

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

DYNEGY MIDWEST GENERATION, INC.,)
)
 Petitioner,)
)
 v.) **PCB 09-048**
) **(Variance-Air)**
)
 ILLINOIS ENVIRONMENTAL)
 PROTECTION AGENCY,)
)
 Respondent.)

NOTICE OF FILING

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

Kathleen C. Bassi
Stephen J. Bonebrake
Schiff Hardin, LLP
6600 Sears Tower
233 South Wacker Drive
Chicago, IL 60606

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Pollution Control Board an APPEARANCE and RECOMMENDATION of the Illinois Environmental Protection Agency, copies of which are herewith served upon you.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,
Respondent



Dated: April 1, 2009

John J. Kim

Managing Attorney

Illinois Environmental Protection Agency

Division of Legal Counsel

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Petitioner,)	
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v.)	PCB 09-048
)	(Variance-Air)
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ILLINOIS ENVIRONMENTAL)	
PROTECTION AGENCY,)	
)	
Respondent.)	

APPEARANCE

The undersigned hereby enters his Appearance on behalf of the Illinois Environmental Protection Agency.

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY

By: 
Kent E. Mohr Jr.
Assistant Counsel
Division of Legal Counsel

DATED: April 1, 2009

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RECOMMENDATION

NOW COMES the Illinois Environmental Protection Agency (“Illinois EPA” or “Agency”) by its attorneys, John J. Kim and Kent E. Mohr Jr., in response to the Petition for Variance of DYNEGY MIDWEST GENERATION, INC. (“Dynegy” or “Petitioner”), from certain requirements of the Multi-Pollutant Standard (“MPS”), 35 Ill. Adm. Code 225.233. Pursuant to Section 37(a) of the Illinois Environmental Protection Act (“Act”) [415 ILCS 5/37(a) (2008)] and 35 Ill. Adm. Code 104.216, the Illinois EPA does not object to the Illinois Pollution Control Board (“Board”) granting the variance as presented and requested by Petitioner. In support of its recommendation, the Illinois EPA states as follows.

I. INTRODUCTION

1. On January 9, 2009, Petitioner filed a Petition for Variance from a provision of the MPS, 35 Ill. Adm. Code 225.233, for a period beginning July 1, 2009, through March 31, 2010.

2. On February 5, 2009, the Board issued an Order identifying several informational deficiencies in the Petition for Variance and directed Petitioner to file an amended petition to provide the additional requested information. Specifically, the Board found that Petitioner did

not provide all of the information required by 35 Ill. Adm. Code 104.204 and requested Petitioner to provide the following: (1) More specific information regarding the location of air quality monitors relative to Petitioner's power stations; (2) Quantification of the amount and type of coal burned at Baldwin Power Station Unit 3, Havana Power Station Unit 6 and Havana Power Station Unit 2, and whether this will change over the variance period; (3) Length of 2010 outage and amount of mercury emissions in excess of 126.83 pounds at its Baldwin Power Station Unit 3 if it operated past March 6, 2010; and (4) Amount of money saved by not losing revenue through an outage to install lances at Baldwin Power Station Unit 3. Further, the Board found that the 120-day statutory period for it to decide this matter would recommence upon the filing of the amended petition.

3. On February 18, 2009, in response to the Board's Order, Petitioner filed an Amended Petition for Variance ("Amended Petition"). Simultaneously, Petitioner filed a Motion for Reconsideration ("Motion") requesting the Board to reconsider its Order. In its Amended Petition, Petitioner incorporated by reference its Petition for Variance and responded to the Board's requests. In its Motion, Petitioner argued that the informational deficiencies cited by the Board did not establish an inadequate Petition for Variance and requested the Board to also reconsider its determination that the 120-day statutory period for decision must recommence. On March 5, 2009, the Board denied Petitioner's Motion, accepted the Amended Petition, and noted that its decision deadline is June 18, 2009.

4. Petitioner seeks a variance, beginning July 1, 2009, from the MPS requirement in Sections 225.233(c)(1)(A) and 225.233(c)(2) to inject halogenated activated carbon at a minimum injection rate of 5.0 pounds per million actual cubic feet ("lbs/macf") exhaust gas flow, and from related monitoring, recordkeeping, and reporting provisions at Section

225.210(b) and (d) and 225.233(c)(5) as applied to Unit 3 at its Baldwin Energy Complex (“Baldwin”). As set forth *infra*, Petitioner proposes that instead of injecting sorbent beginning July 1, 2009, at Baldwin Unit 3, it will inject sorbent at Havana Power Station Unit 6 and Hennepin Power Station Unit 2 six months prior to the MPS deadline applicable to these units.

5. Petitioner owns and operates five coal-fired power plants located in downstate Illinois. These plants include Baldwin located in Randolph County, the Havana Power Station (“Havana”) located in Mason County, the Hennepin Power Station (“Hennepin”) located in Putnam County, the Vermilion Power Station located in Vermilion County, and the Wood River Power Station located in Madison County. Currently, Baldwin Township in Randolph County, the location of Baldwin, is designated nonattainment for PM_{2.5}. Randolph County is designated attainment for all other criteria pollutants. Mason, Putnam, and Vermilion Counties are designated unclassifiable/attainment for all criteria pollutants. Madison County is designated nonattainment for 8-hour ozone and unclassifiable/attainment for all other criteria pollutants. Madison and Vermilion Counties are not affected by this Petition.

6. Pursuant to Section 104.214 of the Board’s procedural rules, the Illinois EPA must provide public notice of any petition for variance within 14 days after filing of the petition. *See*, 35 Ill. Adm. Code 104.214. Section 104.214(a) provides that “the Agency must publish a single notice of such petition in a newspaper of general circulation in the county where the facility or pollution source is located.” *See also*, 415 ILCS 5/37(a) (2008). Section 104.214(b) requires the Illinois EPA to serve written notice of a petition on the County State’s Attorney, the Chairman of the County Board, each member of the General Assembly from the legislative district affected, and any person in the county who has in writing requested notice of variance petitions. The Illinois EPA published the required notice in the Mason County Democrat and the

Putnam County Record on January 21, 2009, and the Belleville News Democrat, the Red Bud North County News, and the LaSalle News Tribune on January 22, 2009. Also, consistent with Section 104.214(b), the Illinois EPA mailed notices of the Petition for Variance on January 22, 2009.

7. The Illinois EPA has not yet received any written comments, objections or requests for hearing. Should any public comments be received before the end of the comment period, the Illinois EPA will file an amendment to its Recommendation addressing any necessary issues.

8. Pursuant to the Board's procedural rules, "[w]ithin 21 days after the publication of notice, the Agency must file with the Board a certification of publication that states the date on which the notice was published and must attach a copy of the published notice." *See*, 35 Ill. Adm. Code 104.214(f). The Illinois EPA has filed a certification of publication within this timeframe.

9. The Illinois EPA is required to make a recommendation to the Board on the disposition of a petition for variance within forty-five (45) days of filing of the petition or any amendment thereto or thirty (30) days before a scheduled hearing pursuant to 35 Ill. Adm. Code 104.216.

II. BACKGROUND

10. As discussed, Petitioner owns and operates five coal-fired power plants for the generation of electricity in downstate Illinois with principal emissions consisting of sulfur dioxide ("SO₂"), nitrogen oxides ("NO_x"), and particulate matter ("PM"). In addition to these emissions, Petitioner's coal-fired power plants also emit mercury.

11. Petitioner's SO₂ emissions are controlled through the use of low sulfur coal. (Pet.

at 3). Specifically, Petitioner utilizes Powder River Basin coal at Baldwin, Havana, and Hennepin. (Amend. Pet. at 4-5). Currently, Petitioner is constructing spray dryer absorbers (*i.e.*, dry scrubbers) with fabric filter systems on all three of its Baldwin units as well as on Havana Unit 6. (Pet. at 3). Also, Petitioner is installing a fabric filter system on Hennepin Unit 2. (Pet. at 3). Petitioner indicates that these dry scrubbers will be in place by December 31, 2012. (Pet. at 3). Further, Petitioner notes that the Baldwin Unit 3 dry scrubber and fabric filter will be installed during its scheduled outage in March 2010. (Pet. at 3). Petitioner asserts that the dry scrubbers will significantly reduce its system-wide SO₂ emission rate. (Pet. at 3). The Illinois EPA has issued construction permits for these installations at Baldwin, Havana and Hennepin. (Pet. at 3). Petitioner has appealed certain aspects of these construction permits (PCB 08-066, 07-115 and 07-123, respectively) and the Board has granted a partial stay of the contested conditions contained in the respective petitions.

12. Petitioner's NO_x emissions are generally controlled by combinations of low sulfur coal, low NO_x burners, over-fire air, and selective catalytic reduction systems ("SCRs"). (Pet. at 3-4). Petitioner's PM emissions are controlled through flue gas conditioning, electrostatic precipitators ("ESPs"), and fabric filter systems. (Pet. at 4).

13. Pursuant to the Illinois mercury rule, Petitioner's mercury emissions will be controlled through injection of halogenated activated carbon in conjunction with SCRs, dry scrubbers, ESPs, and fabric filters. (Pet. at 4).

14. The U.S. Environmental Protection Agency ("USEPA") promulgated regulations requiring reductions in emissions of SO₂ and NO_x in the Clean Air Interstate Rule ("CAIR") to address ozone and PM_{2.5} nonattainment areas in May 2005. *See*, 70 Fed. Reg. 25162 (May 12, 2005). Also in May 2005, the USEPA promulgated the Clean Air Mercury Rule ("CAMR")

which required facilities to reduce their mercury emissions. *See*, 70 Fed. Reg. 28606 (May 18, 2005). Petitioner's coal-fired power plants were subject to the federal CAMR and are subject to the federal CAIR.

15. Also in May 2005, Petitioner entered into a Consent Decree requiring it to reduce SO₂, NO_x, and PM emissions at its five coal-fired power plants as well as mercury emissions at its Vermilion Power Station. (Pet. at 5). In accordance with the Consent Decree, Petitioner is required to control these emissions through a combination of enforceable emission limits, installation of mandatory pollution control and monitoring technology, and SO₂ and NO_x allowance restrictions. (Pet. at 5). Compliance with this Consent Decree is to be achieved by the end of 2012. (Pet. at 5).

16. Following promulgation of the CAMR and CAIR rules, the Illinois EPA initiated outreach with all Illinois electrical generating units ("EGUs") and other interested parties setting forth its intended regulatory proposals to satisfy the federal requirements of CAIR and CAMR. After considering issues raised in outreach, the Illinois EPA filed two separate rulemaking proposals with the Board addressing those two federal rules. In its CAMR rule, Illinois EPA went well beyond the federal CAMR because of the health risks associated with mercury and other concerns regarding the implementation of CAMR alone in Illinois.

17. Subsequently, the Board adopted the Illinois mercury rule at R06-25 (December 21, 2006) with the MPS, and the Illinois CAIR at R06-26 (August 23, 2007) with a Combined Pollutant Standard. As a result, Petitioners endeavored to coordinate the two regulatory requirements along with its Consent Decree requirements and install pollution controls to address all three requirements. (Pet. at 6). In order to meet the requirements of the Illinois CAIR, Petitioner identified that SCRs would be necessary to reduce NO_x emissions and dry scrubbers

would be necessary to reduce SO₂ emissions. (Pet. at 6). Also, Petitioner identified that fabric filters would be necessary for PM control pursuant to the Consent Decree. (Pet. at 6). Petitioner indicates that these same pollution controls aid a source in its ability to reduce mercury emissions and otherwise comply with the Illinois mercury rule. (Pet. at 6). However, Petitioner notes that these pollution control devices could not be installed by the earliest compliance date of July 1, 2009; and therefore, it was necessary to coordinate these individual requirements. (Pet. at 6).

18. Petitioner, along with other electricity generators, approached the Illinois EPA with a multi-pollutant proposal to address, in a coordinated fashion, SO₂, NO_x, and mercury. This proposal was eventually reflected in the Illinois MPS, and adopted by the Board as part of Illinois' mercury rule. As a result, Petitioner voluntarily opted in to the MPS on November 26, 2007, memorializing its commitment to abide by and comply with those requirements. (Pet. at 7).

19. In February 2008, the U.S. Court of Appeals for the District of Columbia ("D.C. Circuit") vacated the federal CAMR indicating that the CAMR had not gone far enough in addressing mercury reductions and that USEPA had improperly promulgated CAMR under Section 111 of the Clean Air Act ("CAA") instead of a MACT standard under Section 112. *See, State of New Jersey v. Environmental Protection Agency*, 517 F.3d 574 (D.C. Cir. 2008). The D.C. Circuit's vacatur of CAMR will result in USEPA's promulgation of CAMR under Section 112.

20. In July 2008, the D.C. Circuit vacated the federal CAIR because of a multitude of inadequacies in the rule, including Section 110(a)(2)(D) issues¹. *See, State of North Carolina v.*

¹ On December 23, 2008, the D.C. Circuit, after considering petitions for rehearing and responses thereto, remanded the CAIR without vacatur directing USEPA to revise the rule consistent with its opinion. *See, North Carolina v.*

Environmental Protection Agency, 531 F.3d 896 (D.C. Cir. 2008). However, the vacatur did not render invalid USEPA's finding in CAIR that EGUs in Illinois significantly impact downwind states and interfere with their ability to attain one or more of the national ambient air quality standards ("NAAQS"). Furthermore, Illinois must address attainment of the ozone and PM_{2.5} NAAQS and must address its impact on downwind states pursuant to Section 110(a)(2)(D).

21. In order to fulfill the requirements of the Illinois mercury rule and MPS, Petitioner must install and operate halogenated activated carbon (also referred to as "sorbent") injection systems, meeting sorbent injection requirements, and followed by a cold-side ESP or fabric filter. *See*, 35 Ill. Adm. Code 225.233(c)(1)(A). The MPS extends the deadline for Petitioner to demonstrate compliance with either a 90% mercury reduction requirement or emission standard of 0.0080 lb mercury/GWh gross electrical output until 2015. *See*, 35 Ill. Adm. Code 225.233(d). Also, the MPS establishes emission limitations for NO_x and SO₂ and precludes trading of any excess NO_x and SO₂ allowances that result from the installation and operation of the pollution control equipment necessary to meet applicable emissions limitations. *See*, 35 Ill. Adm. Code 225.233(e), (f). Since the MPS and Consent Decree both restrict emissions trading, Petitioner must install and operate pollution control equipment.

22. As discussed further *infra*, recently, Petitioner engaged in a dialogue with Illinois EPA regarding the subject of its Petition. As a result of those discussions, and prior to the filing of the Petition, the parties came to an understanding regarding specifics of Petitioner's compliance plan that would deviate from the MPS requirements, yet would still be acceptable to the Illinois EPA.

23. Currently, there are no pending State enforcement actions against the Petitioner.

EPA, 550 F.3d 1176 (D.C. Cir. 2008). Therefore, the requirements of the CAIR are still in effect until USEPA revises the rule in accordance with the D.C. Circuit's opinion and order.

III. RELIEF REQUESTED

24. As explained *supra*, Petitioner is currently required to comply with the MPS, which establishes control requirements and standards for emissions of NO_x, SO₂, and mercury as an alternative to compliance with emissions standards of Section 225.230(a). 35 Ill. Adm. Code 225.233(a)(1). Petitioner is required to comply with Sections 225.233(c)(1)(A) and 225.233(c)(2), which provide as follows:

c) Control Technology Requirements for Emissions of Mercury.

1) Requirements for EGUs in an MPS Group.

A) For each EGU in an MPS Group other than an EGU that is addressed by subsection (c)(1)(B) of this Section for the period beginning July 1, 2009 (or December 31, 2009 for an EGU for which an SO₂ scrubber or fabric filter is being installed to be in operation by December 31, 2009), and ending on December 31, 2014 (or such earlier date that the EGU is subject to the mercury emission standard in subsection (d)(1) of this Section), the owner or operator of the EGU must install, to the extent not already installed, and properly operate and maintain one of the following emission control devices:

- i) A Halogenated Activated Carbon Injection System, complying with the sorbent injection requirements of subsection (c)(2) of this Section, except as may be otherwise provided by subsection (c)(4) of this Section, and followed by a Cold-Side Electrostatic Precipitator or Fabric Filter; or
- ii) If the boiler fires bituminous coal, a Selective Catalytic Reduction (SCR) System and an SO₂ Scrubber.

* * *

2) For each EGU for which injection of halogenated activated carbon is required by subsection (c)(1) of this Section, the owner or operator of the EGU must inject halogenated activated carbon in an optimum manner, which, except as provided in subsection (c)(4) of this Section, is defined as all of the following:

A) The use of an injection system designed for effective absorption of mercury, considering the configuration of the EGU and its

ductwork;

- B) The injection of halogenated activated carbon manufactured by Alstom, Norit, or Sorbent Technologies, or the injection of any other halogenated activated carbon or sorbent that the owner or operator of the EGU has demonstrated to have similar or better effectiveness for control of mercury emissions; and
- C) The injection of sorbent at the following minimum rates, as applicable:
 - i) For an EGU firing subbituminous coal, 5.0 lbs per million actual cubic feet or, for any cyclone-fired EGU that will install a scrubber and baghouse by December 31, 2012, and which already meets an emission rate of 0.020 lb mercury/GWh gross electrical output or at least 75 percent reduction of input mercury, 2.5 lbs per million actual cubic feet;
 - ii) For an EGU firing bituminous coal, 10.0 lbs per million actual cubic feet or for any cyclone-fired EGU that will install a scrubber and baghouse by December 31, 2012, and which already meets an emission rate of 0.020 lb mercury/GWh gross electrical output or at least 75 percent reduction of input mercury, 5.0 lbs per million actual cubic feet;
 - iii) For an EGU firing a blend of subbituminous and bituminous coal, a rate that is the weighted average of the above rates, based on the blend of coal being fired; or
 - iv) A rate or rates set lower by the Agency, in writing, than the rate specified in any of subsections (c)(2)(C)(i), (c)(2)(C)(ii), or (c)(2)(C)(iii) of this Section on a unit-specific basis, provided that the owner or operator of the EGU has demonstrated that such rate or rates are needed so that carbon injection will not increase particulate matter emissions or opacity so as to threaten noncompliance with applicable requirements for particulate matter or opacity.
- D) For the purposes of subsection (c)(2)(C) of this Section, the flue gas flow rate must be determined for the point of sorbent injection; provided that this flow rate may be assumed to be identical to the stack flow rate if the gas temperatures at the point of injection and the stack are normally within 100° F, or the flue gas flow rate may otherwise be calculated from the stack flow rate, corrected for the

difference in gas temperatures.

35 Ill. Adm. Code 225.233(c)(1)(A), (c)(2).

25. Specifically, Petitioner seeks relief from the requirements in Sections 225.233(c)(1)(A) and 225.233(c)(2) that require Petitioner to inject, beginning July 1, 2009, halogenated activated carbon at a minimum injection rate of 5.0 lbs/macf. Petitioner requests a variance term of July 1, 2009, through March 31, 2010. In addition, Petitioner seeks relief from the related monitoring, recordkeeping, and reporting requirements contained in Sections 225.210(b) and (d), which reference such requirements in Sections 225.240 through 225.290, and Section 225.233(c)(5). Petitioner briefly mentions its belief that should the Board grant it the requested relief, Baldwin Unit 3 will not be subject to these monitoring, recordkeeping, and reporting requirements. (Pet. at 12). The Illinois EPA agrees with Petitioner, but notes that if the Board grants the requested relief, Petitioner will be subject to maintaining records as outlined in its compliance plan relating to Havana Unit 6 and Hennepin Unit 2.

26. As discussed *infra*, Petitioner has requested regulatory relief from the aforementioned provisions of the MPS based on economic, resource, and operational hardships.

IV. FACTS PRESENTED IN THE PETITION

27. As required by Section 104.216(a) [35 Ill. Adm. Code 104.216(a)], the Illinois EPA has investigated the facts alleged in the Petition for Variance. To date, the Illinois EPA has not received any public comments regarding the Petition. As stated *supra*, the Illinois EPA will file an amendment to its Recommendation should any additional comments be received before the end of the public comment period.

28. Petitioner represents that the actions it is required to take under the MPS as it relates to Baldwin Unit 3 would result in adverse environmental effects. (Pet. at 9). The Illinois

EPA is aware of no adverse environmental effects stemming from compliance with the MPS requirements.

29. In addition, Petitioner indicates that its Petition for Variance, if granted, will alter the effective dates of the MPS requirements identified in its construction permit (Application Number 07110065; I.D. Number 125804AAB) issued for Baldwin Unit 3 on March 3, 2008, which authorizes the construction and operation of a fabric filter, dry scrubber, and sorbent injection system. (Pet. at 21). Petitioner appealed various conditions contained in this construction permit and the Board has granted Petitioner's request for a partial stay of such contested conditions until it takes final action on the appeal (PCB 08-066). Should the Board grant the Petition for Variance, Petitioner must amend its construction permit to reflect the proper effective dates. Similarly, Petitioner has appealed its construction permits for Havana and Hennepin (PCB 07-115 and PCB 06-072, respectively) and the Board has also granted a partial stay of the contested conditions until it takes final action on the appeal.

30. Further, for informational purposes, the Illinois EPA notes Petitioner filed appeals before the Board relating to Clean Air Act Permit Program ("CAAPP") permits for Baldwin, Havana, and Hennepin in PCB 06-063, PCB 06-071, and PCB 06-072, respectively. These permits set forth recordkeeping requirements relating to emissions of mercury, among other conditions. Currently, these appeals are pending, but the Board has granted a stay of the entirety of these CAAPP permits.

V. ENVIRONMENTAL IMPACT

31. Pursuant to Section 104.216(b)(2), the Illinois EPA is required to state the location of the nearest air monitoring station, where applicable. Exhibit 1 of the Petition for Variance contains a copy of the map included in the Illinois EPA's Illinois Annual Air Quality

Report 2006. The locations of the air quality monitoring stations relative to Petitioner's facilities are delineated on page 34 of this report and contained in Petitioner's Exhibit 1. In accordance with the Board's Order of February 5, 2009, Petitioner has provided further information regarding the specific locations of its power plants relative to Illinois EPA air monitoring and mercury monitoring stations. *See*, Amend. Pet., Exhibits 1 and 2.

32. Petitioner states that a net environmental benefit will result from the requested relief and compliance alternative. (Pet. at 14). Specifically, Petitioner states that Havana Unit 6 and Hennepin Unit 2 will be retrofitted with fabric filter and sorbent injection systems by July 1, 2009, and that these two systems will remove at least as much mercury as sorbent injection upstream of the ESP at Baldwin Unit 3 and are likely to remove more mercury emissions and be more cost effective than compliance with the MPS at Baldwin Unit 3. (Pet. at 14-15). Further, Petitioner asserts that because the combined generating capacity of Havana Unit 6 and Hennepin Unit 2 is greater than Baldwin (645 MW versus 600 MW), this alternative compliance measure could generate even more mercury reductions than Baldwin Unit 3. (Pet. at 15). Specifically, Petitioner estimates that from July 1, 2009, through December 31, 2009, mercury reductions from Havana Unit 6 and Hennepin Unit 2 would aggregate up to 19 pounds more than would be experienced at Baldwin Unit 3. (Pet. at 15). This alternative, Petitioner states, would also avoid the need for an outage in early 2009 and the cost of subsequently relocating the sorbent injection system on Baldwin Unit 3. (Pet. at 15). Also, Petitioner estimates that its compliance alternative would result in injection of 2.5 million fewer pounds of sorbent than at Baldwin Unit 3 from July 1, 2009, through March 31, 2010. (Pet. at 15). However, Petitioner does note that it is unable to determine exactly how much mercury will be controlled at Havana Unit 6 and Hennepin Unit 2, and how much mercury will be emitted by Baldwin Unit 3. (Pet. at 16).

33. While Petitioner admits it does not have data that addresses the qualitative and quantitative impact of its mercury remissions on human health and the environment, it states that emissions from the coal-fired electric power generation sector as a whole tend to affect a large region of the country with relatively minimal impacts in the immediate vicinity of an individual plant. (Pet. at 18). In addition, Petitioner states that because it will offset the effect of this variance with reductions from Havana Unit 6 and Hennepin Unit 2, the difference in the downwind impact may not even be measurable, but, if any, should be lessened by the greater aggregate mercury removal which will occur from these two units. (Pet. at 18).

34. Further, Petitioner asserts numerous other collateral environmental benefits to its compliance alternative. First, Petitioner asserts that the requested compliance alternative would avoid wasting fly ash from Baldwin Unit 3 likely to occur when contaminated with halogenated activated carbon residue as a result of the injection of sorbent upstream of the ESP. (Pet at 18-19). Petitioner states that when Baldwin Unit 3 is reconfigured with sorbent injection downstream of the ESP and upstream of the fabric filter system, Petitioner will be able to collect and reuse this fly ash. (Pet. at 19). Second, Petitioner argues that its compliance alternative will result in a decrease in production of CO₂ emissions. (Pet. at 19). Petitioner asserts that by injecting sorbent into fabric filter systems at Havana Unit 6 and Hennepin Unit 2, it will be able to remove as much or more mercury while using substantially less sorbent, and a reduction in sorbent results in a reduction in indirect CO₂ emissions. (Pet. at 19).

35. The Illinois EPA does not disagree with Petitioner's assertions of the various environmental benefits associated with its proposed compliance alternative. Moreover, as proposed, the Illinois EPA has reviewed the mercury emission calculations and related information submitted by the Petitioner and agrees that Petitioner's compliance alternative will

likely result in a net environmental benefit. Further, the Illinois EPA does not believe that any environmental harm will result if the Board were to grant the Petition for Variance as proposed.

VI. ARBITRARY AND UNREASONABLE HARDSHIP

36. In considering whether to grant or deny a variance pursuant to Section 35(a) of the Act, the Board is required to determine whether Petitioner has shown that it would suffer an arbitrary or unreasonable hardship if required to comply with the regulation or permit requirement at issue. The Act provides that “The Board may grant individual variances beyond the limitations prescribed in this Act, whenever it is found, upon presentation of adequate proof, that compliance with any rule or regulation, requirement or order of the Board would impose an arbitrary or unreasonable hardship.” 415 ILCS 5/35(a)(2008).

37. Also, Section 104.216(b)(5) [35 Ill. Adm. Code 104.216(b)(5)] of the Board’s rules requires the Illinois EPA to estimate the cost that compliance would impose on the Petitioner and on others. *See*, 35 Ill. Adm. Code 104.216(b)(5).

38. Petitioner provides no evidence of its inability to comply with Sections 225.233(c)(1)(A) and 225.233(c)(2), and related monitoring, recordkeeping, and reporting provisions. Rather, Petitioner states that it seeks this variance “because making capital and operating expenditures to install and operate a halogenated activated carbon injection system on Baldwin Unit 3 that will need to be removed and re-located nine months after July 1, 2009, upon installation of the dry scrubber and fabric filter systems on Baldwin Unit 3 is not financially prudent, would divert capital and operating expenditures that could be otherwise better spent, and will result in adverse environmental effects.” (Pet at 9). Further, Petitioner indicates that it will face “arbitrary and unreasonable hardship if it is not granted the variance and allowed to make responsible operating decisions regarding the best combination of actions to address the

myriad compliance requirements of the MPS and Consent Decree.” (Pet. at 9). In addition, Petitioner states that it “must proceed cautiously to maintain its financial resources and operational flexibility, as well as the integrity of the electricity generation system that supports Illinois’ economy” and will continue to “identify the optimal locations for investments and expenditures consistent with the goal of maintaining operational flexibility within a competitive energy market.” (Pet. at 8).

39. Specifically, Petitioner asserts it will experience significant expense because it will be required to inject approximately 20 million pounds of sorbent over its five different facilities during each 12-month period, which would mean 115 million pounds system-wide. (Pet. at 12). Petitioner indicates vendor bids for halogenated activated carbon plus delivery are currently in excess of \$1 per pound², which Petitioner states will represent a significant operating expense for its MPS units. (Pet. at 12). Specifically, at Baldwin Unit 3, Petitioner indicates that under the MPS, it will be required to inject 4 million pounds of sorbent at an approximate cost of \$4 million. (Pet. at 12-13).

40. In addition, Petitioner states that under the MPS, it will be required to install a sorbent injection system upstream of the cold-side ESP in order for the halogenated activated carbon residue to be removed from the flue gas prior to being emitted. (Pet. at 13). Petitioner argues that this is a waste of resources because during a planned spring 2010 outage, Baldwin Unit 3 will be retrofitted with a dry scrubber and a new fabric filter system to meet emission reduction requirements under the Illinois CAIR and the Consent Decree, which will result in the sorbent injection system being reconfigured to be located downstream of the ESP and upstream

²Petitioner points to the Illinois EPA for estimate of the cost of halogenated activated carbon at only 80 cents per pound during the pendency of its mercury rule. The Illinois EPA notes that its estimate was just that, an estimate in 2006, and market conditions are constantly in a state of flux. Also, the Illinois EPA notes that Petitioner voluntarily opted in to the MPS.

of the fabric filter system. (Pet. at 13). Petitioner argues that this configuration will allow it to collect fly ash in the ESP prior to the injection of activated carbon into the flue gas stream with the activated carbon residue removed in the fabric filter system and subsequently disposed. (Pet. at 13). In its Amended Petition, Petitioner indicates that this spring 2010 outage will be a major outage lasting approximately 12 weeks. (Amend. Pet. at 6). Further, Petitioner indicates that Baldwin Unit 3 will not be operating commencing March 6, 2010; and, therefore, there would be no additional amount of mercury emitted by this unit beyond March 6 through the end of the proposed variance period, March 31, 2010. (Amend. Pet. at 6). Petitioner indicates that it requested the variance period to extend through March 31, 2010, so that it would not be required to submit reports for the period between commencement of the outage and the end of the variance period as there would be no injection of sorbent during this time. (Amend. Pet. at 6).

41. Further, Petitioner indicates that the installation of sorbent injection lances in the ductwork upstream of the ESP would require a multi-day unit outage and result in the loss of operating revenue. (Pet. at 13). Petitioner states that it will cost approximately \$100,000.00 to install the injection equipment upstream of the ESP and relocating it after nine months to a location downstream would increase these costs accordingly. (Pet. at 13-14). Thus, Petitioner argues that it is a waste of resources and financially taxing to comply with the MPS required installations at this time when they will be undone in 2010.

42. Further, Petitioner indicates that it must plan for and finance the purchase of the necessary pollution control equipment, and that since the MPS and Consent Decree require compliance with specific emissions rates, Petitioner does not have the option of delaying equipment planning and financing through purchases of allowances until the financial, labor, and equipment markets are more advantageous. (Pet. at 7). Also, Petitioner cites the lengthy

procurement process for SO₂, PM, and mercury pollution control devices, and asserts that each involves approximately three to five years to come online. (Pet. at 7-8).

43. Petitioner estimates that its capital costs of compliance with the Illinois mercury rule (including the MPS) and its Consent Decree would be a total of \$973 million by 2013. (Pet. at 8). Petitioner indicates that these estimates might change depending on additional federal or state requirements, the outcome of any appeals relating to the CAMR vacatur, new technology, or variations in costs of material or labor, among other reasons. (Pet. at 8). The Illinois EPA notes that Petitioner's estimate of capital costs almost certainly includes all of its facilities as opposed to just Baldwin; and further, the cost Petitioner is required to bear relating to its Consent Decree is irrelevant to this proceeding.

44. In its Amended Petition, Petitioner indicates that it may save approximately \$3,035,000 if the Board grants the variance prior to May 8, 2009. (Amend. Pet. at 8).

45. Petitioner is requesting this variance to circumvent the financial outlay for compliance with the MPS requirements, and to be able to maintain flexibility by utilizing financial resources for other investments, while still providing the same or better mercury reductions as agreed to in the MPS.

VII. CONSISTENCY WITH FEDERAL LAW

46. Pursuant to Section 35 of the Act [415 ILCS 5/35 (2008)] and 35 Ill. Adm. Code 104.208(a), all petitions for variances must be consistent with federal law. Petitioner states that "there is no federal law that requires these DMG units to comply with any mercury emission rate limit." (Pet. at 21).

47. Petitioner is correct that there is currently no authority that would require or address federal approval of the MPS. However, Illinois must still develop plans to attain the

ozone and PM2.5 NAAQS. More importantly, Illinois must address its impact on downwind states pursuant to Section 110(a)(2)(D) of the CAA. USEPA made a finding in CAIR that EGUs in Illinois significantly impact downwind states and interfere with their ability to attain one or more of the NAAQS.

VIII. COMPLIANCE PLAN

48. Pursuant to Section 104.204(f), the Petitioner is required to present a detailed compliance plan in the Petition for Variance. Petitioner provides the following compliance plan in its Petition for Variance.

49. Petitioner requests that the term of the variance for Baldwin Unit 3 begin on July 1, 2009, and terminate March 31, 2010, and proposes the following conditions to apply during the term of the variance:

- A. Prior to and during the term of the variance, Baldwin Unit 3 shall not be subject to the requirements of Section 225.233(c)(1)(A), Section 225.233(c)(2), Sections 225.210(b) and (d), and Section 225.233(c)(5).
- B. Beginning December 31, 2009, Havana Unit 6 and Hennepin Unit 2 shall comply with all applicable MPS requirements, as otherwise required.
- C. Likewise, upon restarting operations following its spring 2010 outage, Baldwin Unit 3 shall comply with all applicable MPS requirements.

(Pet. at 20).

50. Further, Petitioner proposes that the compliance plan include the following provisions:

- A. From July 1, 2009, through December 30, 2009, Havana Unit 6 and Hennepin Unit 2 shall inject sorbent at a minimum rate of 5 lbs/macf at each of those units until or unless DMG informs the Agency that these two units, either individually or averaged together, will achieve mercury reductions of 90% or will meet the emission rate of 0.0080 lb/GWhr. Unless expressly stated, such notification shall not commit

the units to achieve a 90% reduction or achieve a rate of 0.0080 lb/GWhr after December 30, 2009. If DMG chooses to comply with this variance by achieving a 90% reduction in mercury emissions at Havana Unit 6 or Hennepin Unit 2, the mercury removal rate shall be determined by performing a single stack test on the applicable unit or units in accordance with proposed Section 225.239(d)(4) and (5), (e), and (f)(1), assuming those sections as adopted in the Board's Docket R09-10 are substantively the same as proposed.

- B. Only sorbents listed in or manufactured by the companies listed in Section 225.233(c)(2)(B) or demonstrated as effective as the listed sorbents as allowed by Section 225.233(c)(4) may be injected unless or until DMG informs the Agency that these two units, either individually or averaged together, will achieve mercury reductions of 90% or will meet the emission rate of 0.0080 lb/GWhr.
- C. If DMG elects to comply with this variance pursuant to the 90% removal or 0.0080 lb/GWhr option under Paragraph 36(A), above, through December 30, 2009, Havana Unit 6 and Hennepin Unit 2 shall inject sorbent at a rate no less than the rate injected during mercury removal performance tests to achieve an emission rate of 0.0080 lb/GWhr or 90% removal. For example, if during stack testing, DMG demonstrated a 90% removal injecting sorbent at a rate of 2 lb/macf, then DMG would continue, throughout the rest of the variance period, to inject at the minimum two-pound rate rather than at a five-pound rate.
- D. For Havana Unit 6 and Hennepin Unit 2, DMG shall maintain records of the sorbent injection rate and flue gas flow rate from July 1, 2009, through December 30, 2009.

(Pet. at 20-21).

51. Essentially, Petitioner proposes that instead of injecting sorbent beginning July 1, 2009, at Baldwin Unit 3, it will inject sorbent at Havana Unit 6 and Hennepin Unit 2 six months prior to the MPS deadline applicable to these units. Petitioner indicates that it does not seek for Havana Unit 6 or Hennepin Unit 2 to be subject to the MPS earlier than December 31, 2009, and does not seek to make any of its units subject to the 90% mercury removal requirement of the Illinois mercury rule. (Pet. at 21).

52. The Illinois EPA's mercury rule amendments pending before the Board (PCB 09-

010) propose various sorbent manufacturers to be added to an approved list. Petitioner states that it expects to be able to use such manufacturers if the Board adopts these amendments. (Pet. at 9). The Illinois EPA has no objection to the use of the proposed sorbent manufactures provided this aspect of the rule is adopted. In addition, Petitioner's compliance plan includes the ability to determine mercury removal rates by performing a single stack test on the applicable unit in accordance with proposed Section 225.239(d)(4) and (5), (e), and (f)(1), assuming those sections are adopted as substantively the same as proposed in PCB 09-010. (Pet. at 20). The Illinois EPA does not object; however, in the event these sections are not adopted as substantively the same as proposed, Petitioner must comply with these sections as adopted.

53. Prior to the filing of the Petition for Variance, the Illinois EPA engaged in dialogue with Petitioner on the subject of its compliance plan and requested a modification. Specifically, the Illinois EPA required that not only would Havana Unit 6 and Hennepin Unit 2 need to meet the July 1, 2009, date for injection of sorbent, but would also have to inject sorbent at a minimum rate of 5lbs/macf or achieve mercury reductions of 90%. Petitioner agreed to this condition, and has included it in the proposed compliance plan. Therefore, the Illinois EPA believes that Petitioner's compliance plan is sufficient and does not object to the plan as set forth in the Petition for Variance.

IX. RECOMMENDATION AND CONCLUSION

54. Under Section 37 of the Act and Section 104.216(b)(11) of the Board rules, the Illinois EPA is required to make a recommendation to the Board as to the disposition of the petition. *See*, 415 ILCS 5/37(a) and 35 Ill. Adm. Code 104.216(b)(11). The burden of proof in a variance proceeding is on the Petitioner to demonstrate that compliance with the rule or regulation would impose an arbitrary or unreasonable hardship. *See*, 415 ILCS 5/35(a) and 35

Ill. Adm. Code 104.238.

55. As a general proposition, the Illinois EPA does not agree that an arbitrary and unreasonable hardship results where a petitioner is not permitted to conserve its limited resources and maintain operational flexibility. Moreover, in this case, the Illinois EPA is unable to respond to Petitioner's contention that it must avoid wasting limited resources and must maintain operational flexibility because the Illinois EPA does not have any information in its possession to either contradict or confirm Petitioner's representations. However, the Illinois EPA does agree that it is a sound business reason to avoid an improvement where it is to be undone in the near future, especially when there will be an overall net environmental benefit.

56. As stated *supra*, Petitioner engaged in dialogue with the Illinois EPA regarding its requested relief and did improve the conditions of its alternative compliance proposal to the satisfaction of the Illinois EPA.


57. Furthermore, the Illinois EPA agrees with Petitioner that there will likely be a net environmental benefit if the Board were to grant the Petition for Variance, and does not believe that any environmental harm would result therefrom. As such, it seems likely that any detriment Petitioner might suffer as a result of compliance with the MPS will outweigh any environmental impact or harm.

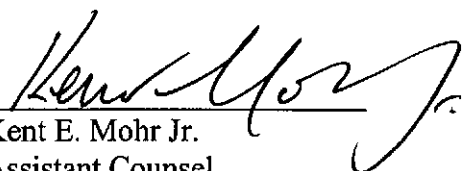
58. Therefore, as presented, the Illinois EPA does not object to the Board granting the variance as presented and requested by Petitioner.

WHEREFORE, for the reasons set forth above, the Illinois EPA does not object to the Board granting the variance as presented and requested by Petitioner.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY

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By: 
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Dated: April 1, 2009

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CERTIFICATE OF SERVICE

I, the undersigned, an attorney, hereby certify that on April 1, 2009, I served true and correct copies of an APPEARANCE and RECOMMENDATION of the Illinois Environmental Protection Agency by electronically filing with the Illinois Pollution Control Board and by placing true and correct copies in properly sealed and addressed envelopes and by depositing said sealed envelopes in a U.S. mail drop box located within Springfield, Illinois, with sufficient First Class postage affixed thereto, upon the following named persons:

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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,
Respondent



Dated: April 1, 2009

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