EPA whether it would be appropriate to use Peoria Airport meteorological data in modeling emissions

from the Edwards Power Station. On September 19, 2013, Illinois EPA confirmed by email that this was the appropriate data to use.

4. For the analysis pertaining to Edwards, where did you get the stack temperatures for the combined stack?

As noted in footnote 8 of the modeling report for the Edwards Power Station, stack parameters were obtained from an AERMOD modeling file provided by Illinois EPA, pekin0.txt, SOURCE – 143805AAG – 8611 – Ameren Energy Resources Generation Co, April 27, 2012. Table 4 of the modeling report summarizes the stack parameters for the facility boilers.

5. For the analysis pertaining to Edwards, where did you get your figures for exit velocities for your analysis?

As with the stack temperatures discussed my answer to Question 4, exit velocities were obtained from the AERMOD modeling file provided by Illinois EPA.

6. Were all modeling receptors used for your analysis located beyond the planned property for each of the following Energy Centers: Edwards, Newton, and Joppa?

With respect to all three power plants, the receptor grid began at the relevant stacks and repeated in 100-meter increments. Some of the receptors therefore were located on power plant property. At all three plants, most on-site receptors showed compliance with the 1-hour NAAQS for SO2.

Use of on-site receptors therefore had no impact on my conclusions that all three of the power plants' emissions were predicted to cause exceedances of the NAAQS, or the required emission reductions to assure that NAAQS are not exceeded. For all three plants, the maximum impact based on allowable emissions occurred off-site.

7. For the analysis pertaining to Newton Energy Center, where did you get the stack height and temperatures?

As noted in footnote 10 of the modeling report for the Newton Power Station, stack parameters were obtained from the annual survey compiled by the U.S. Energy Information Administration. *See* http://www.eia.gov/electricity/data/eia860/. Table 4 of the modeling report summarizes the stack parameters for the three facility boilers.

8. For the analysis pertaining to the Joppa Energy Center, where did you get the stack height?

As noted in footnote 10 of the modeling report for the Joppa Steam Electric Station, stack parameters were obtained from the Illinois EPA modeling file "massac_allowables.txt" for the Joppa Steam Electric Station. The actual stack height of 550 feet was reduced to 407.33 feet. This is the Good Engineering Practice, or GEP, height allowed in the operating permit for modeling analyses. Table 4 of the modeling report summarizes the stack parameters for the facility boilers.

Respectfully submitted,

/s/ Steven Klafka

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Steven Klafka, P.E., BCEE
Environmental Engineer
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303 South Paterson Street
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DATE: September 24, 2013

CERTIFICATE OF SERVICE

I, Andrew Armstrong, hereby certify that I have filed the attached RESPONSES BY STEVEN KLAFKA TO PETITIONER'S QUESTIONS AT HEARING in PCB 2014-010. The aforementioned documents have been served upon the attached service list by email and by depositing said documents in the United States Mail, postage prepaid, in Chicago, Illinois on September 24, 2013.

Respectfully submitted,

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SERVICE LIST
September 24, 2013

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