#### BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	R06-25
PROPOSED NEW 35 ILL. ADM. CODE 225	)	(Rulemaking – Air)
CONTROL OF EMISSIONS FROM	)	,
LARGE COMBUSTION SOURCES (MERCURY)	)	

## **NOTICE OF FILING**

TO:

Dorothy Gunn

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## **SEE ATTACHED SERVICE LIST**

PLEASE TAKE NOTICE that I have today filed electronically with the Clerk of the Illinois Pollution Control Board **PRAIRIE STATE GENERATING COMPANY**,

LLC's PREFILED QUESTIONS, copies of which are herewith served upon you.

By: <u>[s] Mary Frontczak</u>
Mary Frontczak (Reg. No. 6209264)

DATED: July 28, 2006

Mary Frontczak Peabody Energy 701 Market Street St. Louis, Missouri 63101-1826 (314) 342-7810

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# PRAIRIE STATE GENERATING COMPANY, LLC's PREFILED QUESTIONS

Prairie State Generating Company, LLC has the following questions for the witnesses identified below relating to their prefiled testimony in the above captioned matter.

### **Anne Smith:**

- 1. Could you please explain what Figure 4 of your testimony shows?
- 2. Is it fair to conclude from Figure 4 that Ameren would be expected to expend far more annually under the Illinois proposed rule without the multi-pollutant control strategy ("MCS") than it would had Illinois adopted the model CAMR? Is it fair to conclude that those annual expenditures could range from almost 10 times as much in 2009 to still over 2 times as much in 2021?
- 3. Over the entire time period of Figure 4, what is the cumulative difference in present value costs between compliance with CAIR/CAMR versus the Illinois rule without MCS? Would you expect that these cost differences would be similar for other utilities in Illinois?

### Peter M. Chapman:

- 1. Do you expect that a 90% reduction in mercury emissions from Illinois power plants will result in a similar reduction in methylmercury concentrations in fish in Illinois? If not, why not?
- 2. Do you believe there is a linear relationship between mercury reductions in power plant emissions and mercury reductions in fish tissue?
- 3. Do you believe that a 90% reduction in mercury emissions from coal-fired power plants in Illinois will cause the water restrictions on mercury to be lifted in Illinois? If not, why not.

### **Gail Charley:**

- 1. In your testimony you state that the TSD does not critically analyze the health data on methylmercury. Could you explain why you hold this opinion?
- 2. If Illinois EPA had critically analyzed the methylmercury health effects data how would it have changed their analysis?
- 3. In the last sentence of your testimony you conclude: "The public health benefits of limiting Illinois mercury emissions are being oversold and the benefits of limiting mercury emissions deeper and faster than is required by U.S. EPA are political only."
  - a. Why do you believe that the public health benefits are being oversold?
  - b. Had IEPA conducted a scientifically balanced analysis what would it have shown?
  - c. Is it fair to say that you believe that there is little or no public health benefit from reducing mercury emissions from coal-fired power plants either faster or more deeply than EPA has required under CAMR? If so, why?

## J. E. Chicanowicz:

- 1. In your testimony you indicate that to meet a 90% emission limit a plant would need to be designed to achieve at least 93 to 95% control.
  - a. Could you explain why this is the case?
  - b. Is mercury control different in nature than controlling  $SO_2$  or  $NO_x$ ? If so, how?
  - c. Has the past testing of activated carbon injection shown that 93 to 95% of mercury can be achieved over the long term?
- 2. Could you describe the balance-of-plant issues that could arise from the addition of activated carbon to a coal-fired power plant?
  - a. Are these the same balance-of-plant issues that could arise from the use of halogenated carbons?
  - b. Have some balance-of-plant issues already arisen at the full-scale use of activated carbon at the Presque Isle station?
- 3. For medium and high sulfur coals, has 90% removal of mercury been demonstrated?
  - a. Are there special control problems presented by these coals?

- b. Do high SO<sub>3</sub> levels limit the effectiveness of halogenated activated carbon in controlling mercury emissions?
- 4. In your testimony you suggest that the available supply of bromine could affect the future costs of compliance with stringent mercury limits.
  - a. Could you explain this concern?
  - b. Have you attempted to quantify how much bromine would be used annually to produce the activated carbon needed for mercury removal from coal-fired power plants?

## **William DePriest:**

- 1. What are the technical problems of reducing mercury emissions from high sulfur coals?
- 2. Has it been demonstrated that 90% mercury control of high sulfur coals can be achieved over the long-term? If not, what level of control do you believe is possible?

### **Richard D. McRanie:**

- 1. Are data substitution provisions needed or useful for command-and-control regulations like those proposed by Illinois or is data substitution needed primarily for a trading program where every ounce of mercury must be tracked? If data substitution is not as important, what would you suggest be done with "bad" monitoring results?
- 2. In your view, should the Illinois TSD have addressed monitoring issues? Why? How significant is Illinois' omission?
- 3. Has EPA ever conducted CEM monitoring at a plant with mercury emissions as low as those proposed by IEPA? If so, what were the results of that testing?
- 4. If as your testimony suggests that the error band (tolerance) of mercury CEMs is plus or minus 1.0 micrograms per cubic meter, isn't it true that a plant with zero actual mercury emissions could still produce a mercury monitoring result that showed it was out of compliance with Illinois' proposed standard of 0.8 micrograms/cubic meter?
  - a. Isn't this a measurement that is below the detection limit of the method?
  - b. Are you aware of any case where a regulatory agency has imposed a regulatory limit below the level that can be accurately measured?
- 5. To provide a reliable measurement of a 0.8 microgram per cubic meter limit what method detection limit would you like to see? Is it likely given the state of science today that mercury CEMs will have this low a detection limit by 2009?

## **Ishwar Prasad Murarka:**

- 1. If a plant must dispose of its ash because it is not acceptable for making concrete, how much would that add to the cost of operation of the plant?
- 2. If mercury-laden halogenated activated carbon is deemed to be a hazardous waste, how much would that add to the cost of disposal?

## Krish Vijayaraghavan:

- 1. Did the TEAM results presented in your testimony contain any conversion of ionic mercury to elemental mercury in the plume?
  - a. Are you aware that measurements by Eric Edgerton at Atmospheric Research Analysis, Inc. indicate this conversion occurs?
  - b. How would your results have been affected if the mercury conversion were added?
- 2. Have you reviewed the testimony of Dr. Keeler and the limited information that is available on his receptor modeling at Steubenville?
  - a. Are Dr. Keeler's results different and unexpected from the earlier modeling results of AER or EPA?
  - b. Can a receptor model be used to make predictions about the future effects of a regulatory program?
- 3. Have you reviewed Exhibit 65, "Preliminary Mercury Modeling Results for June 2002"? If yes, what is your interpretation of the data?

#### **CERTIFICATE OF SERVICE**

I, Mary Frontczak, certify that I served electronically the attached PRAIRIE STATE GENERATING COMPANY, LLC'S PREFILED QUESTIONS upon the following this 7th day of August, 2006:.

Dorothy Gunn Clerk Illinois Pollution Control Board James R. Thompson Center 100 W. Randolph St. , Suite 11-500 Chicago, Illinois 60601-3218 Marie E. Tipsord Hearing Officer Illinois Pollution Control Board James R. Thompson Center 100 W. Randolph, 100 W. Randolph Chicago, Illinois 60601-3218 tipsorm@ipcb\_state.il.us

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and electronically and by first-class mail with postage prepaid and affixed thereon to the persons listed on the **ATTACHED SERVICE LIST**.

[s] Mary Frontczak\_\_\_\_\_

DATED: August 7, 2006

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