BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
PROPOSED NEW 35 ILL. ADM. CODE 225	)	R06-25
CONTROL OF EMISSIONS FROM	)	(Rulemaking – Air)
LARGE COMBUSTION SOURCES	)	
35 Ill. Adm. Code 225.100, 200	)	
	)	
	)	

NOTICE OF FILING

TO: Those Individuals as Listed on attached Certificate of Service

Please take notice that on May 18, 2006, the undersigned caused to be filed with the Clerk of the Illinois Pollution Control Board the attached **MOTION TO FILE INSTANTER AND PRE-FILED QUESTIONS OF WITNESSES** as listed below, a copy of which is herewith served upon you:

1. Gerald Keeler;
2. Richard E. Ayres;
3. Sid Nelson, Jr.; and
4. IEPA Witnesses.

Dated this 22nd day of May, 2006.

Respectfully submitted,

AMEREN ENERGY GENERATING COMPANY
AMERENENERGY RESOURCES GENERATING COMPANY
ELECTRIC ENERGY, INC.

By: _____
One of its Attorneys

James T. Harrington
David L. Rieser
Attorneys for Petitioners
McGuireWoods LLP
77 West Wacker, Suite 4100
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Telephone: 312/849-8100

CERTIFICATE OF SERVICE

The undersigned, one of the attorneys for Petitioners, hereby certify that I served a copy of the attached **MOTION TO FILE INSTANTER AND PRE-FILED QUESTIONS OF WITNESSES** as listed above upon those listed below on May 22, 2006 via Federal Express.

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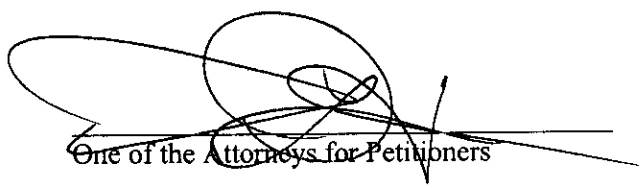

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MOTION TO FILE INSTANTER

AMEREN ENERGY GENERATING COMPANY, AMERENENERGY RESOURCES GENERATING COMPANY, and ELECTRIC ENERGY, INC ("Petitioners) by and through their attorneys, McGuireWoods, LLP, file this motion to request the Board to allow Petitioners to file the attached Pre-Filed Questions instanter and in support states as follows:

1. By Hearing Officer Order dated May 4, 2006, Petitioners were to file their Pre-Filed Questions for IEPA witnesses by Friday May 19, 2006.

2. On Thursday, May 18, 2006, the IEPA contacted Petitioners and others to advise that the IEPA intended to submit revisions to the testimony of their principal witness, Dr. James Staudt, as to the cost and availability to technology to control mercury emissions from coal fired power plants. The IEPA indicated that his testimony as to cost and availability would change but were uncertain as to how or whether those changes would affect the testimony of other IEPA witnesses or the statements made by the IEPA in the Technical Support Document.

3. Petitioners joined in an Emergency Motion filed on May 18 to suspend the deadline for filing all Pre-Filed Questions due to the uncertainty as to how Dr. Staudt's testimony would be revised. The Hearing Officer allowed the Agency to respond by 1:00 on May 19 and indicated she would rule by 3:30 May 19. Her order, placed on the Board's website after 3:30 granted the motion as to questions regarding Dr. Staudt's testimony alone, but denied the motion as to all other witnesses.

4. The principal counsel for Petitioners, James Harrington and David Rieser, were out of the office May 19 to attend a firm meeting in West Virginia. Due to the confusion regarding the issue

and the time late in the day that they became aware of the Hearing Officer's ruling they had insufficient time to arrange for the questions to be filed.

5. The Board requires the pre-filing of both testimony and questions in regulatory proceedings in order to allow participants to the proceedings to be prepared to have a useful discussion of the factual and policy issues involved in the proceeding on the record before the Board. Allowing Petitioners to file these questions instanter, one business day after the due date, will not inhibit, but instead, further that goal.

6. The Board routinely grants motions to allow testimony and questions to be filed instanter in regulatory proceedings, so long as the late filing does not prejudice the participants to the proceeding. In this matter, neither the IEPA, nor any other participant will be prejudiced by the delay of one business day in filing these pre-filed questions.

Wherefore, for the reasons stated in this motion, Petitioners respectfully request the Board to allow Petitioners to file the attached Pre-Filed Questions instanter.

Respectfully submitted,

AMEREN ENERGY GENERATING COMPANY
AMERENENERGY RESOURCES GENERATING COMPANY
ELECTRIC ENERGY, INC.

By: _____
One of its Attorneys

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Questions for Gerald Keeler

1. According to your report and written testimony, the scope of your presentation to the IPCB is to describe the sources of mercury deposition to the Great lakes and to specifically discuss the importance of coal fired utilities to the region.

   a. Is it correct that you were not asked to address the impact of Illinois coal plants on mercury deposition within Illinois?

   b. Is it correct that you have not performed any source receptor studies which determine the impact of Illinois coal plants on mercury deposition in Illinois?

   c. Are you aware of whether any such studies have been performed?

   d. What is the basis for your statement at the end of your testimony that, "Areas with elevated mercury deposition due to emissions related to coal combustion have been identified…?"

   e. Are these areas in Illinois? How have they been identified?

   f. Did you participate in the drafting of the Technical Support Document ("TSD") prepared by Illinois EPA for these proceedings?

2. On page 81 of the TSD, it states that, "Thus it can be expected that significant mercury emissions reductions in Illinois will yield significant reductions of mercury deposition in Illinois."

   a. Did you author that statement?

   b. Do you make that statement in your Report which is Appendix B to the TSD or in your testimony?

   c. Do you believe that there is a factual basis for that statement?

3. Is it correct that the conclusions in your testimony regarding the sources of mercury deposition were based on the work you did in Steubenville, Ohio?

   a. Has that work been published in any peer-reviewed journal?

   b. Is it possible that you will change any of your statements or conclusions as a result of the peer review process?

   c. Is the underlying data available for review?

   d. Have you ever released, for public review, any description of the methodology you used for source attribution?

4. Some portion of the Steubenville work was performed by Matthew S. Landis with the USEPA Office of Research and Development.

   a. What portion of the work was performed by Mr. Landis?

   b. What were your respective roles in the Steubenville work?

   c. Has he published any of his findings regarding Steubenville in any peer-reviewed journal?

   d. Are his data available for public review?

   e. To what extent did you rely on work performed by Mr. Landis?

5. In your testimony you reference a study you performed regarding apportionment of mercury sources in Detroit.

   a. How do you define the terms "regional" and "local" for purposes of this study?

   b. Did you identify the coal fired power plants that you considered to be "local" for purposes of this study?

   c. Do you know what type of coal was utilized in these power plants during the duration of your study?

   d. Do you know what type of emission controls these plants use?

   e. What other sources of mercury emissions did you identify as being "local" with respect to the study site?

   f. What was your basis for determining that the RGM you identified was the result of local emissions from coal fired power plants?

6. Is it correct that the Steubenville study is designed to be a four year study and completed in 2006?

a. Is it accurate that the information you present in your testimony is based on the first two years of the study, 2003 and 2004?

b. Is the data from 2005 available for review?

7. You indicate that you served on the Michigan Electric Utility Workgroup, which studied ways to reduce emissions from coal fired power plants.

a. Did you participate in the drafting of the Final Report of that group dated June 20, 2005?

b. Did you participate in the drafting of the chapter on Mercury Emissions and Deposition, which is Chapter 3.3 on page 50 of the report?

c. Do you agree with the statement on Page 50 that, "The concern over mercury in the environment stems from its eventual deposition at the earth's surface and subsequent conversion to methylated mercury?"

d. Do you agree with the statement on Page 56 that, "oxidized mercury or Hg^0 that is deposited on the surface of the Great Lakes would not likely enter the reaction pathway that would lead to the production of methylmercury in the lakes; although, tributaries and surrounding wetlands would support methylation activities?"

e. Why does not the report discuss your work at Steubenville?

f. Do you agree with the statement on page 58 that, " the results of the Wisconsin Utility Case Study [performed by Vijayaraghaven et al] indicated that on an annual basis, coal fired utility boilers in Wisconsin contribute approximately 1-4% of the mercury being deposited via precipitation near Wisconsin's MDN stations?

g. Do you agree with the statement on pages 60-61 that "the local impact (or a potential hot spot) is likely to be overestimated by" regional 3-D Eulerian models"?

h. Would you agree that the USEPA CMAQ model and the TEAM model are examples of 3-D Eulerian models?

8. On page 81, the TSD states that you suggest that "the lifetime of elemental mercury in the atmosphere is likely much stronger than previously believed."

a. Is this an accurate statement of your testimony?

b. What is the basis for this statement?

9. In your testimony you discuss the USEPA's CMAQ model to determine the impact of domestic mercury sources on atmospheric mercury deposition.

a. Are you familiar with the TEAM model used to perform some of the modeling referenced in the Michigan report?

b. Do your comments regarding CMAQ also apply to TEAM?

c. Are you aware of whether the TEAM results have been validated against MDN data?

d. Are the uncertainties you identify for the CMAQ model also inherent in the type of source receptor study performed at Steubenville?

e. Can the source receptor approach be used to predict the impact of different regulatory approaches on mercury deposition?

f. In using the source receptor approach do you typically attempt to correlate your results with findings from available atmospheric deposition modeling?

g. What steps have you taken to evaluate the accuracy of the Steubenville results?

h. Are there any studies which evaluate the accuracy of source receptor studies?

10. In using the source receptor approach to determine the source of wet deposition of mercury is it accurate that you determine the source of by analyzing for other constituents associated with those sources?

a. Does that analysis demonstrate the proximity of those sources?

b. Does this analysis differentiate among different types of coal used?

11. In your testimony you state that coal combustion was clearly dominant in terms of explaining the mercury deposition (~70%).

a. What is the basis for this figure?

b. What range of values is represented by this approximate value?

c. What is the purpose of expressing this as an "approximate" value?

d. What level of uncertainty do you place on this figure?

12. You state that "a meteorological analysis corroborates that a substantial amount of the mercury deposition found at the Steubenville site was due to local and regional sources."

a. In this testimony, how do you define "local and regional sources?"

b. Are the sources described in this statement limited to coal burning sources?

c. Is the deposition described here limited to wet deposition?

d. What meteorological analysis was performed to demonstrate this statement?

e. Does this analysis differentiate between sources located at different distances?

f. Have you quantified the "substantial amount" as used in this statement?

13. Is it accurate that Steubenville was selected as a study area because of the high density of coal fired utility boilers in the area?

a. How many coal fired power generating units are located within 50 miles of Steubenville?

b. What is the combined capacity in MW of these units?

c. Are they fired with bituminous or sub-bituminous coal?

d. Does the chemical profile of bituminous as opposed to sub-bituminous affect the amount and type of mercury emitted by a coal burning generating unit?

e. Would you expect a different result at Steubenville if the surrounding units burned sub-bituminous coal?

f. What other sources of air borne mercury are located within 50 miles of Steubenville?

g. In what way, if any, are the conditions at Steubenville analogous to conditions in Illinois?

h. Is this high density of coal fired units reflected in the CMAQ modeling performed by USEPA?

i. Is it reflected in the TEAM modeling performed by AER?

j. What steps have you taken to compare the results of your Steubenville work with the USEPA CMAQ modeling?

k. What is the result of this comparison?

l. What steps have you taken to compare the results of your Steubenville work with the EPRI TEAM deposition modeling which was included in the CAMR docket?

m. What is the result of this comparison?

Dated this 22nd day of May, 2006.

Respectfully submitted,

AMEREN ENERGY GENERATING COMPANY
AMERENENERGY RESOURCES GENERATING COMPANY
ELECTRIC ENERGY, INC.

By: _____
One of its Attorneys

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Questions for Richard E. Ayres

1. You state that you were retained to consult with the IEPA regarding the development of the mercury rule.

   a. In what ways did you participate in the development of the rule?

   b. What was the basis for your belief that 90% system wide control could be achieved for Illinois power plants by 2009?

   c. Is your understanding of the technologies available to achieve 90% control of Illinois systems different from that of Dr. Staudt's.

   d. Have you reviewed Dr. Staudt's revised testimony?

   e. Do any of your conclusions change as a result of his revised testimony?

   f. Have you evaluated Illinois power plants to determine if it is technically feasible and economically reasonable for them to achieve 90% control by 2009?

2. In your testimony you state that the Illinois proposed standard can be met on a "'fleet' basis after 2009 and on a plant basis at the beginning of 2013."

   a. How can the generating companies in Illinois meet the rule on a fleet basis?

   b. Did you evaluate the 22 coal fired power plants in Illinois to determine what level of controls would be required at each individual plant in order to achieve a 90% system wide average?

   c. To your knowledge did anyone at the IEPA perform this analysis?

3. In your testimony you indicate that Illinois filed a petition with USEPA to reconsider its decision not to issue a mercury MACT standard and joined in a lawsuit to have the U.S. Court of Appeals for the District of Columbia Circuit void CAMR and require EPA to issue a MACT standard.

   a. Have you reviewed the comments filed by Illinois EPA with the USEPA regarding CAMR and in support of a MACT standard?

   b. Do you agree that in those documents Illinois EPA stated that USEPA was required to issue a mercury MACT standard requiring 80% reduction by 2010?

   c. Do you agree with the Illinois EPA position in these comments that the statutory factors in the Clean Air Act require a MACT standard of 80% based on the best performing 12% of the sources?

   d. Do you know whether any of the plants considered among the 12% best performing sources burned subbituminous coal?

   e. What data is there to suggest that if the statutory analysis under the Clean Air Act indicates that 12% of the best performing sources can achieve 80% reductions by 2010 that Illinois power plants can achieve 90% reductions by 2009?

4. The STAPPA ALAPCO model base rule is apparently based upon the belief that 90% control is not achievable until 2012. What is your basis for believing that 90% control is achievable in Illinois by 2009?

5. Were you involved in the development of STAPPA ALAPCO's multi-pollutant strategy?

   a. Could you describe this approach?

   b. What was the basis for this approach?

   c. Did you discuss a multi-pollutant approach with Illinois EPA?

   d. What was the basis for rejecting that approach?

6. Is it correct that you have written and spoken in support of emissions trading programs?

   a. It is also correct that you have identified USEPA's Acid Rain program from trading emissions credits for sulfur dioxide as an extremely successful program?

b. Was the acid rain program successful in that it reduced emissions faster and at less cost than predicted?

c. Is it also correct that you have written in support of the Illinois ERMS program for trading VOC emissions credit in non-attainment areas?

7. Why do you believe that these programs are successful?

8. Your testimony indicates that the Illinois EPA opposed trading in its comments to USEPA on CAMR. Would it be more accurate to say that Illinois EPA opposed trading unless it provided a protective level to avoid hot spots?

9. Is it accurate that the basis for rejecting the cap and trade approach to mercury control is the presence of "hot spots?"

10. Is it accurate that your basis for rejecting the cap and trade approach to mercury control is the possible presence of "hot spots?"

    a. How do you define "hot spots?"

    b. Is that definition included in the STAPPA-ALAPCO rule or preamble?

    c. Is that definition consistent with USEPA's definition?

11. Do you believe that the atmospheric deposition modeling performed by USEPA supports USEPA's position that the CAMR rule addresses "hot spots?"

12. What data, if any, supports your statement that there are hot spots in Illinois?

13. If there were not "hot spots" in Illinois, would you support a cap and trade program for control of mercury in Illinois?

14. You testified that despite the CAMR cap in Illinois, "Illinois EGUs could meet some or all of their obligations by buying mercury allowances from outside the state rather than by reducing emissions." Given your experience with the Acid Rain trading program and other emissions trading programs, how likely do you think it is that Illinois EGUs will elect to meet all of their emission reductions under CAMR through trading rather than by controls?

15. In your testimony you describe findings "suggesting that the emissions from coal fired power plants are limiting the personal and economic futures of a substantial numbers [sic] of kids being born in Illinois… ." Is this statement based on Dr. Rice's testimony?

16. Are there other reported findings of which you are aware regarding impacts to Illinois children?

17. You testify that you believe that the Illinois EPA's mercury proposal will meet the requirements of the USEPA's CAMR rule.

    a. What is the basis for this statement?

    b. Did you participate in any discussions regarding Illinois' ability to demonstrate that it could achieve the CAMR budgets?

    c. How will Illinois document that its proposal will achieve the EGU mercury budget for Illinois get in CAMR?

Dated this 22nd day of May, 2006.

Respectfully submitted,

AMEREN ENERGY GENERATING COMPANY
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ELECTRIC ENERGY, INC.

By: _____
One of its Attorneys

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AMEREN QUESTIONS FOR IEPA WITNESSES
Robert Kaleel, Christopher Romaine, Jim Ross, and Jeffrey W. Sprague

1. For all witnesses, please describe your personal background in researching the areas of the fate of mercury on the environment, and the health and environmental impacts of mercury contamination.
2. Is it correct that Illinois EPA is relying upon the services of Dr. Gerald Keeler to discuss mercury deposition and to provide technical information on these issues?
3. Is it not correct that neither you nor other Agency personnel have any personal expertise in these areas of deposition?
4. With respect to health and environmental impacts as discussed in your testimony, have you conducted any independent research in the areas concerning the environmental and health impacts of mercury?
5. Did you personally conduct a study of the literature concerning the health impact of mercury? Is it not correct that you are relying upon Dr. Deborah Rice, another witness in this proceeding, to provide the basis for the Agency's proposal related to health and environmental impacts of mercury contamination?
6. For each witness, what portions of the technical support document did you personally participate in preparing?
7. With respect to Section 5 of the TSD, how did Illinois EPA come to the conclusion that the reduction of mercury emissions proposed by the Rule will result in significant reductions of mercury deposition and methyl-mercury levels in waters and fish in Illinois?
8. Did Illinois EPA come to an independent conclusion as to what the reduction in the deposition of mercury will be if the Rule as proposed is fully implemented?
9. How did you come to that conclusion?
10. Are you aware of EPA and EPRI modeling studies that show that mercury from coal fired power plants within the State probably contribute relatively little on average of the total mercury deposited in the State?
11. Are you aware of any studies demonstrating that mercury in the atmosphere or deposited in the ground other than methyl-mercury in fish has a direct impact on human health?

12. Do you agree that the only impact of mercury in the environment that has been identified in the studies and literature is through the consumption of fish and other marine life impacted by methyl-mercury?
13. Do you agree that the purpose of the Illinois Rule is to attempt to reduce the methyl-mercury content in fish in Illinois?
14. Has Illinois EPA or anyone else to your knowledge conducted any studies to determine the direct impact of mercury emissions from Illinois coal fired electrical generating units upon waters in the State of Illinois?
15. If so, please describe that study and its conclusions.
16. To your knowledge, has anyone done a measurement of the mercury deposition within the State of Illinois and attempted to trace it to any particular source?
17. If so, please describe that study and its conclusions.
18. Has Illinois EPA conducted any independent review or study of the availability of mercury control technologies for EGUs other than that prepared by Dr. Staudt?
19. If so, please describe that study and its conclusions.
20. Is it fair to say that Illinois EPA is relying upon Dr. Staudt's expertise as set forth in his testimony and Chapter 8 of the technical support document to determine the availability and costs of mercury control technology?
21. Has Illinois EPA carried out any comparison between the Illinois EGUs and those which were studied in the various studies referred to by Dr. Staudt in his testimony and Chapter 8 of the technical support document?
22. If so, please describe that study and its conclusions.
23. What information did Illinois EPA provide to Dr. Staudt after he filed his original testimony?
24. Did Dr. Staudt ask the Illinois EPA for additional information after he filed his original testimony? What did he ask for? Was it provided?
25. What discussions did the Illinois EPA have with Dr. Staudt after he filed his testimony regarding revisions to his pre-filed testimony?
26. As a result of Dr. Staudt's revised pre-filed testimony is the Illinois EPA modifying its TSD in any way?
27. As a result of Dr. Staudt's testimony has the Illinois EPA considered revising its proposed rule in any way?
28. Has Illinois EPA carried out a review of the physical circumstances of each of the EGUs in Illinois to determine the feasibility of installing halogenated powdered activated carbon prior to the electrostatic precipitators on Illinois EGUs burning subbituminous coal?
29. If so, please describe that study and its conclusions.
30. Has Illinois carried out any independent studies to determine the impacts of sulfur trioxide injection for gas conditioning upon the effectiveness of halogenated powdered activated carbon injection prior to the ESPs?
31. If so, please describe that study and its conclusions.
32. Has Illinois EPA made any determination of the impacts of halogenated powdered activated carbon injection prior to the ESPs upon the performance of the ESPs to achieve particulate and opacity standards or upon the reliability of the ESPs?
33. If so, please describe that study and its conclusions.

34. Has Illinois EPA made any independent determination whether the use of halogenated powdered activated carbon injection prior to the ESPs would result in a significant increase of particulate emissions potentially triggering the prevention of significant deterioration or non-attainment New Source Review on the type and size of ESPs in operation in Illinois?
35. If so, please describe that study and its conclusions.
36. If injection of halogenated powdered activated carbon before the ESPs on Illinois EGUs will not attain the standards set forth in the Illinois EPA proposed regulation, would you agree as set forth in the technical support document that the injection of halogenated powdered activated carbon after the ESPs and prior to a newly installed baghouse is the only logical next step at this time to attempt to achieve the Illinois standards?
37. Has Illinois EPA made any determination as to the costs of installing such technology other than as set forth in Dr. Staudt's testimony and Chapter 8 of the technical support document?
38. If so, please describe that study and its conclusions.
39. Has Illinois EPA made any independent determination of the availability of such equipment for all of the EGUs in the State of Illinois burning subbituminous coal?
40. If so, please describe that study and its conclusions.
41. Has Illinois EPA made any determination of the availability of engineering staff to design such systems for each of the EGUs in the State of Illinois?
42. If so, please describe that study and its conclusions.
43. Has Illinois EPA made any independent determination of the availability of skilled labor, such as electricians, steel workers, pipefitters, etc. to install such systems on each EGU in the State of Illinois by the deadline specified by the proposed regulation?
44. If so, please describe that study and its conclusions.
45. Is it not Illinois EPA's position and belief that the limitations specified in the proposed Illinois regulation can be achieved by the injection of halogenated powdered activated carbon prior to the ESPs?
46. If the operators of the Illinois EGUs install such technology and work to optimize its application without sacrificing control of opacity and particulate emissions, but are unable to achieve the standards in the Illinois proposal, what do you envision the consequences to be?
47. As drafted, would not the continued operation be in violation of the regulation and the Title V Permit that would be revised to incorporate the standards?
48. In that case, would Illinois EPA believe that these facilities should shut down?
49. Would Illinois EPA support variances and/or adjusted standards to allow continued operation of these facilities either with or without the addition of additional controls?
50. If the operators of the EGUs which installed a halogenated powdered activated carbon injection before the ESPs in good faith and in reliance upon the Agency's opinions as expressed in this proceeding are unable to achieve the standard set forth in the Rule, would you agree that they should be allowed to continue operating employing such controls?

51. As written, would not the requirements of the proposed regulation be written in the Title V Permits for each of the EGUs?
52. In that case, would not the limits be enforceable by USEPA and by the citizens independent of the Illinois EPAs decision in the matter?
53. Has Illinois EPA considered adopting the proposed rule for Illinois and not incorporating it into the federally enforceable Title V Permit Program or otherwise making it federally enforceable?
54. If not, why not?
55. As set forth as page 3 of Mr. Romaine's revised testimony, is it not correct that "the earliest date that the first formal determination of compliance with these standards can occur is July 1, 2010"?
56. If at that time it is first determined that a facility is not in compliance, what penalties would it be subject to?
57. If that is the first date a facility is determined not to be in compliance, would it be considered that there are 365 days of violation?
58. Would it be prudent for a company to rely upon questionable technology to meet such limits in light of the consequences of the failure to achieve compliance?
59. Is it correct that IEPA has made no independent determination of the availability and accuracy of continuous emission monitors for measuring mercury and the flue gas?
60. If not, what such study has been performed?
61. Are you aware of the current studies being performed by USEPA and its contractors to determine the accuracy and precision of continuous emission monitors for mercury?
62. Are you aware that no such monitors have been approved?
63. Are you aware that such monitors that have been tested tend to have high levels of variability and a wide range of potential bias?
64. How would the availability of accurate and reliable emission monitors impact the administration of the proposed Illinois Rule?
65. If such monitors vary by as much as 20%, would that not make it virtually impossible to determine compliance with the Illinois Rule?
66. What studies has Illinois EPA done to determine reliable methods for sampling coal being fed to the boilers on the EGUs?
67. Has IEPA determined what the cost of such measures would be?
68. Would not the Illinois Rule depend heavily on the reliability of such sampling and analysis methods?
69. Please describe what other Illinois rulemakings are expected to impose requirements on EGUs in Illinois?
70. At a minimum, will not all Illinois EGUs be affected by the Clean Air Interstate Rule or CAIR?
71. Although Illinois has not yet proposed its CAIR Rule to the Board, did not the drafts that were shared with industry provide for set asides of 30% from what would have been the federally allowable allocations rather than a 5% set aside that might be allowed under the federal rule?
72. Would this not effectively impose more stringent emission standards on each Illinois EGU than would be required by the federal rule?

73. When finally adopted, would this rule not require significant additional controls on Illinois facilities or purchases of significant allocations from outside the State?
74. Is not Illinois under an obligation to adopt an attainment plan for fine particulate (PM2.5) for the Chicago and St. Louis metropolitan areas?
75. Will not that plan likely require significant additional reductions of nitrogen oxides and sulfur dioxides on all coal fired power plants in the State of Illinois beyond those required by CAIR?
76. Has not Illinois indicated an intent to apply such limits statewide as part of its attainment strategy, at least with respect to the so-called NOx RACT Rulemakings?
77. Will not those attainment strategies require emission reductions in the State of Illinois that cannot be met by purchasing allocations from outside the State?
78. When would you expect those limitations designed to achieve attainment with the PM2.5 air quality standards to be required?
79. Is there not a significant overlap between technologies which might achieve compliance with new nitrogen oxide and sulfur dioxide regulations and those which may be required for mercury control?
80. Is it not logical that these various requirements be harmonized both in terms of emission limitations and scheduling?
81. Has Illinois EPA taken any consideration of the total economic impact of these multi-pollutant controls on Illinois power plants?
82. Were not the federal CAMR regulations based on a desire to harmonize the controls of SO_2 and NOx with those for mercury?
83. For example, are there not significant mercury reduction benefits in the installation of wet flue gas desulfurization preceded by selective catalytic reduction on mercury for facilities burning bituminous coal, such as produced in Illinois?
84. If a facility installs halogenated powdered activated carbon injection with a baghouse for mercury control to comply with Illinois EPA's mercury proposal, would that not be inconsistent with burning Illinois bituminous coal in the future because the facilities would use dry scrubbing with the baghouse to achieve SO_2 reductions?
85. If, as the companies have suggested, the Illinois mercury proposal would require installation of baghouses on virtually all of the facilities presently burning subbituminous coal, would that not effectively discourage any use of Illinois coal in the future by making the investments substantially obsolete if a facility was to switch to Illinois coal?
86. If multi-plant averaging is allowed, why not allow averaging between companies?
87. With respect to the averaging demonstration as discussed at pages 7 and 8 of Mr. Romaine's testimony, has Illinois EPA made any internal estimates of which facilities would comply for the 75% minimum reduction by plant or which units, if any, would not have to install controls?
88. Since, at best, technology proposed by Illinois EPA witnesses will barely exceed a 90% removal rate as described in the various studies for subbituminous coals, which units would be available, if any, to avoid installing controls during Phase I of the rule since there would not be excess reductions from other units?

89. Is it Illinois EPA's intention or contemplation that its Illinois mercury rule would require or encourage switching to Illinois coal at any facilities in Illinois?
90. To the extent that Illinois appears to base its proposal in part on encouraging the use of Illinois coal and the potential availability of coal benefits from the use of wet flue gas desulfurization and selective catalytic reduction on bituminous fired power plants, has it made any study of the availability of Illinois coal and transportation networks to deliver that coal to Illinois power plants particularly within the time required by these rules? If so, please describe.
91. During the public meetings on the proposed Illinois mercury rule, Illinois EPA discussed a "technology out" which would have provided a significant extension of time to come into compliance with the requirements of the Illinois rule if a facility installed the halogenated powdered activated carbon injection prior to the ESPs and was unable to achieve 90% reduction by the spring of 2009, is that not correct?
92. Is Illinois EPA still willing to consider such a proposal?
93. Would Illinois EPA agree to a proposal that facilities willing to commit to more elaborate controls such as halogenated powdered activated carbon injection after the ESPs with baghouses could have a later compliance date?
94. Would Illinois EPA consider later compliance dates if such controls were to be phased in across a company-wide or multi-company-wide system?
95. Since Illinois EPA is convinced that injection of halogenated powdered activated carbon prior to the baghouses would achieve a 90% limit, would it agree to a proposal requiring such installation in Illinois companies allowing them to operate or optimize such a system subject to whatever limitations it achieves?

Dated this 22nd day of May, 2006.

Respectfully submitted,

AMEREN ENERGY GENERATING COMPANY
AMERENENERGY RESOURCES GENERATING COMPANY
ELECTRIC ENERGY, INC.

By: _____
One of its Attorneys

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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
PROPOSED NEW 35 ILL. ADM. CODE 225	)	R06-25
CONTROL OF EMISSIONS FROM	)	(Rulemaking – Air)
LARGE COMBUSTION SOURCES	)	
35 Ill. Adm. Code 225.100, 200	)	
	)	
	)	

Questions for Sid Nelson, Jr.

1. Please describe your personal involvement in the development of the mercury control technologies, particularly the sorbents discussed in your paper.
2. What is your personal involvement in the development engineering construction and installation with the pollution control equipment in coal fired power plants?
3. Have you reviewed the technical support document provided by IEPA in this proceeding?
4. Do you agree with the conclusions in Chapter 8 of the technical support document therein, particularly as to what technology is required in various facilities?
5. Page 3 of your testimony refers to the St. Clair Power Plant of Detroit Edison.
6. Were you personally involved in that study?
7. Do you know what size the ESP is at that facility?
8. Were all the fields being utilized for particulate collection during the test of Sorbent Technologies sorbent?
9. Does the SCA you report correspond to all of the fields that were installed, whether they were used or not?
10. Do you know the halogen content of the coal blend that was used at that facility?
11. What time of year was that study run at that facility?
12. Do you know whether any flue gas conditioning, such as SO_3 injection, was used prior to the ESP at that facility?
13. Do you know the source of the subbituminous coal used at that facility?
14. Do you know what mines that subbituminous coal was from?
15. Do you know how the size of the ESP at that facility compares to the size ESPs in the State of Illinois?
16. Your testimony refers to the Great River Energy Stanton Station. Were you personally involved in the study of that facility?
17. Do you know what size the ESP is in that facility?
18. Do you know the halogen content of the subbituminous coal blend that was used at that facility?
19. What time of year was that study run at that facility?

20. Do you know whether any flue gas conditioning, such as SO_3 injection, was used prior to the ESP at that facility?
21. Do you know the source of the subbituminous coal used at that facility?
22. Do you know what mines that subbituminous coal was from?
23. Do you know how the size of the ESP at that facility compares to the size ESPs in the State of Illinois?
24. Page 3 of your testimony references experiments at the Meramec Station of Ameren. Do you know what type of coal was being burned during that experiment?
25. How would that affect the removal that was achieved?
26. Do you know the size of the ESPs that was on the units being tested?
27. Do you know how the size of that ESP compares to the size of the ESPs in Illinois?
28. Are you aware there are also experiments that were run at the Labadie Station of Ameren in Missouri where halogenated activated carbon was injected on a subbituminous coal fired electrical generating unit.
29. Are you aware that the facility operates with SO_3 injection prior to the electrostatic precipitator?
30. Are you also aware that the average removals achieved with that injection was in the 50% range?
31. Are you aware that without the SO_3 injection the facility could not meet its emission limits for opacity and particulate?
32. Are you aware that a test to determine removal without SO_3 injection had to be discontinued because of opacity issues?
33. Is not that facility, the one most analogous to the Ameren facilities in the State of Illinois.
34. Would your Company be willing to enter into a guarantee that if sorbent injection utilizing your Company's sorbents was installed on the EGU's in Illinois, and it failed to achieve 90% reduction in accordance with the Illinois rule, that your Company would pay for any necessary retrofits and any fines or penalties that were imposed for failure to achieve that limit?
35. Assuming that appropriately 3.3-3.5 lbs. per million cubic feet of gas would be the normal sorbent injection rate, what would you expect the cost to be for all facilities across the State of Illinois on an annual basis?
36. Has your estimate of the price for bromine-activated sorbents changed since 2003?
37. What is the size of the ESPs at Yates?
38. Have you ever referred to any one of these as "tiny" ESPs?
39. What is the size of the ESP at Lausche?
40. Have you ever referred to this as a modestly-sized ESP?
41. Was there any indication of higher opacity in the stack during the demonstration trial of Sorbent Technologies product at the Monroe Generating Station?
42. What limited the mass injection rate of sorbent at Monroe?
43. How do the average and largest –sized ESPs in Illinois compare to the SCA values that you have called "tiny" and "modestly sized"?

44. Are there any limits imposed on your guarantee for process performance, in terms of liquidated damages, compensation for higher than projected auxiliary power, or additional sorbent above and beyond what is projected?
45. Will Sorbent Technologies provide for the additional sorbent above and beyond what is projected in the guarantee, at no additional cost to the owner, for as long as the plant operates with your technology?
46. If the sorbent injection rate went to as high as 8 lbs. per million cubic feet of gas. What would you expect that cost to be?
47. Is your Company prepared to give a ten year price guarantee with an inflation adjustment on supply of halogenated activated carbon?
48. If all the facilities in Illinois and surrounding states went to halogenated activated carbon injection, would your Company and competitors be able to supply that with current capacity?
49. You stated that Buck achieved about 70% mercury removal. At what load point was that achieved?
50. What was the average mercury removal over the load range?
51. Is it correct that, to date, no hot side ESP equipped unit has been able to demonstrate 90% mercury removal with sorbent injection over the full load range?
52. You state that you believe that Waukegan 7 and Will County 3 units equipped with hot side ESPs will be able to achieve 90% Hg removal with H-Pac sorbent. Is Sorbent Technologies willing to give guarantees to that effect with appropriate liquidated damages?

Dated this 22nd day of May, 2006.

Respectfully submitted,

AMEREN ENERGY GENERATING COMPANY
AMERENENERGY RESOURCES GENERATING COMPANY
ELECTRIC ENERGY, INC.

By: _____
One of its Attorneys

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