

ILLINOIS POLLUTION CONTROL BOARD
May 7, 2009

DYNEGY MIDWEST GENERATION, INC.)	
)	
Petitioner,)	
)	
v.)	PCB 09-48
)	(Variance - Air)
ILLINOIS ENVIRONMENTAL)	
PROTECTION AGENCY,)	
)	
Respondent.)	

OPINION AND ORDER OF THE BOARD (by G.L. Blankenship):

On January 9, 2009, Dynegy Midwest Generation, Inc. (Dynegy) filed a variance petition requesting temporary relief from the Board's air regulations for its facility in Randolph County. Dynegy requests the Board to grant a variance from certain provisions of the Multi-Pollutant standards (MPS) for controlling mercury emissions from coal-fired electric generating units set forth at 35 Ill. Adm. Code 225.233. The requested variance will allow Dynegy to defer the implementation of mercury emissions controls at Baldwin Unit 3 for a period of 9 months starting from to July 1, 2009 until March 31, 2010. The Illinois Environmental Protection Agency (IEPA) filed its recommendation stating that the IEPA does not object to the granting of the variance.

The Board's responsibility in this matter arises from the Environmental Protection Act (Act) (415 ILCS 5/35 (2006)). The Board is charged there with the responsibility of granting a variance from Board regulations whenever it is found that compliance with the regulations would impose an arbitrary or unreasonable hardship upon the petitioner. 415 ILCS 5/35(a) (2006). The Agency is required to appear in hearings on variance petitions. 415 ILCS 5/4(f) (2006). The Agency is also charged, among other matters, with the responsibility of investigating each variance petition and making a recommendation to the Board as to the disposition of the petition. 415 ILCS 5/37(a) (2006).

The Board has carefully considered the request for variance and the IEPA's recommendation. The Board finds that the record establishes that Dynegy will suffer an arbitrary or unreasonable hardship if the variance is not granted. In addition, the Board finds that the requested variance is not inconsistent with federal law and the impact on public health and the environment is alleviated by the potential for increased mercury reductions at certain other Dynegy units. Therefore, the Board grants the variance subject to certain conditions.

In this opinion, the Board will first describe the procedural history and then the statutory and regulatory backgrounds. Next the Board will summarize the petition, then the IEPA's recommendation. The Board will then discuss the Board's reasons for granting the variance and the conditions of that variance.

PROCEDURAL BACKGROUND

On January 9, 2009, Dynegey filed a petition requesting a variance from the Board's air regulations limiting emissions of mercury from coal-fired electric generating units (Pet.). Specifically, Dynegey seeks relief from the multi-pollutant standard (MPS) in Sections 225.233(c)(1)(A), 225.233(c)(2), 225.233(c)(5), and 225.210(b) and (d). These provisions address mercury emissions control and reporting requirements. Dynegey requested the variance for its Baldwin Unit 3 coal-fired power plant in Randolph County. In the petition, Dynegey waived hearing. On February 5, 2009, the Board identified informational deficiencies in the petition and directed Dynegey to file an amended petition to provide the additional information. The Board allowed Dynegey until March 9, 2009, to file the amended petition and noted that the 120-day statutory period for the Board to decide this case would recommence upon the filing of the amended petition. *See* 35 Ill. Adm. Code 104.232(a)(2).

On February 18, 2009, Dynegey filed a motion asking the Board to reconsider the February 5, 2009 order (Mot.) and Dynegey filed an amended petition (Am. Pet.), accompanied by a motion. In the motion to reconsider, Dynegey asserted that the "informational deficiencies" identified by the Board in the February 5, 2009 order "do not rise to the level of jurisdictional deficiencies" that warrant dismissal of the petition. Mot. at 4. Dynegey asserts that therefore, "it is improper for the Board to treat Dynegey's submittal" as an amended petition and recommencing the 120-day statutory period. *Id.*

On March 5, 2009, the Board denied the motion to reconsider and accepted the amended petition. In that order, the Board noted that the Board's decision deadline is June 18, 2009.

On April 1, 2009, the IEPA filed a recommendation (Rec.). IEPA's recommendation states that the IEPA "does not object to the Board granting the variance as presented and requested by Dynegey." Rec. at 1.

STATUTORY BACKGROUND

A "variance is a temporary exemption from any specified rule, regulation, requirement or order of the Board." *See* 35 Ill. Adm. Code 104.200(a)(1). Under Title IX of Act (415 ILCS 5/35-38 (2006)), the Board is responsible for granting variances when a petitioner demonstrates that immediate compliance with the Board regulation would impose an "arbitrary or unreasonable hardship" on petitioner. *See* 415 ILCS 5/35(a) (2006).

The Board may grant a variance, however, only to the extent consistent with applicable federal law. *See* 415 ILCS 5/35(a) (2006). Further, the Board may issue a variance with or without conditions, and for only up to five years. *See* 415 ILCS 5/36(a) (2006). The Board may extend a variance from year to year if petitioner shows that it has made satisfactory progress toward compliance with the regulations from which it received the variance relief. *See* 415 ILCS 5/36(b) (2006).

Specifically, the Act provides:

To the extent consistent with applicable provisions of the . . . Clean Air Act . . . and regulations pursuant thereto . . .:

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. However, the Board is not required to find that an arbitrary or unreasonable hardship exists exclusively because the regulatory standard is under review and costs of compliance are substantial and certain. 415 ILCS 5/35(a) (2006); *see also* 35 Ill. Adm. Code 104.200, 104.208, 104.238.

In granting a variance the Board may impose such conditions as the policies of this Act may require.

[A]ny variance granted pursuant to the provisions of this Section shall be granted for such period of time, not exceeding five years, as shall be specified by the Board at the time of the grant of such variance, and upon the condition that the person who receives such variance shall make such periodic progress reports as the Board shall specify. Such variance may be extended from year to year by affirmative action of the Board, but only if satisfactory progress has been shown. 415 ILCS 5/36(a), (b) (2006); *see also* 35 Ill. Adm. Code 104.200, 104.210, 104.242, 104.244.

The Act requires IEPA to provide public notice of a variance petition, including notice by publication in a newspaper of general circulation in the county where petitioner's facility is located. *See* 415 ILCS 5/37(a) (2006); 35 Ill. Adm. Code 104.214. The Board will hold a hearing on the variance petition (1) if petitioner requests a hearing, (2) if IEPA or any other person files a written objection to the variance within 21 days after the newspaper notice publication, together with a written request for hearing, or (3) if the Board, in its discretion, concludes that a hearing would be advisable. *See* 415 ILCS 5/37(a) (2006); 35 Ill. Adm. Code 104.224, 104.234.

The Act requires IEPA to appear at hearings on variance petitions (415 ILCS 5/4(f) (2006)) and to investigate each variance petition and "make a recommendation to the Board as to the disposition of the petition" (415 ILCS 5/37(a) (2006); 35 Ill. Adm. Code 104.216). The "burden of proof shall be on the petitioner." 415 ILCS 5/37(a) (2006); *see also* 35 Ill. Adm. Code 104.200(a)(1), 104.238(a). In a variance proceeding then, the burden is on the petitioner to prove that immediate compliance with Board regulations would cause an arbitrary or unreasonable hardship that outweighs public interest in compliance with the regulations. *See Willowbrook Motel v. PCB*, 135 Ill. App. 3d 343, 349-50, 481 N.E.2d 1032, 1036-1037 (1st Dist. 1985).

REGULATORY BACKGROUND

After promulgation of regulations by the United States Environmental Protection Agency (USEPA) requiring reduction of nitrogen oxide (NO_x), sulfur dioxide (SO₂), and mercury (*see* 70 F.R. 25162 (May 12, 2005) and 70 F.R. 28606 (May 18, 2005)), the IEPA proposed rules to the Board to implement both federal rules. Pet. at 4-5; Rec. at 4-5. The first rulemaking was Proposed New 35 Ill. Adm. Code 225 Control of Emissions from Large Combustion Sources (Mercury), R06-25 (Dec. 21, 2006). The second was Proposed New Clean Air Interstate Rules (CAIR) SO₂, NO_x Annual and NO_x Ozone Season Trading Programs, 35 Ill. Adm. Code 225, Subparts A C, D, E, and F, R06-26, (Aug. 23, 2007). Dynegy and other electricity generators in Illinois sought to control emissions from mercury, SO₂, and NO_x in a coordinated manner and approached the IEPA with an amendment to the rules that would allow for a multi-pollutant standard (MPS). Pet. at 6; Rec. at 7. The Board included the MPS provision in the final mercury rule at 35 Ill. Adm. Code 225.233. *Id.*

Dynegy opted to use the MPS and notified the IEPA on November 26, 2007. The MPS requires Dynegy to install and operate halogenated activated carbon (sorbent) injection systems to control mercury emissions beginning July 1, 2009, but extends the deadline to demonstrate compliance with the 90% overall mercury reduction provision until 2015. Pet. at 87; 35 Ill. Adm. Code 225.233. The MPS further requires that Dynegy make use of specific sorbent injection rates on its units prior to 2015. *Id.* The MPS sets declining emissions limits for SO₂ and NO_x prior to 2015 and precludes trading any excess SO₂ and NO_x emission allowances. *Id.*

The specific rules from which Dynegy now seeks a variance are the provisions of the MPS at Section 225.233(c)(1)(A), (c)(2) and (c)(5). Those provisions provide in pertinent part:

- 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. 35 Ill. Adm. Code 225.233(c)(1)(A)

* * *

- 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)(2)

* * *

- 5) In addition to complying with the applicable recordkeeping and monitoring requirements in Sections 225.240 through 225.290, the owner or operator of an EGU that elects to comply with this Subpart B by means of this Section must also comply with the following additional requirements:
- A) For the first 36 months that injection of sorbent is required, it must maintain records of the usage of sorbent, the exhaust gas flow rate from the EGU, and the sorbent feed rate, in pounds per million actual cubic feet of exhaust gas at the injection point, on a weekly average;
 - 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, 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; and

- C) If a blend of bituminous and subbituminous coal is fired in the EGU, it must keep records of the amount of each type of coal burned and the required injection rate for injection of activated carbon, on a weekly basis. 35 Ill. Adm. Code 225.233(c)(5)

In addition, Dynegey seeks a variance from various reporting and monitoring requirements associated with the MPS provisions. Those specific reporting and monitoring requirements are at Sections 225.210(b) and (d) and provide in pertinent part:

b) Monitoring Requirements.

- 1) The owner or operator of each source and each EGU at the source must comply with the monitoring requirements of Sections 225.240 through 225.290 of this Subpart B.
- 2) The compliance of each EGU with the mercury requirements of Sections 225.230 and 225.237 of this Subpart B must be determined by the emissions measurements recorded and reported in accordance with Sections 225.240 through 225.290 of this Subpart B. 35 Ill. Adm. Code 225.210(b)

d) Recordkeeping and Reporting Requirements

Unless otherwise provided, the owner or operator of a source with one or more EGUs at the source must keep on site at the source each of the documents listed in subsections (d)(1) through (d)(3) of this Section for a period of five years from the date the document is created. This period may be extended, in writing by the Agency, for cause, at any time prior to the end of five years.

- 1) All emissions monitoring information gathered in accordance with Sections 225.240 through 225.290.
- 2) Copies of all reports, compliance certifications, and other submissions and all records made or required or documents necessary to demonstrate compliance with the requirements of this Subpart B.
- 3) Copies of all documents used to complete a permit application and any other submission under this Subpart B. 35 Ill. Adm. Code 225.210(d)

PETITION FOR VARIANCE

The Board will summarize Dynegy's variance petition by first describing the coal-fired electricity generating units affected by the variance request. Next the Board will summarize Dynegy's arguments on the arbitrary or unreasonable hardship Dynegy will face without the requested relief. The Board will then proceed to set forth the requested relief and compliance plan from Dynegy. The Board will conclude with Dynegy's position on the consistency with federal law.

Facilities

Dynegy owns and operates five coal-fired electricity generating plants in Illinois. Pet. at 2. The Dynegy plants employ approximately 588 persons. *Id.* The Baldwin Energy Complex is located in Randolph County and Baldwin Unit 3 is the specific unit for which Dynegy is asking the Board to grant variance relief. *Id.* Baldwin Energy Complex has 175 of Dynegy's 588 employees. *Id.* In addition to Baldwin Unit 3, the variance relief sought will impact two other units owned by Dynegy by reducing the mercury emissions from those units prior to the required date. *Id.* These units are Havana Unit 6 at the Havana Power Station located in Mason County, and Hennepin Unit 2 at the Hennepin Power Station located in Putnam County. Pet. at 2-3. The remaining two power stations, Vermilion Power Station located in Vermilion County and Wood River Power Station located in Madison County, are not affected by the variance request. Pet. at 2.

The principal emissions at Dynegy's coal-fired power plants are SO₂, NO_x, particulate matter (PM) and mercury. Pet. at 3. Dynegy is currently controlling SO₂ by using low sulfur coal. *Id.* Dynegy is also constructing spray dryer absorbers (dry scrubbers) with fabric filter on all the units at Baldwin to control SO₂. *Id.* Havana Unit 6 will also have this equipment installed and Hennepin Unit 2 will have a fabric filter. *Id.* All this equipment is scheduled to be in place by December 31, 2012, and an outage to begin in March 2010 will be used to install the dry scrubber at Baldwin Unit 3. Pet. at 3. Dynegy opines that the installation of this equipment will "significantly reduce" Dynegy's system-wide SO₂ emission rate. *Id.*

Dynegy indicates that NO_x emissions are generally controlled by low sulfur coal, low NO_x burners, over-fire air, and selective catalytic reduction systems (SCRs), while PM is generally controlled through the use of flue gas conditioning, electrostatic precipitators (ESPs), and fabric filter systems. Pet. at 3-4. Pursuant to the requirements of the MPS rules, Dynegy will control mercury emissions by injection of halogenated activated carbon in conjunction with SCRs, dry scrubbers, ESPs, and fabric filters. Pet. at 4.

In addition to the requirements of the MPS, Dynegy is subject to a consent decree that requires Dynegy to reduce SO₂, NO_x, and PM emissions at the five coal-fired plants and mercury at the Vermilion Power Station. Pet. at 5, citing United States, et al. v. Illinois Power Co., et al., No. 99-CV-833-MJR (S.D. Ill.) (Consent Decree entered May 27, 2005). Dynegy must reduce the emissions by using a combination of: 1) enforceable emission limits, 2) installation of

mandatory pollution control and monitoring technology, and 3) SO₂ and NO_x allowance restrictions. *Id.* Dynegy must achieve full compliance by the end of 2012. *Id.*

The MPS requires Dynegy to install and operate halogenated activated carbon (sorbent) injection systems on its coal-fired power plants to control mercury emissions. Pet. at 7. The MPS also prescribes a minimum injection rate of activated carbon prior to 2015. *Id.* Under the MPS, Dynegy must begin injecting sorbent at four units on July 1, 2009, including Baldwin Unit, and at five units on December 31, 2009, including Havana Unit 6 and Hennepin Unit 2. Pet. at 12. By January 1, 2015, all units in the MPS Group must then demonstrate a 90% reduction in mercury emissions, using whatever injection rate is necessary. 35 Ill. Adm. Code 225.233(d).

Baldwin Unit 3 emissions are currently controlled using cold side ESP that includes sulfur trioxide injection. Pet. at 13. In order to comply with the MPS requirements by July 1, 2009, Dynegy would need to install sorbent injection upstream of the cold side ESP in order for the mercury/halogenated activated carbon residue to be removed from the flue gas prior to being emitted. *Id.*

Dynegy has scheduled an outage for Baldwin Unit 3 in the spring of 2010 to retrofit the unit with a dry scrubber and a new fabric filter system to meet emission reductions required by CAIR and the consent decree. Pet. at 13. When Baldwin Unit 3 resumes operations in 2010, the unit will be reconfigured with sorbent injection downstream of the ESP and upstream of the fabric filter system. *Id.* The new configuration allows Dynegy to collect fly ash in the ESP prior to the injection of activated carbon into the flue gas stream, and then remove the activated carbon residue in the fabric filter system for subsequent disposal. *Id.*

Without the variance, Dynegy estimates Baldwin Unit 3 would need 4 million pounds of sorbent at \$1 per pound during the requested variance period from July 1, 2009, through March 31, 2010, at an approximate cost of \$4 million. Pet. at 12-13. Dynegy estimates the cost of installing injection equipment upstream of the ESP at Baldwin Unit 3 to be approximately \$100,000 plus additional costs for relocating the equipment downstream after nine months. Pet. at 12-13.

With the variance, Dynegy estimates Havana Unit 6 and Hennepin Unit 2 would use 2.5 million fewer pounds of sorbent than Baldwin Unit 3, resulting in a savings of \$2.5 million dollars. Pet. at 15. If the Board grants the variance before an unplanned unit outage is taken, Dynegy projects an additional savings by avoiding \$435,000 in lost gross margin that would result if Dynegy were required to take a planned two-day outage to install the sorbent injection system lances. Am. Pet. at 7-8. Dynegy also adds \$100,000 to the savings by avoiding the cost of installing the sorbent injection lances that would later need to be relocated. *Id.* Under this scenario, Dynegy arrives at a total estimated savings of approximately \$3,035,000. If the Board grants the variance after the installation of the sorbent injection lances, the savings would only be realized in the \$2.5 million worth of sorbent. *Id.*

Arbitrary and Unreasonable Hardship

Dynegy states that to meet the requirements of the MPS and the consent decree, it must plan for and finance the purchase of equipment. Dynegy maintains that it cannot rely on allowances purchased from other companies as a compliance strategy, since Dynegy is restricted from emissions trading under the MPS and the Consent decree. Pet. at 7. Dynegy indicates that the procurement process for SO₂, PM, and mercury pollution control devices are approximately three to five years, and Dynegy began procurement for Baldwin Unit 3 in 2007. Pet. at 8. Dynegy estimates the capital costs of compliance with the Illinois mercury rule and the consent decree will be a total of \$973 million by 2013. *Id.* Dynegy asserts that to maintain financial resources, it must move cautiously. *Id.* Thus, Dynegy seeks this variance to avoid “wasting limited resources and to provide operating flexibility in conjunction with its other environmental obligations.” Pet. at 9.

Dynegy argues that the requested relief is sought to obviate the need for making capital and operating expenditures to install and operate a sorbent injection system which will be relocated in nine months upon the installation of the dry scrubber and fabric filter system. Pet. at 9. Dynegy maintains that installation of the sorbent system will divert capital and operating expenditures that could otherwise be spent and “will result in adverse environmental effects.” *Id.* Dynegy asserts that it faces arbitrary and unreasonable hardship if Dynegy is not granted the variance. *Id.*

Dynegy maintains that in order to comply with the July 1, 2009 sorbent injection requirements at Baldwin Unit 3, a multi-day unit outage would be needed resulting in a loss of revenue. Pet. at 13. Dynegy approximates \$435,000 in lost gross margin would result if Dynegy were required to take a planned two-day outage to install the sorbent injection system lances. Am. Pet. at 7-8. In addition, Dynegy estimates that the installation cost of sorbent injection equipment upstream of the ESP is approximately \$100,000 and the relocation of the equipment would increase the costs accordingly. Pet. at 13-14. Adding to the inefficiencies of this scenario, Dynegy states that injection of sorbent upstream of the ESP removes less mercury than injection of sorbent downstream of ESP and upstream of a fabric filter system. Pet. at 14.

Requested Relief

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

- A. Prior to and during the term of the variance, Baldwin Unit 3 shall be not 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.

Compliance Plan

Dynegy argues that a “viable alternative” to “wasting resources” by installing the upstream equipment on Baldwin Unit 3 exists “that will result in a net environmental benefit.” Pet. at 14. Specifically, Dynegy proposes to inject sorbent at Havana Unit 6 and Hennepin Unit 2 beginning July 1, 2009, six months prior to the beginning date of December 31, 2009, required by the MPS. *Id.* Dynegy maintains that the overall mercury emissions reductions that will be achieved at these two units will be “largely contemporaneous with the time period sorbent would have been injected into Baldwin Unit 3.” *Id.* Dynegy claims that the proposed variance “will result in collateral environmental benefits with regard to fly ash reuse and carbon dioxide (CO₂) emission reductions.” *Id.*

Dynegy will retrofit Havana Unit 6 and Hennepin Unit 2 with fabric filter particulate collection systems and sorbent injection systems by July 1, 2009, which will remove at least as much mercury as sorbent injection upstream of the ESP at Baldwin Unit 3. Pet. at 14-15. Dynegy will inject sorbent at Havana Unit 6 and Hennepin Unit 2 at a rate of 5 lbs/macf unless or until Dynegy informs the IEPA that the units, individually or averaged together, have reached 90% mercury reductions or comply with the 0.0080 lb/GWhr mercury emission rate. Pet at 16.

Dynegy notes that the requested relief will also avoid the approximate \$435,000 cost associated with lost gross margin resulting from an unplanned outage at Baldwin Unit 3 and the \$100,000 cost of installing equipment to be later relocated. Pet. at 15, Am. Pet. at 7-8. Also, Dynegy estimates that the Havana Unit 6 and Hennepin Unit 2 sorbent injection systems would use about 2.5 million fewer pounds of sorbent from July 1, 2009, to December 1, 2009, than at Baldwin Unit 3 from July 1, 2009, to March 31, 2010. *Id.* Dynegy equates this savings in sorbent to \$2.5 million. *Id.*

Dynegy’s proposes a specific compliance plan and indicated that the compliance plan must 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 Dynegy informs the IEPA 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 Dynegy 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 Dynegy informs the IEPA 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 Dynegy elects to comply with this variance pursuant to the 90% removal or 0.0080 lb/GWhr option under (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, Dynegy demonstrated a 90% removal injecting sorbent at a rate of 2 lb/macf, then Dynegy 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, Dynegy 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.

Environmental Impact

Dynegy argues that the requested relief will have a net environmental benefit because the reduction of mercury emissions that will take place at the Havana Unit 6 and Hennepin Unit 2 during the relief period, is more than the emission reductions that would be achieved at Baldwin Unit 3 without the requested relief. Pet. at 17. Dynegy claims that the fabric filter systems are more effective at removing mercury even at lower sorbent injection rates, than ESP controlled units and the net effect will be more cost-effective removal of mercury. Pet. at 15. Dynegy notes that the combined generating capacity of Havana Unit 6 and Hennepin Unit 2 is greater than Baldwin Unit 6, therefore the fabric filter/sorbent injection system could generate even more mercury reductions than cold-side ESP with sorbent injection at Baldwin Unit 3 alone. *Id.* Dynegy estimates that Havana Unit 6 and Hennepin Unit 2 in aggregate will reduce mercury by up to 19 pounds more than reduced from Baldwin Unit 3 during the requested variance period. Pet. at 15.

In its amended petition, Dynegy provides the name and addresses of the air monitoring stations located nearest to its power plants. Am. Pet. at 3-4, Exh. 1, 2. Dynegy points out that there is only one air monitoring station maintained by the Agency in Illinois that monitors for mercury. Am. Pet. at 3. Dynegy identifies the location of this station at the Northbrook Water Plant, 750 Dundee Road, Northbrook, IL. Am. Pet. Exh. 1.

Furthermore, Dynegy notes that the requested relief will not impact SO₂ and NO_x reductions required by the MPS. Pet. at 18. Dynegy also believes that the requested variance will avoid wasting the fly ash from Baldwin Unit 3 that is likely to be contaminated with halogenated activated carbon residue absent the requested relief. Pet. at 18-19. The majority of the fly ash from Baldwin Unit 3 is currently reused as an additive in the production of concrete. Pet. at 19. Dynegy claims that the amount of fly ash at risk could be over 55,000 tons. *Id.* After completion of improvements at Baldwin Unit 3 and the expiration of the variance, the configuration of Baldwin Unit 3 will allow for continued reuse of the fly ash. *Id.*

Dynegy also claims that the requested variance will reduce potential CO₂ emissions because Dynegy expects to remove as much or more mercury using less sorbent from the emissions at Havana Unit 6 and Hennepin Unit 2. Pet. at 19. Dynegy notes that the production of one pound of activated carbon takes the combustion of five pounds of coal. *Id.* Therefore, Dynegy asserts a reduction in sorbent demand will produce a corresponding reduction in indirect CO₂ emissions. *Id.*

Consistency with Federal Law

Dynegy indicates that there is no federal law that requires Dynegy's units to comply with a mercury emission rate. Pet. at 21. Dynegy opines that the Board may grant the variance consistent with federal law and specifically with the Clean Air Act (42 U.S.C. §§ 7401 *et. seq.*). Pet. at 21.

IEPA RECOMMENDATION

The IEPA's recommendation states that the IEPA "does not object to the Board granting the variance as presented and requested by Dynegy." Rec. at 1. The IEPA's recommendation summarizes the petition contents and then offers some comments on Dynegy's: 1) facilities, 2) alleged hardship, 3) requested relief, and 4) compliance plan.

Facilities

IEPA indicates that the Dynegy's facilities are generally located in counties that are designated unclassifiable/attainment. Rec. at 3. However, Baldwin Township in Randolph County is designated nonattainment for PM 2.5 and Madison County is designated nonattainment for 8-hour ozone. *Id.* The facilities operated by Dynegy in Madison and Vermilion Counties are not affected by the requested variance. *Id.*

IEPA published a notice of the pending variance request in the *Mason County Democrat*, the *Putnam County Record* on January 21, 2009. Rec. at 3-4. IEPA published a notice of the pending variance request in the *Belleville News Democrat*, the *Red Bud North County News*, and the *LaSalle News Tribune* on January 22, 2009. Rec. at 4. The IEPA has not received any comments concerning the pending variance request. *Id.* The IEPA indicated that if any comments should be filed, the IEPA would file an amended recommendation at that time. Rec. at 11.

The IEPA states that the principal emissions from the five coal-fired electric generating plants operated by Dynegy consist of SO₂, NO_x, PM, and mercury. Rec. at 4. The IEPA also notes that Dynegy has several pending appeals of construction permits and if the variance is granted those permit requests will need to be amended to reflect the compliance dates in the variance. Rec. at 12.

Arbitrary and Unreasonable Hardship

IEPA notes that the Board must determine whether compliance with the rule of general applicability will cause an arbitrary or unreasonable hardship for the petitioner, when determining whether to grant or deny a variance. Rec. at 15, citing 415 ILCS 5/35(a) (2006). Further, IEPA points out that the Board's procedural rules require the IEPA to estimate the cost that compliance would impose on the petitioner and others. Rec. at 15, citing 35 Ill. Adm. Code 104.216(b)(5). The IEPA asserts that Dynegy provided no evidence of Dynegy's inability to comply with Sections 225.233(c)(1)(A) and 225.233(c)(2) and related monitoring, recordkeeping and reporting provisions. Rec. at 15. The IEPA's recommendation then summarizes the petition contents. *See generally* Rec. at 15-18. The IEPA then opines that the cost estimates provided by Dynegy "almost certainly includes all of its facilities" and that the costs Dynegy bears relating to the consent decree are irrelevant. Rec. at 18.

In the recommendation's conclusion, IEPA indicates that it does not agree that an arbitrary and unreasonable hardship results where a petitioner is not permitted to conserve limited resources. Rec. at 22. IEPA asserts that it cannot respond to Dynegy's contentions regarding resources because IEPA does not have information in its possession to either contradict or confirm Dynegy's assertions. *Id.* IEPA does agree that there are sound business reasons to avoid an improvement that would be undone in the near future, especially where there is a net environmental benefit. *Id.*

Requested Relief

The IEPA agrees with Dynegy that, if the variance relief is granted, Baldwin Unit 3 will not be subject to certain monitoring, recordkeeping, and reporting requirements. Rec. at 11. However, the IEPA notes that Dynegy will need to maintain those records as outlined in the compliance plan for Havana Unit 6 and Hennepin Unit 2. *Id.*

Environmental Impact

Regarding environmental impact, IEPA states that it "does not disagree with Dynegy's assertions of the various environmental benefits associated with its proposed compliance alternative." Rec. at 14. IEPA further states that it has reviewed the mercury calculations and related information submitted by Dynegy and IEPA agrees that the proposed compliance alternative "will likely result in a net environmental benefit." Rec. at 14-15. IEPA "does not believe" that the granting of the variance will result in any environmental harm. Rec. at 15.

Consistency with Federal Law

IEPA agrees with Dynegy that there is currently no authority that would require or addresses federal approval of the MPS. Rec. at 18. The IEPA states that Illinois must however develop plans to attain ozone and PM_{2.5} national ambient air quality standards (NAAQS) and address Illinois' impact on downwind states. Rec. at 18-19.

Compliance Plan

The IEPA states that in order to fulfill the requirements of the MPS, Dynegy must install and operate halogenated active carbon injection systems that meet the sorbent injection requirements and follow with a cold side ESP or fabric filter. Rec. at 8, citing 35 Ill. Adm. Code 225.233(c)(1)(A). By opting into the MPS, Dynegy's deadline for meeting the mercury reduction requirements is extended until 2015. Rec. at 8, citing 35 Ill. Adm. Code 225.233(d). The MPS as well as the consent decree Dynegy is subject to does not allow for trading of pollution credits; therefore, Dynegy must install and operate pollution control equipment. Rec. at 8.

The IEPA indicates that there are no current state enforcement actions pending against Dynegy. Rec. at 8. Further, the IEPA and Dynegy discussed the pending variance petition prior to Dynegy filing its request with the Board. *Id.* The IEPA states that "the parties came to an understanding regarding specifics of Dynegy's compliance plan that would deviate from the MPS requirements, yet would still be acceptable to the IEPA." *Id.* Specifically, IEPA requested that Havana Unit 6 and Hennepin Unit 2 not only meet the July 1, 2009 date for injection of sorbent but also inject sorbent at a minimum rate of 5 lbs/macf or achieve mercury reductions of 90%. Rec. at 21.

The IEPA notes that parts of Dynegy's compliance plan rely on proposed changes in the rules in Amendments to 35 Ill. Adm. Code 225: Control of Emissions From Large Combustion Sources (Mercury Monitoring), R09-10. Specifically, Dynegy's compliance plan would use sorbent manufactures that are proposed to be added to the list of approved sorbent manufactures and Dynegy would use a single stack test to determine mercury removal also proposed in R09-10. Rec. at 21. The IEPA does not object as long as those provisions are adopted in R09-10 substantially the same as proposed.¹ *Id.*

IEPA's Recommendation and Conclusion

In conclusion IEPA states that it "does not object to the Board granting the variance as presented and requested by Dynegy." Rec. at 22. Although IEPA does not believe Dynegy demonstrated that the need to conserve limited resources was an arbitrary and unreasonable hardship, the IEPA does believe the variance will provide a net environmental benefit. *Id.*

¹ On April 16, 2009, the Board adopted for second notice Amendments to 35 Ill. Adm. Code 225: Control Of Emissions From Large Combustion Sources (Mercury Monitoring), R09-10 and these provisions were not substantively amended at second notice.

DISCUSSION

The Board is authorized to grant a variance when a petitioner demonstrates that compliance with the rule of general applicability will result in an arbitrary or unreasonable hardship. 415 ILCS 5/35(a) (2006). The Board must also determine that the variance is consistent with applicable federal law. *See* 415 ILCS 5/35(a) (2006). And, the Board may issue a variance with or without conditions. *See* 415 ILCS 5/36(a) (2006). The petitioner bears the burden of proving that the variance will result in an arbitrary or unreasonable hardship. *See Willowbrook Motel v. PCB*, 135 Ill. App. 3d 343, 349-50, 481 N.E.2d 1032, 1036-1037 (1st Dist. 1985).

The Board finds that granting the variance is appropriate and the Board will discuss its reasoning for granting the variance beginning with the Board's finding on arbitrary or unreasonable hardship and then the environmental impact of the variance. Next, the Board discusses the compliance plan and conditions the Board will place on the variance. The Board will conclude with a discussion of the consistency with federal law.

Arbitrary or Unreasonable Hardship

As noted above, Dynegey has established that for Baldwin Unit 3 to comply with the Board's MPS provisions, Dynegey must install sorbent injection equipment, and expend all the resources that installation would involve. Nine months later, Dynegey would have to remove the equipment and move it to another location at the plant for optimum mercury emissions control upon the installation of the dry scrubber system.

If Dynegey is made to comply with the rule of general applicability, the record indicates that the cost of installing sorbent injection system upstream of the ESP is approximately \$100,000, and relocating it after nine months downstream would increase these installation costs accordingly. Also, installation of injection equipment by July 1, 2009, would require Dynegey to take a two-day outage if no other unplanned outages occurred within the next several months, resulting in a lost gross margin for Dynegey. The Board notes that the lost gross margin due to any outage resulting from installation of emissions control equipment would generally be considered as a part of the compliance cost. However, in Dynegey's case, the Board views the cost as additional loss because the control equipment would have to be relocated in nine months, and the Baldwin plant has a planned outage in March 2010. Finally, the Board notes that requiring Dynegey to operate the sorbent injection system from July 1, 2009, would also impact the handling of the fly ash, which will have to be landfilled instead of being reused due to contamination by halogenated activated carbon residue. In light of these factors, the Board finds that requiring Dynegey to comply with the sorbent injection requirements under Section 225.233, and associated recordkeeping and reporting requirements under Sections 225.233 and 225.210 by July 1, 2009, will impose an arbitrary or unreasonable hardship.

Environmental Impact

Based upon the calculations provided by Dynegy in the Sargent & Lundy Report, the Board notes that without the requested relief, Baldwin Unit 3 would achieve approximately 127 pounds in mercury removal during the term of the variance. Pet. Exh. 6 at 2. In order to reduce the environmental impact of not achieving those mercury emissions from Baldwin Unit 3, Dynegy has committed to installing and operating sorbent injection systems at two other Dynegy facilities. Dynegy proposes, as a part of its compliance plan, to operate sorbent injection systems at Havana Unit 6 and Hennepin Unit 2 beginning July 1, 2009, instead of December 31, 2009. Dynegy's calculation indicates that early commencement of operation of sorbent injection system at Havana Unit 6 and Hennepin Unit 2 would result in an aggregate mercury emissions reduction of approximately 146 pounds, which is about 19 pounds more than if Baldwin Unit 3 was to comply with the MPS rules as of July 1, 2009. Pet. Exh. 6 and Pet. at 16. Although the proposed ending date of the variance is March 31, 2010, Dynegy clarifies in its amended petition that the calculations assume Baldwin Unit 3 will cease operating on March 6, 2010, for approximately 12 weeks. Am. Pet. at 6.

In support of these calculations, the Sargent & Lundy exhibit includes Figure 1: "Hg [mercury] removal efficiencies with various technologies (MEGA Symposium 2008, Ramsay Chang)." The graph depicts mercury removal as a function of injection concentration dependent on the type of coal and technology used. Exh. 6, Fig. 1. The graph shows higher vapor mercury removal percentages with lower injection concentrations for the Western coal than the high sulfur or low sulfur Eastern bituminous coal. *Id.* The Board notes that one type of Western coal is Powder River Basin (PRB) coal. The amended petition elaborates that PRB coal was historically used at Baldwin Unit 3, Havana Unit 6, and Hennepin Unit 2, and Dynegy expects to continue using only PRB at these units during the variance period. Am. Pet. at 5.

In its amended petition, Dynegy elaborates that the hourly rate of coal use for Baldwin Unit 3, Havana Unit 6, and Hennepin Unit 2 would not change under the variance. By assuming no outages during the proposed variance period, Dynegy does project an increase in coal use over the previous 9 month period (July 2007-March 2008) when various types of outages occurred. Am. Pet. at 4-5.

In addition, the requested variance will allow Dynegy to continue to reuse fly ash that would be contaminated were Baldwin Unit 3 required to use sorbent injection upstream of the ESP. The Board notes that IEPA agreed that the early operation of sorbent injection systems at Havana Unit 6 and Hennepin Unit 2 would benefit the environment by achieving greater overall mercury emissions reduction. The Board agrees with the petitioner and IEPA that granting of the requested relief will not adversely impact the environment.

Compliance Plan and Variance Conditions

Dynegy's petition includes a detailed compliance plan, which addresses the various elements of the early operation of sorbent injection systems at Havana Unit 6 and Hennepin Unit 2. While the compliance plan does not specifically address the various steps and associated

timeline concerning the retrofitting of Baldwin Unit 3 with the dry scrubber and sorbent injection systems to achieve full compliance by the end of the variance term, Dynegy's petition includes sufficient details regarding the installation of emissions control at Baldwin Unit 3. For purposes of clarity, the Board will include the proposed compliance plan provisions as conditions to the variance. Further, the Board will add a compliance plan provision that reflects Dynegy's intent to retrofit Baldwin Unit 3 with a dry scrubber system and install the sorbent injection system downstream of the ESP and upstream of the fabric filter system during its planned outage commencing in March 2010.

The Board notes that, while one of the proposed conditions requires Baldwin Unit 3 to be in full compliance with the MPS provisions when the unit restarts following the spring 2010 outage, the variance term itself will terminate on March 31, 2010. In its amended petition, Dynegy clarified that the outage will last approximately 12 weeks, commencing March 6, 2010. Dynegy requested the March 31, 2010, ending date for the variance so that Dynegy would not be required to submit reports on the amount of sorbent injected for the period from when the outage commences on March 6, 2010, to the end of the 2010 first quarter on March 31, 2010. If the variance ended before March 31, Dynegy would need to file a report stating that it injected no sorbent. Am. Pet. at 6. The Board notes that after March 31, 2010, Baldwin Unit 3 will be subject to all applicable MPS provisions.

Consistency with Federal Law

Dynegy states that there is no federal law that requires the affected units, including Baldwin Unit 3 to comply with any mercury emission rate limit. IEPA agrees with Dynegy's assertions, while noting that Illinois still needs to develop plans to attain ozone and PM_{2.5} NAAQS. In light of this, the Board finds that granting of the requested relief is consistent with the federal law.

CONCLUSION

The Board finds that Dynegy established an arbitrary or unreasonable hardship exists if immediate compliance with the MPS is required for Baldwin Unit 3. Specifically given the expenditures necessary for immediate compliance that Dynegy will have to expend again in 2010, the Board finds this to be an unreasonable hardship. The Board finds that the potential negative environmental impact of not being able to reuse the fly ash and the resulting disposal of that fly ash adds to the hardship. Also, Dynegy's commitment to reduce mercury emissions earlier than required at two other units by amount which exceed the reduction immediate compliance would achieve alleviates potential environmental concerns. Finally, the Board finds that granting of a variance is consistent with the federal law. Therefore, the Board will grant Dynegy's variance request with conditions discussed in this opinion.

The Board grants Dynegy a variance for Baldwin Unit 3 for a period beginning July 1, 2009 until March 31, 2010 from the requirements of Section 225.233(c)(1)(A), Section 225.233(c)(2), Section 225.233(c)(5), and Sections 225.210(b) and (d). This variance is granted subject to the conditions outlined in the order below.

ORDER

The Board grants Dynegy Midwest Generation, Inc. a variance for Baldwin Unit 3 located at 10901 Baldwin Road, Baldwin in Randolph County for a period beginning July 1, 2009 until March 31, 2010 from the requirements of Section 225.233(c)(1)(A), Section 225.233(c)(2), Section 225.233(c)(5), and Sections 225.210(b) and (d) subject to the following conditions:

1. 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 Dynegy informs the IEPA 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 Dynegy 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 Section 225.239(d)(4) and (5), (e), and (f)(1) as proposed in Amendments to 35 Ill. Adm. Code 225: Control of Emissions From Large Combustion Sources (Mercury Monitoring), R09-10.
2. Only sorbents listed in or manufactured by the companies listed in Section 225.233(c)(2)(B) (as amended in Amendments to 35 Ill. Adm. Code 225: Control of Emissions From Large Combustion Sources (Mercury Monitoring), R09-10) or demonstrated as effective as the listed sorbents as allowed by Section 225.233(c)(4) may be injected unless or until Dynegy informs the IEPA 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.
3. If Dynegy elects to comply with this variance pursuant to the 90% removal or 0.0080 lb/GWhr option under (1), 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, Dynegy demonstrated a 90% removal injecting sorbent at a rate of 2 lb/macf, then Dynegy would continue, throughout the rest of the variance period, to inject at the minimum two-pound rate rather than at a five-pound rate.
4. At Havana Unit 6 and Hennepin Unit 2, Dynegy shall maintain records of the sorbent injection rate and flue gas flow rate from July 1, 2009, through December 30, 2009.
5. Beginning December 31, 2009, Havana Unit 6 and Hennepin Unit 2 shall comply with all applicable requirements of 35 Ill. Adm. Code 225.233.

6. Dynegy must retrofit Baldwin Unit 3 with a dry scrubber system and install the sorbent injection system downstream of the ESP and upstream of the fabric filter system during its planned outage in March 2010.
7. Upon restarting operations following its March 2010 outage, Baldwin Unit 3 shall comply with all applicable requirements of 35 Ill. Adm. Code 225.233 and 225.210.

If petitioners choose to accept this variance, they must, within 45 days after the date of this opinion and order, file with the Board and serve on the Agency a certificate of acceptance and agreement to be bound by all the terms and conditions of the granted variance. "A variance and its conditions are not binding upon the petitioner until the executed certificate is filed with the Board and served on the Agency. Failure to timely file the executed certificate with the Board and serve the Agency renders the variance void." 35 Ill. Adm. Code 104.240. The form of the certificate follows:

CERTIFICATE OF ACCEPTANCE

I (We), _____, having read the opinion and order of the Illinois Pollution Control Board in docket PCB 09-48 dated May 7, 2009, understand and accept the opinion and order, realizing that this acceptance renders all terms and conditions of the variance set forth in that order binding and enforceable.

Petitioner: Dynegy Midwest Generation, Inc.

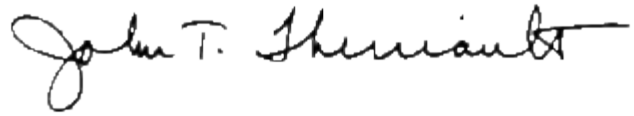
By: _____
Authorized Agent

Title: _____

Date: _____

Section 41(a) of the Environmental Protection Act provides that final Board orders may be appealed directly to the Illinois Appellate Court within 35 days after the Board serves the order. 415 ILCS 5/41(a) (2006); *see also* 35 Ill. Adm. Code 101.300(d)(2), 101.906, 102.706. Illinois Supreme Court Rule 335 establishes filing requirements that apply when the Illinois Appellate Court, by statute, directly reviews administrative orders. 172 Ill. 2d R. 335. The Board's procedural rules provide that motions for the Board to reconsider or modify its final orders may be filed with the Board within 35 days after the order is received. 35 Ill. Adm. Code 101.520; *see also* 35 Ill. Adm. Code 101.902, 102.700, 102.702.

I, John T. Therriault, Assistant Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on May 7, 2009, by a vote of 5-0.

A handwritten signature in black ink that reads "John T. Therriault". The signature is written in a cursive style with a long horizontal stroke at the end.

John T. Therriault, Assistant Clerk
Illinois Pollution Control Board