

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:

**AMENDMENTS TO 35 ILL.ADM.CODE 225:
CONTROL OF EMISSIONS FROM LARGE
COMBUSTION SOURCES (MERCURY
MONITORING)**

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**R09-10
(Rulemaking – Air)**

NOTICE OF FILING

To:

John T. Therriault, Assistant Clerk
Illinois Pollution Control Board
James R. Thompson Center
Suite 11-500
100 West Randolph
Chicago, Illinois 60601

Persons included on the
ATTACHED SERVICE LIST

PLEASE TAKE NOTICE that we have today filed with the Office of the Clerk of the Pollution Control Board the **POST-HEARING COMMENTS OF DYNEGY MIDWEST GENERATION, INC.**



Kathleen C. Bassi

Dated: March 5, 2009

Kathleen C. Bassi
Stephen J. Bonebrake
SCHIFF HARDIN, LLP
6600 Sears Tower
233 South Wacker Drive
Chicago, Illinois 60606
312-258-5500
Fax: 312-258-5600

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POST-HEARING COMMENTS OF DYNEGY MIDWEST GENERATION, INC.

NOW COMES Participant in this rulemaking, DYNEGY MIDWEST GENERATION, INC. (“DMG”), by and through its attorneys, SCHIFF HARDIN LLP, and offers comments on the proposed amendments to 35 Ill.Adm.Code Part 225, Subparts A and B.

DMG has actively participated in the development of this rule, both before the rule was filed with the Board during the Illinois Environmental Protection Agency’s (“Agency”) outreach efforts and subsequent to the December 17, 2008, hearing. DMG generally supports the proposal as it has been amended and as reflected in the Agency’s compilation of its recommended revisions to the proposed amendments, filed with the Board February 19, 2009 (“Revised Proposal”) with three additional changes discussed below. The Revised Proposal sets forth the rule its final form, and DMG encourages the Board to adopt the rule as reflected in the Revised Proposal with the three additional changes to Sections 225.265(a)(1)(C), 225.233(c)(5)(B), and 225.290(b)(4) identified below. In addition, there are several points regarding the rule that DMG wishes particularly to address in these comments.

First, regarding coal sampling, DMG understands that the rule does not require the inclusion of coal data in the semi-annual reports submitted by companies complying with the mercury rule through the Multi-Pollutant Standard (“MPS”), Section 225.233, that are relying on

the periodic stack testing provisions of proposed Section 225.239 for units that are not early compliers with the 90% reduction standard, *i.e.*, that have not “opted in” to the 90% reduction requirement prior to the compliance deadline. Rather, this data is to be maintained at each power station and made available to the Agency upon request.

DMG also understands that MPS units that are early compliers with the mercury standard, *i.e.*, before 2015, where the company is relying on the periodic stack testing provisions of proposed Section 225.239 must collect and analyze coal samples for mercury content for each day during stack testing and then on a monthly basis between stack tests. In other words, the coal sampling requirement is contemporaneous with the emission sampling period.

DMG further understands that MPS units complying with the mercury emission standard through the 90% reduction approach and using sorbent traps (*i.e.*, “excepted monitoring system” as defined in the Revised Proposal) as the monitoring method must collect daily coal samples. Section 225.265 requires the grab sample to be analyzed, and those analyses are to be averaged to provide mercury content data but does not specifically allow or prohibit compositing of samples prior to analysis. In other words, the daily coal sampling requirement is much more frequent than the emission sampling period. DMG, thus, suggests that the Board allow for the period over which the daily samples are analyzed to correspond with the sorbent trap data capture period, which varies depending on the flue gas flow rate in the stack and the mercury emission rate. We currently anticipate that sorbent traps will remain in the stack capturing data for a period of seven or eight days at a time. Effectively, sorbent traps create a composite of mercury emissions over that time period. Likewise, DMG suggests that the coal samples could be composited over a period of time corresponding to the sorbent trap sampling period. For example, if the sorbent trap analysis cycle is eight days, then the daily coal samples could be

composited and analyzed on an eight-day cycle. This practice would produce more relevant data because the data analyzed would be have been collected over a similar period of time. DMG suggests the following amendment:

Section 225.265 Coal Analysis for Input Mercury Levels

a) * * *

1) * * *

C) All other EGUs subject to this requirement, including EGUs in an MPS or CPS Group electing to comply with the control efficiency standard in Section 225.233(d)(1)(B) or (d)(2)(B), Section 225.294(c)(2), or Section 225.294(c)(2) pursuant to Section 225.294(e)(1)(A), must perform such coal sampling on a daily basis with the boiler is operating and combusting coal, except that EGUs using an excepted monitoring system may analyze samples that have been composited to correspond to the emission sampling period.

Second, in conjunction with the removal of the temperature correction factor from Section 225.233(c)(2)(D) for all units except those equipped with sorbent injection prior to a hot-side electrostatic precipitator ("ESP"), the monitoring, recordkeeping, and reporting of "flue gas temperature at the point of sorbent injection" should be removed from Section 225.233(c)(5)(B) for all units except those injecting sorbent prior to a hot-side ESP. DMG suggests the following revision in Section 225.233(c)(5)(B):

Section 225.233 Multi-Pollutant Standards (MPS)

* * *

c) * * *

5) * * *

B) After the first 36 months that injection of sorbent is required, it must monitor activated sorbent feed rate to the EGU, flue gas temperature at the point of sorbent injection if the unit is equipped with activated carbon injection prior

to a hot-side electrostatic precipitator, and exhaust gas flow rate from the EGU, automatically recording this data and the sorbent carbon feed rate, in pounds per million actual cubic feet of exhaust gas at the injection point, on an hourly average;

Third, DMG also understands that EGUs using excepted monitoring systems will be hard-pressed to have their end-of-quarter emission measurements collected, sent off-site for analysis, and the reported data then included in the quarterly report for submittal to the Agency, all within 45 days. A 60-day reporting deadline is more appropriate for the additional transportation and analytical steps associated with excepted monitoring systems. Accordingly, for EGUs using excepted monitoring systems, DMG asks the Board to provide 60 days in Section 225.290(b)(4) for submittal of quarterly reports. DMG suggests the following revision to the proposal:

Section 225.290 Recordkeeping and Reporting

* * *

b) Quarterly Reports. * * *

- 4) The owner or operator must submit each quarterly report to the Agency within 45 days following the end of the calendar quarter covered by the report, except that for an EGU using an excepted monitoring system, the quarterly report shall be submitted within 60 days following the end of the calendar quarter covered by the report.

Fourth, DMG injects sulfur trioxide ("SO₃") prior to the ESP on some units to enhance particulate capture. However, the presence of SO₃ in the flue gas can inhibit mercury capture by halogenated activated carbon. Ramsay Chang and Katherine Dombrowski, "Near and Long Term Options for Controlling Mercury Emissions from Power Plants," Paper # 25, MEGA Symposium (2008), p 9; Thomas J. Feeley, III, *et al.*, "DOE/NETL's Mercury Control Technology R&D Program – *Taking Technology from Concept to Commercial Reality*," Paper #

42, MEGA Symposium (2008), p. 6.¹ SO₃ “competes with Hg for adsorption sites on the sorbent surface thereby limiting [the sorbent’s] performance.” Feeley, p. 6 (citation omitted). In testing funded by NETL at Ameren’s Labadie plant, for example, the units achieved greater than 90% reduction in mercury with a sorbent injected at about 5 lb/macf with SO₃ injection disengaged; that percentage reduction dropped to 50% with SO₃ injection engaged. Feeley, p. 6. Likewise, at Progress Energy’s Lee Station Unit 1, sorbent injected at a rate of about 8 lb/macf with the SO₃ injection disengaged resulted in about an 82% reduction in mercury, and dropped to about 32% when the SO₃ injection was turned back on. Feeley, p. 6.

As indicated, the literature describing tests at other units suggests that DMG should expect reduced mercury removal at those units where it injects SO₃, even, perhaps, those units controlled by both an ESP and a baghouse. In utilizing the flexibilities provided by the MPS prior to 2015 to develop the system best suited to DMG’s operations, DMG units injecting SO₃ may not be able to achieve mercury reductions at levels normally anticipated to be achieved through injection of sorbent at a rate of 5 lb/macf, despite that the injection system is “designed for effective absorption of mercury” in accordance with Section 225.233(c)(2).

Finally, with respect to “optimum manner,” during the course of this rulemaking proceeding, DMG had some questions regarding the Agency’s application of the provision requiring that units subject to Section 225.233(c)(2) inject sorbent in an optimum manner. The Agency has clarified the issue through Mr. Jim Ross’ statement on the issue at the February 10th hearing. DMG seeks no further clarification or other action from the Board regarding “optimum manner.”

¹ The Chang and the Feeley documents are, respectively, Exhibits 4 and 5 to DMG’s Petition for Variance, PCB 09-48, and so are readily available to the Board for further review.

DMG supports the proposed amendments to the mercury rule and encourages the Board to adopt the Revised Proposal with the changes to Sections 225.265(a)(1)(C), 225.233(c)(5)(B), and 225.290(b)(4) suggested above.

Respectfully submitted,

DYNEGY MIDWEST GENERATION, INC.

by: 
one of its attorneys

Dated: March 5, 2009

Kathleen C. Bassi
Stephen J. Bonebrake
SCHIFF HARDIN LLP
6600 Sears Tower
233 South Wacker Drive
Chicago, Illinois 60606
312-258-5567
fax: 312-258-5600
kbassi@schiffhardin.com

CERTIFICATE OF SERVICE

I, the undersigned, certify that on this 5th day of March, 2009, I have served electronically the attached **POST-HEARING COMMENTS OF DYNEGY MIDWEST GENERATION, INC.** upon the following persons:

John T. Therriault, Assistant Clerk
Illinois Pollution Control Board
James R. Thompson Center
Suite 11-500
100 West Randolph
Chicago, Illinois 60601

and electronically and by first class mail, postage affixed upon persons included on the **ATTACHED SERVICE LIST.**



Kathleen C. Bassi

Kathleen C. Bassi
Stephen J. Bonebrake
SCHIFF HARDIN, LLP
6600 Sears Tower
233 South Wacker Drive
Chicago, Illinois 60606
312-258-5500
Fax: 312-258-5600
kbassi@schiffhardin.com

SERVICE LIST

(R09-10)

Timothy Fox
Hearing Officer
Illinois Pollution Control Board
100 West Randolph, Suite 11-500
Chicago, Illinois 60601
foxt@ipcb.state.il.us

John J. Kim
Charles E. Matoesian
Dana Vetterhoffer
Division of Legal Counsel
Illinois Environmental Protection Agency
1021 North Grand Avenue, East
P.O. Box 19276
Springfield, Illinois 62794-9276
john.j.kim@illinois.gov
charles.matoesian@illinois.gov
dana.vetterhoffer@illinois.gov

S. David Farris, Manager, Environmental,
Health and Safety
City of Springfield, City Water Light & Power
201 East Lake Shore Drive
Springfield, Illinois 62757
dfarris@cwlp.com

David Rieser
McGuire Woods LLP
on behalf of Kincaid Generation, L.L.C.
77 W. Wacker Drive, Suite 4100
Chicago, Illinois 60601
drieser@mcguirewoods.com

Renee Cipriano
Kathleen C. Bassi
Joshua R. More
Schiff Hardin LLP
on behalf of Ameren
6600 Sears Tower
233 South Wacker Drive
Chicago, Illinois 60606
rcipriano@schiffhardin.com
kbassi@schiffhardin.com
jmore@schiffhardin.com