BEFORE THE ILLINOIS POLLUTION CONTROL BOARD				
MIDWEST GENERATION, LLC – WAUKEGAN GENERATING STATION	(, ) (, ) ()			
Petitioner,	)			
v.	) PCB 12 ) (Variance – Air)			
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,	) (variance - An)			
Respondent.	)			
NOTIC	CE OF FILING			
To:				
John T. Therriault, Assistant Clerk Illinois Pollution Control Board James R. Thompson Center Suite 11-500 100 West Randolph Chicago, Illinois 60601	Julie Armitage Acting General Counsel Illinois Environmental Protection Agency 1021 North Grand Avenue, East P.O. Box 19276 Springfield, Illinois 62794-9276			
PLEASE TAKE NOTICE that we have today filed with the Office of the Clerk of the Pollution Control Board PETITION FOR VARIANCE and APPEARANCES OF KATHLEEN C. BASSI and STEPHEN J. BONEBRAKE, copies of which are herewith served upon you.				
Hellen C. Bassi				
Dated: April 10, 2012				

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## SCHIFF HARDIN LLP

Attorneys for Midwest Generation, LLC Kathleen C. Bassi Stephen J. Bonebrake 233 South Wacker Drive, Suite 6600

Chicago, Illinois 60606 Phone: 312-258-5567 Fax: 312-258-5600 kbassi@schiffhardin.com

### CERTIFICATE OF SERVICE

I, the undersigned, certify that on this 10th day of April, 2012, I have served electronically the attached PETITION FOR VARIANCE and APPEARANCES OF KATHLEEN C. BASSI and STEPHEN J. BONEBRAKE, upon the following persons:

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

and via the U.S. Postal Service, postage affixed and prepaid:

Julie Armitage
Acting General Counsel
Illinois Environmental Protection Agency
1021 North Grand Avenue, East
P.O. Box 19276
Springfield, Illinois 62794-9276

SCHIFF HARDIN LLP

Attorneys for Midwest Generation, LLC

Kathleen Hassi

Kathleen C. Bassi

Stephen J. Bonebrake

233 South Wacker Drive, Suite 6600

Chicago, Illinois 60606 Phone: 312-258-5567

Fax: 312-258-5600 kbassi@schiffhardin.com

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APPEARANCE  I hereby file my appearance in this proceeding, on behalf of Midwest Generation, LLC,					
Waukegan Generating Station.					
Hathleen C. Bassi					
Dated: April 9, 2012					
Kathleen C. Bassi SCHIFF HARDIN, LLP 233 South Wacker Drive, Suite 6600 Chicago, Illinois 60606 312-258-5567 Fax: 312-258-5600 kbassi@schiffhardin.com					

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Stephen J. Bonebrake SCHIFF HARDIN, LLP 233 South Wacker Drive, Suite 6600 Chicago, Illinois 60606 312-258-5646 Fax: 312-258-5600 sbonebrake@schiffhardin.com	

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD				
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Petitioner,	) )			
v.	) PCB 12			
ILLINOIS ENVIRONMENTAL	)			
PROTECTION AGENCY,	)			
Respondent.	) )			

### PETITION FOR VARIANCE

NOW COMES Petitioner, MIDWEST GENERATION, LLC – WAUKEGAN

GENERATING STATION, by and through its attorneys, SCHIFF HARDIN, LLP, and, pursuant to Sections 35 and 37 of the Environmental Protection Act, 415 ILCS 5/35, 37 (2010) ("Act"), and 35 III. Adm. Code Part 104, Subpart B, requests that the Board grant Petitioner a variance from the provisions of 35 III. Adm. Code §§ 225.296(a)(1) and (c)(1)<sup>1</sup> for the 12-month period beginning December 31, 2013, and ending December 31, 2014. In light of significantly changed circumstances since this rule was adopted, Midwest Generation's current operational plans will provide northeastern Illinois with a substantial net benefit in air emission reductions compared to a reasonably-expected business-as-usual case, while continuing to comply with the emission limits of the rule, most of which (unit-specific requirements for mercury and annual fleet-wide limits for nitrogen oxides ("NOx")) have already been achieved. As such, Midwest Generation and the Waukegan Generating Station will suffer arbitrary or unreasonable hardship if the Board does not grant this requested variance.

<sup>&</sup>lt;sup>1</sup> Hereinaster, citations to the Board's regulations will be by section number only.

Midwest Generation seeks a variance from only two of many components of the Combined Pollutant Standard ("CPS") codified at 35 Ill. Adm. Code §§ 225.291-225.299 and 225.Appendix A in order to avoid arbitrary and unreasonable hardship by permitting the company to adapt to unanticipated conditions that have evolved since the adoption of the CPS. Specifically, Midwest Generation seeks a variance from the compliance dates applicable to Waukegan Unit 7 for the installation of flue gas desulfurization ("FGD") equipment (Section 225.296(a)(1)) and the conversion of the hot-side precipitator on that unit (Section 225.296(c)(1)). The requested variance is for a period of one year only, from December 31, 2013, until December 31, 2014, with no change in the existing emission rate limits of the CPS.

The unanticipated conditions that have evolved since the adoption of the CPS have occurred because of two factors. First, a significant, ongoing deterioration in energy market prices combined with the development of substantial new federal environmental regulations layered on top of the CPS have made long-term investment in the smallest generating units in the Midwest Generation fleet questionable and subject to reconsideration at this time. Second, the CPS requires Waukegan Unit 8 to be retrofitted with FGD equipment by December 31, 2014; in bidding construction work for pollution control installations since the CPS was adopted, Midwest Generation has determined that in this circumstance it can gain cost and other efficiencies by sequencing the Waukegan units' installation of FGD equipment within a concurrent time period. None of the above conditions were foreseen when the CPS was adopted; therefore, to enforce the CPS as written would impose undue economic hardship on Midwest Generation.

Further, this proposal complements Midwest Generation's announcement on February 29, 2012, that it will retire the coal-fired unit at the Fisk Generating Station in Chicago by no later

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than December 31, 2012, and the coal-fired units at the Crawford Generating Station, also in Chicago, by no later than December 31, 2014. Those retirements are the result of economic conditions in the energy market and Midwest Generation's desire to settle a longstanding debate in the City of Chicago over a Clean Power Ordinance which proposed to layer additional air emission regulations at the local/municipal level. While not a comment on the use of coal to generate electricity, which Midwest Generation believes is essential to ensuring a reliable and affordable supply of energy, the company recognized that there is an opportunity to address a unique circumstance in which densely-populated neighborhoods have grown up around the Chicago plants over the decades since they began operation. In an agreement entered into with Midwest Generation on February 28, 2012, four major environmental organizations in the state who frequently intervene on air emission rulemakings before the Board – the Environmental Law and Policy Center, the Sierra Club, the Natural Resources Defense Council, and the Respiratory Health Association of Metropolitan Chicago – stated that, recognizing the net benefits to the CPS realized by the early retirements of the Fisk and Crawford coal-fired units, they would not oppose this request for a variance for Waukegan Unit 7.

In support of its Petition, Petitioner states as follows:

## I. BACKGROUND

 $(\S\S 104.204(b)(1), (2), (3), (4), (5), (6), (7), (8))$ 

1. The Waukegan Generating Station ("Waukegan" or the "Station"), Agency l.D. No. 097190AAC, is an electric generating station owned and operated by Midwest Generation, LLC. The Waukegan Generating Station is located at 401 East Greenwood Avenue, Waukegan, Lake County, Illinois 60087-5197. The electrical generating units ("EGUs") at the Waukegan

Station went online between 1952 and 1962 and can generate approximately 781 net megawatts of electricity. Midwest Generation employs approximately 157 people at the Station.

- 2. The Station is located on approximately 200 acres in a partially-developed industrial area. To the west, the area is partially wooded and contains a railroad line; residential development is located further in that direction. To the north is the former Johns-Manville transite manufacturing facility, now essentially vacant and fenced. Lake Michigan is to the east. South of the Station are the North Shore Sanitary District wastewater treatment plant and a vacant piece of property owned by Commonwealth Edison.
- 3. Midwest Generation operates two electric generating units at Waukegan<sup>2</sup> with the capability to fire coal as their primary fuel. In addition, the boilers fire natural gas as auxiliary fuel during startup and for flame stabilization.<sup>3</sup> Waukegan also operates associated coal handling, coal processing, and ash handling activities. In addition to the boilers, Waukegan operates four oil-fired turbines, used during peak demand periods. Pursuant to the CPS, the company permanently retired the 100-megawatt coal-fired Waukegan Unit 6 in 2007.
- 4. Relevant to this Petition for variance, particulate matter ("PM") emissions from each boiler are controlled by an electrostatic precipitator ("ESP"); the ESP for Unit 7 is a "hot-side" precipitator, defined in the Board's pertinent rule as "an ESP on a coal-fired boiler that is installed before the boiler's air-preheater [SIC] where the operating temperature is typically at least 550° F, as distinguished from a cold-side ESP that is installed after the air pre-heater where the operating temperature is typically no more than 350° F." Section 225.296(c). PM emissions

<sup>&</sup>lt;sup>2</sup> Waukegan Unit 6 was shut down by December 31, 2007, pursuant to the requirements of Section 225.297(a)(1).

<sup>&</sup>lt;sup>3</sup> The Title V permit issued to Waukegan Station identifies fuel oil as an optional fuel, but Midwest Generation does not use fuel oil at the station.

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at the Waukegan Station in 2011 were 768 tons.<sup>4</sup> Emissions of mercury are controlled by the injection of powdered activated carbon ("ACI"). Mercury emissions in 2011 were 79 pounds at the Waukegan Station, compared with station mercury emissions of 231 pounds in 2007, the year the CPS was adopted. SO<sub>2</sub> emissions are currently controlled through the use of very low-sulfur coal. SO<sub>2</sub> emissions from the Waukegan Station in 2011 were 9,929 tons. Emissions of other pollutants, including NOx, are not an issue in this Petition for Variance, although, as discussed further below, the CPS also addresses NOx emissions, and Midwest Generation has already installed NOx controls, at considerable expense, to comply with the CPS.

- 5. Lake County is part of the Chicago ozone and PM2.5<sup>5</sup> nonattainment areas.<sup>6</sup> The Illinois Environmental Protection Agency ("Agency" or "Illinois EPA") has proposed that Lake County be designated unclassifiable for the 1-hour sulfur dioxide ("SO<sub>2</sub>") NAAQS.<sup>7</sup>
- 6. It appears from the Agency's 40th Annual Air Quality Report (2010) ("2010 AQ Rpt.") that there are two monitoring stations operated by the Agency located in Lake County:

  No. 24 at the Waukegan North Fire Station, AIRS Code 170971002, and No. 25 at Zion Camp

  Logan, AIRS Code 170971007. 2010 AQ Rpt., p. 34. Ozone is monitored at the Waukegan

<sup>&</sup>lt;sup>4</sup> Data for 2011 does not include fugitive emissions; data regarding fugitive emissions will not be available until mid-2012. The 2010 PM emissions at Waukegan were 861 tons: 725 tons from the stack and 136 tons fugitive.

<sup>&</sup>lt;sup>5</sup> Particulate matter less than 2.5 microns in aerodynamic diameter.

<sup>&</sup>lt;sup>6</sup> Note that the U.S. Environmental Protection Agency ("USEPA") has found that the area attains the 1997 ozone National Ambient Air Quality Standard ("NAAQS") and the 1997 PM2.5 NAAQS, 74 Fed.Reg. 62243 (November 27, 2009); 75 Fed.Reg. 12088 (March 12, 2010), but has not yet redesignated the area. Additionally, USEPA has proposed to include Lake County in the 2008 ozone nonattainment area as a marginal nonattainment area, the lowest classification of nonattainment. 77 Fed.Reg. 8211 (February 14, 2012) (proposed designation of the Chicago area as nonattainment); letter and attachment from Susan Hedman, USEPA Region 5, to Patrick Quinn, Governor of the State of Illinois (January 31, 2012), available at < <a href="http://www.epa.gov/ozonedesignations/2008standards/rec/region5R.htm">http://www.epa.gov/ozonedesignations/2008standards/rec/region5R.htm</a> ; 77 Fed.Reg. 8197 (February 14, 2012) (proposed nonattainment classifications, such as marginal, moderate, etc.)

<sup>&</sup>lt;sup>7</sup> Letter to Cheryl Newton, Director, Office of Air and Radiation, USEPA Region 5, from Laurel Kroack, Chief, Bureau of Air, Illinois EPA (June 2, 2011). Midwest Generation can provide the Board with a copy of this letter if the Board so requires.

North Fire Station; ozone and PM2.5 are monitored at the Zion Camp Logan monitor. 2010 AQ Rpt., p. 40. Copies of these pages are attached hereto as Exhibits 1 and 2, respectively. The entire document is available on the Agency's website at < <a href="http://www.epa.state.il.us/air/air-quality-report/2010/index.html">http://www.epa.state.il.us/air/air-quality-report/2010/index.html</a> >.

- ("CAAPP"). 415 ILCS 5/39.5 (2010). The Illinois Environmental Protection Agency ("Agency") issued a CAAPP permit to Midwest Generation for Waukegan on February 7, 2006. Subsequently, on March 13, 2006, Midwest Generation timely appealed the CAAPP permit for Waukegan at PCB 06-146. The Board accepted the appeal for hearing on March 16, 2006, and the Board found that, pursuant to Section 10-65(b) of the Administrative Procedure Act (5 ILCS 100/10-65(b) (2010)) ("APA") and the holding in *Borg-Warner Corp. v. Mauzy*, 427 N.E. 2d 415 (Ill.App.Ct. 1981), the CAAPP permit is ineffective, upon appeal, as a matter of law. Order, *Midwest Generation, LLC. Waukegan Generating Station v. Illinois Environmental Protection Agency*, PCB 06-146 (March 16, 2006), p. 2. The CAAPP permit remains ineffective. The current decision deadline in that appeal is September 6, 2012. Midwest Generation, however, anticipates entering into negotiations with the Agency regarding resolution of the CAAPP permit appeal.<sup>8</sup>
- 8. On July 19, 2007, the Agency issued Midwest Generation a construction permit authorizing the installation of ACI equipment at the Waukegan Station, 9 as required by the CPS. Midwest Generation timely appealed this permit on August 27, 2007, at PCB 08-020. Pursuant

<sup>&</sup>lt;sup>8</sup> The CAAPP permit and appeal have no direct relevance to this petition for variance and so no related documents are attached as exhibits hereto. However, if the Board is interested in the CAAPP permit or the appeal. Midwest Generation directs the Board to its own docket at PCB 06-146 for any documents of interest.

<sup>&</sup>lt;sup>9</sup> Application No. 07050007.

to Midwest Generation's request, the Board issued a partial stay of this permit. Order, *Midwest Generation, LLC – Waukegan Generating Station v. Illinois Environmental Protection Agency* (September 20, 2007). As required by Section 104.204(i), attached hereto as Exhibits 3 and 4, respectively, are copies of the permit issued by the Agency and Exhibit 2 of the Petition for Review of the construction permit, which is a redlined version of the permit revealing the stayed and active portions of this permit. Notwithstanding this appeal of certain provisions of the permit, the air quality benefits of the CPS relative to mercury have been fully realized as of this date with the installation and operation of the ACI equipment beginning in July 2008.

- 9. On November 19, 2010, the Agency issued Midwest Generation a construction permit authorizing the installation of a dry sorbent injection system and the conversion of the hot-side ESP to a cold-side ESP for Waukegan Unit 7. See Exhibit 5. As discussed more fully below, Midwest Generation sought this construction permit as part of its plan to comply with the CPS and has obtained a one-year extension of this permit from the Illinois Environmental Protection Agency.
- 10. Midwest Generation has sought no other variances from the CPS for the Waukegan Station or any of the other generating stations comprising the Midwest Generation CPS Group as defined at Sections 225.292(a) and (d) and 225.Appendix A.

## II. REGULATORY BACKGROUND

(§ 104.204(a))

11. On March 14, 2006, the Agency submitted a proposed rulemaking to the Board, "In the Matter Of: Proposed New 35 Ill.Adm.Code 225 Control of Emissions from Large Combustion Sources," docketed at R06-25 ("the Mercury Rule"). The Board adopted this rule

<sup>&</sup>lt;sup>10</sup> Application No. 10090034,

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on December 21, 2006, and it was effective as of that same date. The Mercury Rule includes some provisions in Subpart A of Part 225 and all of Subpart B of Part 225.

- 12. On May 22, 2006, the Agency submitted a proposed rulemaking to the Board, "In the Matter of: Proposed New CAIR SO<sub>2</sub>, CAIR NOx Annual and CAIR NOx Ozone Season Trading Programs, 35 Ill. Adm. Code 225, Control of Emissions from Large Combustion Sources, Subparts A, C, D, and E," docketed at R06-26 ("CAIR"11). On January 5, 2007, the Agency and Midwest Generation filed a joint comment in this rulemaking describing an agreement they reached regarding mercury control and purporting to set forth the substance of their agreement to add Subpart F to Part 225 ("Subpart F"). R06-26, PC # 9. Subsequently, on January 10, 2007, the Agency and Midwest Generation filed a joint comment providing the regulatory language for Subpart F, including amendments to that language. R06-26, PC # 11. On April 19, 2007, the Board proceeded to First Notice on the CAIR, including Subpart F. On June 25, 2007, Midwest Generation submitted comments on the First Notice CAIR, including requested revisions to Subpart F. R06-26, PC # 14. On July 26, 2007, the Board ordered the rule to Second Notice, including Subpart F with minor amendments. R06-26, Board Order (July 26, 2007). These rules became effective August 31, 2007. Subsequently, in Docket R09-10, effective June 26, 2009. the Board moved the CPS from Subpart F of Part 225 to Subpart B of Part 225.
- 13. Pursuant to Section 225.292, Midwest Generation opted in to the CPS on December 27, 2007, identifying Waukegan Unit 7 as one of the electric generating units ("EGUs") to be included as part of the Midwest Generation CPS Group. Therefore, Waukegan

<sup>11</sup> Clean Air Interstate Rule.

<sup>&</sup>lt;sup>12</sup> Note that the Board's website docket does not include substantive, regulatory language for Subpart F at PC # 9.

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Unit 7, the subject of this Petition for Variance, is subject to the provisions from which Midwest Generation seeks relief.

14. The provisions from which Midwest Generation seeks relief are as follows:

Section 225.296 Combined Pollutant Standard: Control Technology Requirements for NO<sub>x</sub>, SO<sub>2</sub>, and PM Emissions

- a) General Technology Requirements for NO<sub>x</sub> and SO<sub>2</sub>.
  - 1) On or before December 31, 2013, the owner or operator must either permanently shut down or install and have operational FGD equipment on Waukegan 7;

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- c) Control Technology Requirements for PM. The owner or operator of the two specified EGUs listed in this subsection that are equipped with a hot-side ESP must replace the hot-side ESP with a cold-side ESP, install an appropriately designed fabric filter, or permanently shut down the EGU by the dates specified. Hot-side ESP means an ESP on a coal-fired boiler that is installed before the boiler's air-preheater [SIC] where the operating temperature is typically at least 550° F, as distinguished from a cold-side ESP that is installed after the air pre-heater where the operating temperature is typically no more than 350° F.
  - 1) Waukegan 7 on or before December 31, 2013....

### III. RELIEF REQUESTED

(§§ 104.204(c), (d), (e), (f), (k))

15. Midwest Generation seeks targeted, narrow relief from the CPS in order to avoid arbitrary and unreasonable hardship. Specifically, Midwest Generation seeks relief from the CPS requirements that it (1) install FGD equipment on Waukegan Unit 7 by December 31, 2013, and (2) that it convert the hot-side ESP on Waukegan Unit 7 by December 31, 2013, or (3), failing either of these, that it shut the unit down by December 31, 2013. Midwest Generation

seeks one additional year to install the FGD equipment, convert the hot-side ESP to a cold-side ESP, or shut down the unit. Midwest Generation does not seek any relief from the system-wide SO<sub>2</sub> emission rate set forth at Section 225.295(b), the CPS NOx requirements set forth at Sections 225.295 through 225.298, the mercury emission limitation and control requirements applicable to Waukegan Unit 7 set forth at Section 225.294, or the CPS requirements applicable to the other EGUs in the Midwest Generation CPS Group.

16. Midwest Generation seeks the variance almost two years in advance of the compliance date because of the long lead time necessary for planning and conducting the construction necessary to comply with the provisions of Sections 225.296(a)(1) and (c). It is essential that Midwest Generation know now whether the Board will grant the relief so that it does not embark on unnecessary and costly activities required in anticipation of construction, as well as the actual construction of the FGD equipment and the conversion of the hot-side precipitator. Commencement of such activities on the schedule currently required would constitute arbitrary and unreasonable hardship to Midwest Generation and may be economically impractical and result in the permanent retirement of the unit and subsequent loss of jobs.

## A. Section 225.296(a)(1) - FGD Equipment

Generation install FGD equipment at the Waukegan Generating Station, Midwest Generation examined several alternatives. Midwest Generation initially evaluated retrofitting Waukegan 7 with a spray dryer absorber dry scrubber ("dry scrubber") in order to meet the FGD equipment requirement and a baghouse in order to comply with the additional requirement of the CPS to install a baghouse or convert from a hot- to cold-side ESP to achieve additional mercury emission reductions (*see* Section B, below). In 2006, Midwest Generation estimated that the cost

for a dry scrubber and baghouse was approximately \$240 million, based on an engineering study conducted for the company by Shaw. The lack of available, adequate space at Waukegan 7 was part of the cost and scheduling issue. In order to accommodate a dry scrubber and baghouse, Midwest Generation would have to fill in part of the circulating water inlet canal, which in itself would require various permits and long lead times. Escalating costs and the onset of the recession caused Midwest Generation to reevaluate the SO<sub>2</sub> control strategy and FGD equipment for Waukegan 7 in 2009. At this time, Midwest Generation determined that the cost of installing a dry sorbent injection system using Trona as the reagent to meet the FGD equipment requirement would cost approximately \$18 million, while ensuring compliance with the CPS. Discussion of converting the ESP from hot- to cold-side at a cost of \$70 million, rather than installing a baghouse, to comply with the CPS for mercury removal, is found in paragraph 20, below. Therefore, total FGD equipment and mercury removal costs have been reduced from an estimated \$240 million in 2006 to \$88 million.

18. With the SO<sub>2</sub> reduction efficiencies generally equal, Midwest Generation determined that the best approach for Waukegan Unit 7 is the dry sorbent injection system. In order to comply with the December 31, 2013, installation deadline set forth in Section 225.296(a)(1), Midwest Generation already sought and obtained a construction permit, see Exhibit 5, for installation of FGD equipment (a dry sorbent injection system). Midwest Generation began construction of the dry sorbent injection system in the fall of 2011 but has obtained an extension of the construction permit to allow it time to reevaluate in light of the developments discussed in this petition. See Exhibit 6. To install dry sorbent injection system, Midwest Generation will need to engineer, procure, and install equipment designed to inject a dry sorbent reagent (trona) into the flue gas stream exiting the boiler before it goes out the stack.

This equipment includes trona unloading equipment, on-site trona storage, milling equipment needed to grind the trona, and blowers necessary to transport and distribute it into the flue gas stream to react with the SO<sub>2</sub>. Additionally, the ESP will need to be upgraded to remove the added particulate loading resulting from the process. Planned upgrades to the ESP for Waukegan 7 include conversion from the hot-side ESP to a cold-side ESP configuration. Upgrades to the ash removal system are also needed to handle the additional solid particulates that will be collected in the ESP.

19. Unlike Unit 7, Midwest Generation has until December 31, 2014, to install FGD equipment on Unit 8. 35 Ill. Adm. Code § 225.296(a)(2). Delaying the requirement to install FGD equipment on Unit 7 for a year would allow Midwest Generation to perform the installation work for both units at the same time. Under the current and presently unique circumstances regarding Waukegan Station, this single construction mobilization is more efficient and provides significant cost savings.

### B. Section 225.296(c)(1) - Conversion of the Hot-Side ESP

- 20. Section 225.296(c)(1) provides Midwest Generation with the choice of converting the hot-side ESP on Unit 7 to a cold-side ESP, installing a baghouse, or shutting down the unit. As discussed above, there are space limitations at Waukegan 7 that make installation of a baghouse particularly expensive and time-consuming. Midwest Generation determined that it would best to convert the unit's hot-side ESP. The cost of converting the hot-side ESP to a cold-side ESP is approximately \$70 million.
- 21. To timely convert the hot-side ESP to a cold-side ESP, Midwest Generation has already obtained a construction permit for this work. The November 19, 2010, construction permit for the FGD equipment installation described above also authorized the conversion of the

hot-side ESP to a cold-side ESP. To implement that conversion pursuant to the permit, Midwest Generation would have to complete detailed engineering of the conversion process and order and fabricate the necessary duct work to accommodate the conversion. Additionally, the conversion of the ESP will entail a long outage of Waukegan Unit 7. Therefore, Midwest Generation must coordinate that outage with PJM.<sup>13</sup> which could also affect the timing of the project.

## C. Compliance Efforts and Hardship

- 22. Planning to comply with Sections 225.296(a)(1) and (c)(1) through the installation of the FGD equipment and ESP conversion at Waukegan 7 described above, Midwest Generation expended considerable resources to obtain a construction permit, attached hereto as Exhibit 5, issued November 19, 2010. However, subsequent to the Agency's issuance of the construction permit, USEPA proposed and promulgated two major rules: the Cross-State Air Pollution Rule ("CSAPR")<sup>14</sup> and the Mercury and Air Toxics Standards ("MATS").<sup>15</sup>
- 23. The CSAPR was adopted to replace the Clean Air Interstate Rule ("CAIR") currently applicable to fossil fuel-fired EGUs in the eastern United States, in response to the court order in *North Carolina v. EPA*. The CSAPR includes a number of features that are significantly more stringent than the CAIR, namely the addition of assurance provisions or variability limits that establish hard mass emission caps on each subject state's emissions of SO<sub>2</sub>

<sup>&</sup>lt;sup>13</sup> PJM Interconnection, LLC is the regional transmission system operator that must protect reliability of the grid and review the removal for any extended period of time of any generating units within the scope of PJM's authority and responsibility.

<sup>&</sup>lt;sup>14</sup> Proposed at 75 Fed.Reg. 45210 (August 2, 2010); finalized at 76 Fed.Reg. 48208 (August 8, 2011), effective October 7, 2011.

<sup>&</sup>lt;sup>15</sup> Proposed at 76 Fed.Reg. 24976 (May 3, 2011); finalized at 77 Fed.Reg. 9304 (February 16, 2012), effective April 16, 2012.

<sup>&</sup>lt;sup>16</sup> The court found that the CAIR was pervasively flawed and initially vacated the rule. *North Carolina v. EPA*, 531 F.3d 896 (D.C. Cir. 2008). Subsequently, the court remanded the CAIR in its entirety without vacatur, *North Carolina v. EPA*, 550 F.3d 1176 (D.C. Cir. 2008), ordering that the CAIR remain effective until USEPA replaced it with a new rule, which is the CSAPR.

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and NOx. It presents an entirely different allowance allocation methodology, with permanent allowances issued by USEPA and no involvement of the states unless they develop state implementation plans ("SIPs") in the future. The CSAPR also presents an entirely new SO<sub>2</sub> allowance trading program.

- clear whether the Illinois EPA will develop a SIP to address the CSAPR to replace USEPA's allowance allocation methodology and if it does, exactly what allowance allocation methodology it will adopt. Second, the CSAPR was timely appealed by a number of entities at *EME Homer City LLC v. EPA*, No. 11-132 (D.C. Cir. filed August 23, 2011). On December 30, 2011, the court stayed the effectiveness of the CSAPR. In light of the nature of the program and the time needed for the court to address the merits of the arguments on appeal, it seems likely that the stay will defer implementation of the rule for at least a year. Oral arguments are scheduled for April 13, 2012, suggesting that the court will issue an opinion before the end of the year. However, no one can predict the outcome of the appeals. Assuming that the court does, indeed, issue its final order this year and that it will not require substantial changes to the CSAPR, which is a huge assumption, theoretically, the CSAPR compliance deadlines could be delayed by a year, making the rule first effective in 2013 with the additional reduction in SO<sub>2</sub> allowances applicable in 2015.
- 25. The MATS, which codifies the Utility Maximum Achievable Control Technology ("MACT") requirement applicable to coal- and oil-fired EGUs pursuant to Section 112 of the Clean Air Act, was not even proposed at the time that Midwest Generation obtained its construction permit. Midwest Generation could not have had any idea of the scope of the rule. As with the CSAPR, USEPA made changes to the MATS in its final form. At least one party to

date has filed an appeal of the MATS, and one can reasonably anticipate that there will be appeals filed by additional parties before the April 16, 2012, deadline. It would be impossible for one to speculate on the final scope of issues that will be appealed and their outcome or even whether the rule will survive the challenge. However, as finally adopted, the MATS requires reductions of emissions of mercury, non-mercury hazardous ("HAP") metals, and hydrogen chloride ("HCl"). USEPA has established in the MATS the option of monitoring filterable PM emissions as a surrogate for the non-mercury HAP metals. Even if a source does not choose to utilize the PM surrogate, the technology to control non-mercury HAP metals is the same as to control PM: ESPs or baghouses. Likewise, USEPA offers the option to comply with an SO<sub>2</sub> emission limit as a surrogate to complying with the HCl limit. As with PM and non-mercury HAP metals, USEPA has found that controlling SO<sub>2</sub> effectively controls HCl. Therefore, the company would not install different control equipment to address HCl. In this sense, the measures that Midwest Generation must undertake to comply with the CPS overlap with its compliance obligations under the MATS. The MATS requires compliance within three years, i.e., by April 16, 2015, with the strong possibility that upon a certain showing, sources can be granted a fourth year by their states.

26. This set of compliance deadlines converging on 2015 creates overlapping, significant SO<sub>2</sub>, mercury, and PM emission reduction obligations that conflict with the CPS's 2013 deadlines applicable to Waukegan Unit 7. The one-year extension sought herein would help synchronize these various regulatory timing requirements and would also impose the same CPS compliance deadline for Waukegan Units 7 and 8, improving efficiency and providing cost savings, as mentioned above. In addition, the pending CSAPR appeal and stay and the pending MATS appeal create uncertainties about the timing and scope of the requirements that may

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survive appeal. At least some of this uncertainty could be alleviated by deferring the deadlines at issue for Waukegan 7, thus potentially providing an opportunity for greater clarity and better decision-making before action must be commenced to physically address PM and SO<sub>2</sub> compliance.

- 27. The ability to better coordinate compliance with these overlapping obligations could help Midwest Generation avoid additional and unnecessary significant costs and disruption of unit operation. Under these circumstances, compliance with the current December 31, 2013, CPS deadlines would create an unreasonable hardship for Midwest Generation, but one that can be alleviated by the grant of the requested variance with respect to Waukegan Unit 7 to allow Midwest Generation to harmonize and consolidate its compliance efforts under the CPS with those required by or that may be required by the CSAPR and the MATS. Importantly, Midwest Generation does not claim that it cannot comply with the CPS, but that doing so is arbitrary and unreasonable at this time and poses an undue hardship, especially given that Midwest Generation seeks no change in fleet-wide emissions limits under the CPS.
- 28. Section 35(a) of the Act states that "the Board is not required to find that an arbitrary or unreasonable hardship exists exclusively because the [state] regulatory standard is under review and the costs of compliance are substantial and certain." 415 ILCS 5/35(a) (2010). However, the Board has, indeed, recently granted a variance to a petitioner faced with unique regulatory uncertainty where the costs of compliance were also determined both substantial and certain. *ExxonMobil Oil Corp. v. IEPA*, 11-86, 12-46 (December 1, 2011). Midwest Generation is similarly facing regulatory uncertainty through the convergence of the CPS and the new federal rules, and the costs of compliance are substantial and certain. Considering those factors together with the lack of impact to the environment from delaying compliance by one year shows

that a variance is warranted. This slight adjustment of the compliance date for Midwest Generation for this one unit would help to avoid the unforeseen inefficiencies and uncertainties that have developed with the promulgation of the two new federal rules.

## IV. ENVIRONMENTAL IMPACT

(§ 104.204(g))

- 29. As Midwest Generation announced on February 29, 2012, it plans to shut down the coal-fired unit at the Fisk Generating Station in 2012 and its Crawford Generating Station by no later than the end of 2014, subject to PJM review. The removal of emissions from the coal-fired unit at the Fisk Station during the timeframe of this variance, if the Board grants it, and of the coal-fired units at the Crawford Station coincidental with the termination of the variance would more than offset the one-year delay in achieving additional emission reductions from Waukegan Unit 7 sought in this Petition.
- 30. Under the CPS, Midwest Generation is required to achieve annually declining system-wide SO<sub>2</sub> emission rates beginning with an average annual rate of 0.44 lb/mmBtu in calendar year 2013. Based on actual generation for 2007, the year in which the CPS was finalized, Midwest Generation estimates that 2013 SO<sub>2</sub> emissions from Midwest Generation's system at the CPS SO<sub>2</sub> rate of 0.44 lb/mmBtu would be 66,109 tons. With the coal-fired unit at the Fisk Station retired by the end of this calendar year, the estimated system-wide 2013 SO<sub>2</sub> emissions would be 62,282 tons, a reduction of 3,827 tons or 5.6 percent. The CPS does not require the installation of FGD equipment or retirement at Fisk until December 31, 2015.

<sup>&</sup>lt;sup>17</sup> If PJM were to determine that the shutdown of either Fisk or Crawford or both threatened reliability or raised market power issues, PJM could request that Midwest Generation continue to operate the plant or plants. Midwest Generation submitted its notice to PJM of its intention to shut down Unit 19 at the Fisk Station. *See* Exhibit 7. If Midwest Generation receives the final results of PJM's review during this variance proceeding, it will provide a copy to the Board.

Therefore, even if one assumed that the coal-fired unit at Fisk would be retired at the end of 2015 rather than retrofitted with FGD equipment, there are cumulative annual reductions of SO<sub>2</sub> in 2013, 2014, and 2015 accruing from the early retirement of the coal-fired unit at the Fisk Station totaling 11.481 tons or a 7.5 percent fleetwide reduction.

- 31. The net SO<sub>2</sub> benefit of the total package included with this request for variance increases with the retirement of the two coal-fired units at Crawford Station by no later than the end of 2014. Under the CPS, there is no requirement to install FGD equipment at Crawford until the end of 2017 for Unit 8 and of 2018 for Unit 7. Therefore, it would be logical to assume that Crawford would have continued to generate in a business-as-usual case through at least the end of 2017 for Unit 8 and through the end of 2018 for Unit 7. With the early retirement of both units by the end of 2014, the cumulative reduction in SO<sub>2</sub> emitted from Crawford for years 2015, 2016, 2017, and 2018 is 23,592 tons, compared to a business-as-usual CPS compliance case.
- 32. Using these same assumptions for PM emissions, *i.e.* 2008-2011 average heat input, Midwest Generation estimates that the PM emission reductions due to the early, planned shutdowns of the coal-fired unit at the Fisk Station would be 2,084 tons for 2013, 2014, and 2015. The estimated emission reductions from the early, planned shutdown of the two coal-fired units at Crawford would total 3,536 tons for 2015, 2016, 2017, and 2018. The total tons of PM reduced from the early, planned shutdowns of the coal-fired units at Fisk and Crawford Stations would be 5.620 tons. <sup>18</sup>

<sup>18</sup> The MATS provides a PM emission rate as a surrogate for the non-mercury HAP metal emissions. If Midwest Generation chose to rely on that surrogate rate for compliance with the MATS, the PM emission reductions resulting from the planned early shutdowns of the coal-fired units at Fisk and Crawford would be less: 264 tons for 2015 at Fisk and 1,664 tons for 2015, 2016, 2017, and 2018 at Crawford. The MATS provides that companies may comply with a 0.2 lb/mmBtu SO<sub>2</sub> emission rate as a surrogate for compliance with the HCl emission rate. The only year in which the MATS 0.2 lb/mmBtu rate is more stringent than the rate required by the CPS is 2015, when the CPS rate is 0.28 lb/mmBtu. Because these rates are so close, Midwest Generation has not calculated the reductions that would result from the early, planned shutdowns of the coal-fired units at Fisk and Crawford.

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- 33. Although the one-year compliance delay sought in this variance will not affect NOx emissions at Waukegan Unit 7, the shutdowns of the coal-fired units at Fisk and Crawford will yield reductions in NOx. The CPS requires Midwest Generation to achieve a system-wide emission rate of 0.11 lb NOx/mmBtu in 2012. Based on 2008-2011 average heat input, in 2013 through 2015. Midwest Generation estimates the reduction in NOx emissions from the shutdown of the coal-fired unit at Fisk will be 3,456 tons. Based on this same average heat input. Midwest Generation estimates that the total reduction in NOx emissions resulting from the planned early shutdown of Unit 7 at Crawford Station will be 2,663 tons during 2015 through 2018 and 3,437 tons from Unit 8 in 2015 through 2018. The total anticipated NOx reductions at Crawford Station would be 6,100 tons.
- 34. Pursuant to the CPS, both Waukegan units were among the first in the nation to install mercury control equipment in July 2008. Since 2007, mercury emissions at Waukegan Station have been reduced from approximately 231 pounds per year to less than 80 pounds per year. Since 2008, Waukegan Unit 8 has achieved significant mercury reductions, consistently measuring greater than 90 percent, well in advance of the federal compliance deadline. Unit 7 is now achieving significant mercury emission reductions, in the range of 72% when the unit operates at lower loads. When operated at higher loads, the rate of reduction decreases. The CPS requirement to convert or replace the hot-side ESP is to improve mercury removal efficiency on that unit. Even with the extension of a year to convert or replace the hot-side ESP, Unit 7 will have begun significantly reducing mercury emissions prior to implementation of the MATS. Moreover, Unit 7 will comply with the state's unit-by-unit limitations by the CPS'

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January 1, 2015, compliance deadline.<sup>19</sup> Midwest Generation will continue to operate the ACl system on Waukegan Unit 7 during the variance period.

- 35. The Fisk and Crawford coal-fired units were also controlled for mercury beginning in July 2008. Since then, Midwest Generation has been able to optimize mercury reduction at both stations such that the average mercury emissions, based on 2010 and 2011 actual emissions and which Midwest Generation would expect to continue into the future if it continued to operate the coal-fired units at these two plants, are approximately 5 lbs/year at Crawford Unit 7, 3 lbs/year at Crawford Unit 8, and 8 lbs/year at Fisk Unit 19. With the planned shutdown of the coal-fired unit at Fisk in 2012, approximately 23 pounds of mercury that could have been emitted in 2013, 2014, and 2015, assuming a level of generation similar to 2010 and 2011, would not be emitted. Likewise, Crawford Unit 7 would not emit approximately 18 pounds of mercury in 2015, 2016, 2017, and 2018, and Crawford Unit 8 would not emit approximately 12 pounds of mercury in 2015, 2016, and 2017. The total reduction in mercury attributable to the shutdown of these three units between 2013 and 2018 is approximately 54 pounds. Because of the potential persistence of mercury in the environment, the Board can legitimately view the future reductions from the Fisk and Crawford coal-fired units as mitigation for the one-year delay in achieving additional mercury emissions from Waukegan Unit 7.
- 36. Table 1<sup>20</sup> below sets forth current relevant emissions levels, estimated emissions in 2014 based on average 2008-2011 heat input, the levels that Midwest Generation estimates would be emitted from Waukegan Unit 7 if the variance were not granted, also based on average 2008-2011 heat input, and the net benefit in terms of overall reductions in emissions resulting

<sup>&</sup>lt;sup>19</sup> Note that the MATS does not require unit-by-unit compliance and allows source-wide averaging.

<sup>&</sup>lt;sup>20</sup> Exhibit 9 provides a table of the calculations that serve as the basis for Table 1.

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from the total package comprising this request for variance, *i.e.*, including the early closures of the coal-fired units at Fisk and Crawford.

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Pollutant	2011 Emissions* at Waukegan Unit 7	2014 Estimated Emissions at Waukegan Unit 7 Without Variance	2014 Estimated Emissions at Waukegan Unit 7 if the Variance Is Granted	Difference in Emissions at Waukegan Unit 7 if the Variance Is Granted	Net Benefit in Emissions Reduced if the Variance Is Granted 2013-2015 (Fisk Unit 19 Shut Down in 2012)	Total Net Benefit in Emissions Reduced if Variance Is Granted 2013-2018 (Fisk Unit 19 Shut Down in 2012 and Crawford Units 7 and 8 Shut Down End of 2014)
SO <sub>2</sub>	3,801 tons	1,016 tons	3,974 tons	2,957 tons	8,385 tons	32,231 tons
Hg <sup>21</sup>	74 lbs	8 lbs	83 lbs	75 lbs	<51 lbs>	<20 lbs>
PM <sup>22</sup>	140 tons	140 tons	157 tons	18 tons	2,066 tons	5,602 tons
NOx	1.073 tons	1,321 tons	1,321 tons	0 tons	3,456 tons	9,556 tons

<sup>\*2011</sup> emissions reflect a low capacity factor of 59%; the previous five years' capacity factor was 69%.

It is clear from Table 1 that the differences in estimated mass emissions of SO<sub>2</sub>, mercury, and PM are relatively small and would occur for only one year longer than is currently required by

The mercury emissions reported in Table 1 reflect actual emissions based upon stack testing at various loads. Stack tests of mercury emissions at various operating loads revealed that Unit 7 achieves a reduction in mercury emissions of approximately 72% at a lower operating load. The unit was operated at that lower load slightly less than 25% of the operating hours in 2011.

<sup>&</sup>lt;sup>22</sup> Midwest Generation notes that although the CPS refers to PM emissions in the title of Section 225.296, nothing in the CPS actually imposes any specific emissions limitations. However, the purpose of an ESP is to control PM. Although the purpose of the conversion of the Waukegan 7 ESP from a hot-side to a cold-side ESP is to improve inercury removal efficiency and not specifically PM removal efficiency, Midwest Generation has included the impact of the variance, if granted, on PM emissions for purposes of providing complete information to the Board.

the CPS. The delay in additional emission reductions for one year is outweighed by the significant reductions in these same emissions due to the planned shutdowns of the Fisk and Crawford Stations in northeastern Illinois, which are discussed above. Therefore, Midwest Generation is actually providing through this proposal a benefit to the environment that far exceeds any delay in additional emission reductions from Waukegan 7 that could result from the grant of this variance. Any suggestion of environmental harm that might result if the Board grants the requested variance is outweighed by the benefits to the environment and public by the emission reductions due to the planned shutdowns of the coal-fired units at Fisk and Crawford and by the hardship to Midwest Generation if it were required to proceed with compliance at Waukegan Unit 7 and forego the efficiencies that can be attained by just a year's delay.

- 37. Midwest Generation has already installed significant mercury (ACI) and NOx (SNCR) controls on other CPS Group units, thus significantly reducing such emissions.

  Assuming the variance requested in this petition is granted, following the one-year deferral, Midwest Generation will proceed with one of the Waukegan 7 compliance options under the CPS. Further, Midwest Generation will comply with the requirements applicable to other CPS Group units on the timeline provided by the CPS, thus further reducing SO<sub>2</sub>, PM, and mercury emissions, or, alternatively, additional units will be required to permanently retire.
- 38. USEPA says that the potential for human exposure to mercury is through consumption of fish containing mercury through bioaccumulation. Under certain conditions, mercury in waterbodies can methylate, thus making the mercury available for uptake by organisms, according to USEPA. Subsistence fishers are considered by USEPA to be the group most likely to be affected by mercury consumption in the United States. 76 Fed.Reg. 24976, 24984 (May 3, 2011). However, USEPA in the MATS Preamble indicated that the potential

impact of fine particulate matter on human health may be far more significant than the potential impact of mercury. 77 Fed.Reg. 9304, 9426 ff. (Feb. 16, 2012). Therefore, the reductions in fine particulate matter precursors SO<sub>2</sub> and NOx resulting from the early shutdowns of the coal-fired units at Fisk and Crawford would have a far greater benefit, based on USEPA publications. The impact of a year's delay in reducing mercury emissions at Waukegan will be minimal and will be significantly offset by the effectively contemporaneous closures of the coal-fired units at Fisk and Crawford. Therefore, the impact of the request variance for Waukegan Unit 7 should be minimal, if any, to both human health and the environment.

- 39. PM emissions are already controlled by the existing ESP. Therefore, mercury emissions and PM emissions from that unit are already significantly controlled, and the use of a somewhat less efficient ESP for a single year should have minimal impact. Moreover, the early closure of Unit 19 at Fisk more than offsets the PM emissions from Waukegan 7 during the year of the variance period.
- 40. SO<sub>2</sub> emissions contribute to the formation of Acid Rain and fine particulate matter. Midwest Generation complies with the Acid Rain permit issued for Waukegan 7. Emissions of fine particulate matter are currently regulated by the CAIR. Acid Rain can contribute to eutrophication of water bodies located far downwind of a source of SO<sub>2</sub>. USEPA has documented various health effects, largely respiratory, associated with inhalation of fine particulate matter. Waukegan 7 is in compliance with these requirements and will remain so during the pendency of the variance, if granted.
- 41. Additionally, Waukegan 7 is subject to the state's PM limitations at Section 212.203. These requirements will continue to apply. Waukegan Unit 7 is in compliance with these requirements and will remain so. Moreover, the PM reductions resulting from the

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shutdowns of the coal-fired units at Fisk and Crawford significantly exceed the additional year's PM emissions at Waukegan 7, again a net benefit to the environment.

42. In a variance proceeding, a petitioner must demonstrate that the hardship resulting from denial would "outweigh any injury to the public or the environment" from granting the relief. Marathon Oil Co. v. EPA, 242 III. App. 3d 200, 206, 610 N.E.2d 789, 793 (5th Dist. 1993). The proposed variance should cause negligible, if any, quantitative or qualitative injury in light of the associated emission changes, including the large expected reductions in SO<sub>2</sub> and PM emissions. During the pendency of the variance, if granted, Midwest Generation will continue to inject powdered activated carbon to control mercury emissions at Waukegan Unit 7. It will continue to operate its hot-side ESP to control particulate emissions. And it will continue to burn very low sulfur coal to meet SO<sub>2</sub> limitations at Unit 7. Midwest Generation's entire Illinois coal-fired system will comply with the applicable SO<sub>2</sub> emission rate in the CPS. Additionally, subject to PJM review, Midwest Generation will shut down the Fisk and Crawford Generating Stations, thereby mitigating the one-year delay in achieving additional reductions of mercury emissions from Waukegan Unit 7 and more than fully offsetting the one-year delay in reducing emissions of PM and SO<sub>2</sub> from Waukegan Unit 7 resulting from the requested one-year deferral and achieving a reduction in SO<sub>2</sub> tons emitted in excess of the CPS schedule beginning in 2013. Given all of these factors, the hardship to Midwest Generation clearly outweighs any potential impact to human health or the environment, and the hardship, therefore, rises to the level of "arbitrary or unreasonable," consistent with Section 35(a) of the Act and Board precedent in variance proceedings.

### V. CONSISTENCY WITH FEDERAL LAW

(§§ 104.204(i) and 104.208(a))

- Granting the variance has no impact on Section 110(a) of the Clean Air Act and 40 CFR Part 51 other than as discussed above. Further, Section 110(a)(2)(D) of the Clean Air Act is addressed through the CAIR and eventually the CSAPR or its successor. Midwest Generation complies with the CAIR and will continue to do so as long as it is applicable. On June 24, 2011, the Agency submitted portions of the CPS, including Sections 225.296(a)(1) and (c)(1), to USEPA for inclusion in Illinois' SIP addressing Best Available Retrofit Technology ("BART") and Regional Haze. Illinois EPA, selected pages of *Technical Support Document for Best Available Retrofit Technology Under the Regional Haze Rule*, AQPSTR 09-06 (April 29, 2011), attached hereto as Exhibit 9;<sup>23</sup> 77 Fed.Reg. 3966 (Jan. 26, 2012), attached hereto as Exhibit 10. On January 26, 2012, USEPA proposed to approve the Illinois BART SIP as submitted. 77 Fed.Reg. 3966 (Jan. 26, 2012). Therefore, the provisions from which Midwest Generation seeks relief are not currently part of the Illinois SIP and are not federally enforceable and are consistent with federal law.
- 44. However, recognizing a potential concern of the Board regarding consistency with federal law, Midwest Generation points out several factors. First, Waukegan Unit 7 is not one of the BART-eligible units that Illinois EPA identified in its BART SIP submittal. *See* 77 Fed.Reg. at 3971. Additionally, the BART/Regional Haze SIP is concerned with the SO<sub>2</sub> emission rate. Illinois EPA demonstrated that the system-wide average SO<sub>2</sub> emission rates

<sup>&</sup>lt;sup>23</sup> Exhibit 9 consists of the cover letter, the Technical Support Document ("TSD") cover page, TSD pp. 24-25, 30-31, 33, and Appendix C. These are the pages pertinent to this request for variance; however, Midwest Generation will provide the Board with a copy of the entire TSD or the entire collection of documents included in the SIP submittal if the Board requires.

included in the CPS provide greater reductions than applying the presumptive BART rate to just BART-eligible units by applying the rates to average heat input, and USEPA accepted this analysis. *See* 77 Fed.Reg. at 3973. Midwest Generation will continue to comply with the SO<sub>2</sub> emission rates in Section 225.295(b), thus satisfying presumptive BART, as presented in Illinois' BART submittal. Additionally, the shutdowns of Fisk and Crawford will reduce mass emissions of SO<sub>2</sub> to levels below those included in Illinois' demonstration in the BART submittal that the system-wide CPS rates produced greater reduction than applying the BART presumptive rates to only the BART-eligible units. Therefore, even if USEPA were to adopt the CPS into the SIP before the conclusion of the requested variance period, there would be no negative impact on the Agency's calculations regarding emissions levels.

- 45. The only issue could be a discrepancy between the compliance dates for the FGD equipment installation and the ESP conversion that would be included in the SIP versus the date that the Board would grant in a variance. If the BART/Regional Haze SIP, including elements of the CPS, is in place before the termination of the requested variance, Midwest Generation will request that the Agency submit the Board's order granting the variance along with updating the emissions information and environmental benefits derived from the planned shutdowns of Fisk and Crawford. It is possible, perhaps likely, in that case that the variance period could expire before USEPA took action on revising the SIP to reflect the variance.
- 46. The portions of the CPS addressing mercury, *i.e.*, the impetus for requiring the ESP conversion, were not included in Illinois' BART and Regional Haze SIP submittal.<sup>24</sup>

  Therefore, the reduction in efficiency in mercury control resulting from continued operation of

<sup>&</sup>lt;sup>24</sup> See Appendix C included in Exhibit 9. Illinois EPA submitted the entirety of Part 225, Subpart B to USEPA with the BART SIP for purposes of completeness but requested that only the bolded sections in Part 225, Subpart B be included in the SIP.

the hot-side ESP has no import under the Clean Air Act. There are no federal provisions that directly impose fine particulate matter standards on Waukegan Unit 7. Arguably, Section 225.296(c)(1) should not even be part of the proposed SIP. However, we understand that Illinois EPA included it in the proposal because it submitted entire sections of the CPS rather than limiting the submittal to appropriate subsections.

### VI. VARIANCE CONDITIONS AND COMPLIANCE PLAN

(§§ 104.204(f) and (j))

- 47. Midwest Generation requests that the Board grant a variance extending the compliance deadlines of Sections 225.296(a)(1) and (c)(1). On or before December 31, 2014, Midwest Generation shall (1) either permanently shut down Waukegan Unit 7 or (2) shall (a) install and have operational FGD equipment on Waukegan 7 and (b) either replace the hot-side ESP with a cold-side ESP or install an appropriately designed fabric filter on Waukegan Unit 7.
  - 48. Midwest Generation recommends a compliance plan as follows:

<u>Date</u>	Activity
Continuously during pendency of the variance	Comply with the system-wide SO <sub>2</sub> emissions rate set forth in Section 225.295(b).  Comply with the ACI rate set forth in Section 225.294(g).  Comply with the CAIR or the CSAPR, as applicable.  Comply with the Acid Rain Program.  Comply with all other applicable requirements.
On or before September 15, 2014	Apply for a new or extended construction permit, as needed, for installation of the FGD equipment and conversion of the hot-side precipitator or other control methodologies that Midwest Generation determines are more appropriate for Waukegan Unit 7.
On or before December 31, 2014	Shut down Unit 7; OR

<u>Date</u>	<u>Activity</u>
	Install and have operational FGD equipment, AND
	Convert the hot-side ESP to a cold-side ESP or install an appropriately designed fabric filter.
On or before December 31, 2012	Shut down the coal-fired unit at Fisk Generating Station. <sup>25</sup>
On or before December 31, 2014	Shut down the coal-fired units at Crawford Generating Station. <sup>25</sup>

## VIL HEARING

(§ 104,204(n))

49. Midwest Generation does not request a hearing in this matter because no federal law is affected by the requested variance. However, Midwest Generation reserves its right to request a hearing should USEPA approve Illinois' BART and Regional Haze SIP prior to issuance of the Board's order. In such an event, Midwest Generation will waive the decision deadline to an appropriate date to accommodate a hearing.

## VIII. RCRA

(§ 104.206)

50. Section 104.206 of the Board's procedural regulations is not applicable to this request for variance. Section 104.206 specifically addresses requests for variance from the

<sup>&</sup>lt;sup>25</sup> Midwest Generation recognizes that compliance plans generally reflect activities necessary to achieve the compliance that is being delayed. In this case, however, Midwest Generation has included the shutdowns of the coal-fired units at the Fisk and Crawford Generating Stations because of the relevance of the emission reductions associated with those shutdowns to assessment of any environmental harm that might arise if the Board grants this variance. Midwest Generation, nonetheless, believes that the requested variance may be granted even absent such shutdowns in light of the substantial and arbitrary hardship created by the current ESP schedule for Waukegan Unit 7 and the minimal, if any, adverse impact attributable to the one-year extension requested herein.

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Resource Conservation and Recovery Act (RCRA). Midwest Generation does not seek such relief.

WHEREFORE, for the reasons set forth above, MIDWEST GENERATION, LLC – WAUKEGAN GENERATING STATION requests that the Board grant it a variance that defers the requirements of Sections 225.296(a)(1) and (c)(1) for one year, until December 31, 2014.

Respectfully submitted,

MIDWEST GENERATION, LLC – WAUKEGAN GENERATING STATION

by:

Dated: April 9, 2012

Kathleen C. Bassi Stephen J. Bonebrake SCHIFF HARDIN, LLP 233 South Wacker Drive, Suite 6600 Chicago, Illinois 60606 312-258-5500

Fax: 312-258-5600 kbassi@schiffhardin.com

### BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

MIDWEST GENERATION, LLC -	)	
WAUKEGAN GENERATING STATION,	)	
	)	
Petitioner,	)	
	)	
V.	)	PCB 12
	)	(Variance – Air)
ILLINOIS ENVIRONMENTAL	)	
PROTECTION AGENCY,	)	
	)	
Respondent.	)	

## AFFIDAVIT OF DOUGLAS McFARLAN

I, DOUGLAS R. McFARLAN, having first been duly sworn upon oath, depose and state as follows:

- I am President of Midwest Generation, LLC. I am also Senior Vice President, Public
  Affairs for Edison Mission Group, the indirect parent company of Midwest Generation.
  In that role, I am responsible for state and local government relations, environmental
  policy and compliance, media and community relations, executive and employee
  communications, and corporate contributions. I joined the company in 1999 and became
  President of Midwest Generation in 2011.
- My duties and responsibilities at Midwest Generation specifically include supervision of the Environmental Compliance group and oversight of such activities as the preparation of this Petition for Variance.
- 3. I participated in the development of this Petition for Variance.

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4. I have read the foregoing Petition for Variance, and based upon my personal knowledge and belief, the facts stated therein are true and correct.

FURTHER AFFIANT SAYETH NOT.

Subscribed and sworn to before me

this

day of April, 2012.

Doylas R. M. Yarl

JOY RIDENOUR

Commission # 1902120

Notary Public - California

Los Angeles County

My Comm. Expires Sep 26, 2014

V Notary Public

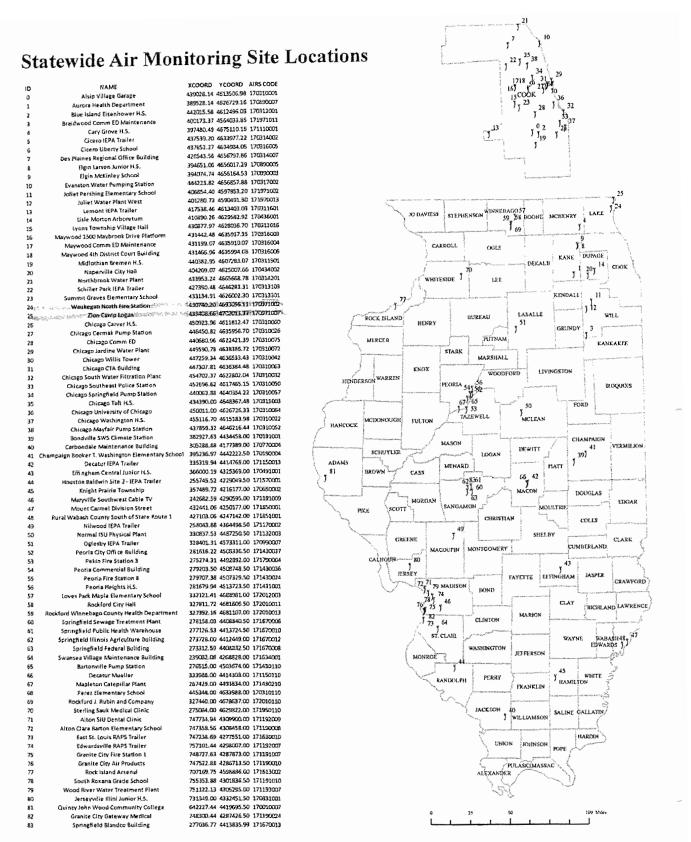
CH2/11/150703.1

### Exhibit List (104.204(h)) Exhibit 1 Statewide Air Monitoring Site Locations, Illinois EPA, 40th Annual Air Quality Report 2010 (Dec. 2011), p. 34 < www.epa.state.il.us/air/air-qualityreport/2010/index.html >. 2 2010 Monitoring Directory, Illinois EPA, 40th Annual Air Quality Report 2010 (Dec. 2011), Table A4, p. 39, < www.epa.state.il.us/air/air-qualityreport/2010/index.html >. 3 Construction Permit Issued to Midwest Generation for the Construction of Mercury Control Equipment (July 19, 2007), Appealed in PCB Docket 08-020 (August 27, 2007) 4 Redlined Permit (Ex. 2 in PCB 08-020) Reflecting the Partial Stay Granted in the Appeal of the Mercury Control Equipment Construction Permit. 5 Construction Permit Issued to Midwest Generation for Construction of FGD Equipment (Trona Injection System) (November 19, 2010). 6 Letter from Midwest Generation to Mr. Ed Bakowski at Illinois EPA Requesting Extension of Trona Construction Permit (February 28, 2012) and Revised Construction Permit Reflecting the Extension in Condition 1.12a (March 28, 2012). 7 Two Letters to Mr. Mike Kormos, Senior Vice President, System Operations & Planning, PJM Interconnection, Notifying PJM of Midwest Generation's Intention to Shut Down the Coal-Fired Units at the Fisk and Crawford Generating Stations (March 8, 2012). 8 Letter to Cheryl Newton, USEPA Region 5, from Illinois EPA (June 24, 2011) Conveying the State's BART SIP Submittal and Selected Pages from Illinois EPA's Technical Support Document for Best Available Retrofit Technology Under the Regional Haze Rule, AQPSTR 09-06 (April 29, 2011). 9 Table of Calculations Prepared by Midwest Generation in Support of Table 1 in the Petition for Variance. 10 Proposed Approval of Illinois' BART SIP, 77 Fed.Reg. 3966 (January 26, 2012).

## Exhibit 1

## **Statewide Air Monitoring Site Locations**

Illinois EPA, 40th Annual Air Quality Report 2010 (Dec. 2011), p. 34. <a href="https://www.epa.state.il.us/air/air-quality-report/2010/index.html">www.epa.state.il.us/air/air-quality-report/2010/index.html</a> >



## Exhibit 2

## **2010 Monitoring Directory**

Illinois EPA, 40th Annual Air Quality Report 2010 (Dec. 2011), Table A4, p. 39

< www.epa.state.il.us/air/air-quality-report/2010/index.html >

## Electronic Filing - Received, Clerk's Office, 04/10/2012 \* \* \* \* \* \* PCB 2012-121 \* \* \* \* \*

## Table A4 2010 Monitoring Directory

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AQS ID	City	00	CO2	NO2	Ozone	PM10	PM2.5	PM2.5 AQI	PM2.5 Speciation	502	voc	Toxícs	TSP Pb, Metals	Wind System	Solar	Meteorological
17-001-0007	Quincy															
17-019-0004	Champaign															
17-019-1001	Bondville															
17-031-0001	Alsip															
17-031-0022	Chicago Washington High School					С										
17-031-0026	Chicago Cermak Pump Station															programme and a make make make and a make and a make a
17-031-0032	Chicago South Water Fikration															
17-031-0042	Chicago Wiás Tower															pir remedia a los
17-031-0050	Chicago Southeast Police Station															
17-031-0052	Chicago Maylair Pump Station															******
17-031-0057	Chicago Springfield Pump Station															
17-031-0060	Chicago Carver High School					16 (1) (1)										
17-031-0063	Chicago CTA Building						eg ja						-			
17-031-0064	Chicago University of Chicago															,
17-031-0072	Chicago Jardine Water Plant															
17-031-0076	Chicago Com Ed Maintenance															
17-031-0110	Chicago Perez Elementary															
17-031-1003	Chicago Tait High School															
17-031-1016	Lyons Township					C										
17-031-1601	Lemont				1,24,0					5. S.						
17-031-1901	Midlothian															
17-031-2001	Blue Island															untili.
Active Monitor	Site/Monitor lostalled	Site/	Vonito	r Remi	oved	C = (	Continu Trace I	uous F evel m	M10 onitor	H-						
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## Exhibit 3

Construction Permit Issued to Midwest Generation for the Construction of Mercury Control Equipment (July 19, 2007), Appealed in PCB Docket 08-020 (August 27, 2007)

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\* \* \* \* \* PCB 2008-020 \* \* \* \* \*

EXHIBIT



#### ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 North Grand Avenue East, P.O. Box 19506, Springfield, Illinois 62794-9506 – (217) 782-2113

ROD R. BLAGOJEVICH, GOVERNOR

DOUGLAS P. SCOTT, DIRECTOR

217/782-2113

RECEIVED

CONSTRUCTION PERMIT

JUL 2 3 2007

#### PERMITTEE

**ENVIRONMENTAL SERVICES** 

Midwest Generation EME, LLC - Waukegan Generating Statio MIDWEST GENERATION EME, LLC

Attn: Andrea Crapisi

440 South LaSalle Street, Suite 3500

Chicago, Illinois 60605

<u>Application No.</u>: 07050007 <u>I.D. No.</u>: 097190AAC

Applicant's Designation: Date Received: May 3, 2007

Subject: Sorbent Injection Systems for Units 7 and 8

Date Issued: July 19, 2007

Location: Waukegan Generating Station, 401 East Greenwood Avenue, Waukegan,

60087

Permit is hereby granted to the above-designated Permittee to CONSTRUCT equipment consisting of a sorbent injection system to control mercury emissions for each of the Unit 7 and 8 boilers, as described in the above referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- la. This Permit authorizes construction of sorbent injection systems for each of the existing coal-fired boilers for Units 7 and 8 (affected boilers). The new sorbent injection systems would control mercury emissions by injecting sorbent, i.e., halogenated activated carbon, into the flue gas from these existing coal-fired boilers prior to the electrostatic precipitators (ESPs) for each affected boiler.
- b. i. This permit is issued based on this project being an emissions control project, whose purpose and effect will be to reduce emissions of mercury from the existing coal-fired boilers and which will not significantly increase emissions of other PSD pollutants. As such, the terms and conditions of the existing permits will continue to govern emissions and operation of the boilers except as specifically indicated.
  - ii. This permit is issued based on negligible particulate matter (PM) emissions from the storage and handling of sorbent for the sorbent injection systems. For this purpose emissions shall not exceed 0.44 tons/year. However Permittee shall comply with all applicable requirements of 35 Ill. Adm. Code Part 212 that apply to the storage and handling of sorbent.
- c. This permit does not authorize any modifications to the affected boilers or generating units, which would increase capacity or potential emissions.
- 2a. The Permittee shall comply with applicable emission standards and requirements related to mercury emissions for the affected boilers pursuant to 35 IAC Part 225, Subpart B and/or Subpart F, by the applicable dates specified by these rules.

## Electronic Filing, Received, Clerk's Office, August 27, 2007

Page 2

Note: The Permittee expects that it will comply with certain provisions of 35 IAC Part 225, Subpart F, which is still proposed, as an alternative to compliance with 35 IAC Part 225, Subpart B. If the Permittee elects to comply with 35 IAC Part 225, Subpart F, certain provisions of subpart B would not be applicable, and the provisions of Subpart F would set the dates when certain other requirements do become applicable.

- b. This permit does not affect the authorizations in existing operating permits for the affected boilers, pursuant to 35 IAC 201.149, 201.161 and 201.262, that allow the Permittee:
  - i. To operate an affected boiler in violation of certain state emission standards during startup of the boiler or the terms and conditions that accompanied such authorization.
  - ii. To continue to operate an affected boiler in violation of certain state emission standards during malfunction or breakdown of the boiler, including control devices and ancillary systems, or the terms and conditions that accompanied such authorization.
- 3. At all times, the Permittee shall, to the extent practicable, maintain and operate the sorbent injection systems including storage and handling of sorbent, in a manner consistent with good air pollution control practice for minimizing emissions from the existing coal-fired boilers and the source.
- 4a. The Permittee shall comply with all applicable requirements of 35 IAC Part 225, by the dates specified in the rules, related to monitoring of mercury emissions from the affected boilers.
- b. If the sorbent injection systems can be adjusted remotely by personnel in the control room, the Permittee shall install, operate, and maintain instrumentation for measuring rate of sorbent injection for each affected boiler with the status of the system.
- 5a. The Permittee shall maintain following records for the coal supply for the affected boilers:
  - Applicable records required by 35 IAC Part 225, by the dates specified in the rules, related to sampling and analysis of the coal supply to the affected boilers for its mercury content.
  - ii. Records of mercury and heat content of the current coal supply to the affected boilers, with supporting data for the associated sampling and analysis methodology, so as to have representative data for the mercury content of the coal supply.
- b. The Permittee shall maintain the following records for the sorbent injection system on each affected boiler:

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#### Page 3

- i. An operating log or other records for the system that, at a minimum, identify the sorbent that is being used, the setting(s) for sorbent injection rate and each period of time when an affected boiler was in operation without the system being operated with explanation, e.g., the boiler was being fired on natural gas.
- ii. Maintenance and repair log or other records for the system that, at a minimum, list the activities performed, with date and description.
- c. The Permittee shall maintain following records related to mercury emissions from the affected boilers:
  - All applicable records required by 35 IAC Part 225, by the dates specified in the rules, related of monitoring mercury emissions.
  - ii. During the period before the Permittee is required to conduct monitoring for the mercury emissions of the affected boilers pursuant to 35 IAC Part 225, the Permittee shall maintain records of any mercury emission data collected for the affected boilers, including emissions or control efficiency with identification and description of the mode of operation.
- d. The Permittee shall retain all records required by this permit at the source for at least 5 years from the date of entry and these records shall be readily accessible to the Illinois EPA for inspection and copying upon request.
- 6. If there is any deviation from the requirements of this permit, the Permittee shall submit a report to the Illinois EPA within 30 days after the deviation or such other time period specified in the current CAAPP permit issued for the source. The report shall include a description of the deviation, a copy of relevant records, and measures to reduce emissions and future occurrences.
- The Permittee shall notify the Illinois EPA when sorbent injection systems on affected boilers start operating.
- 8. The Illinois EPA has determined that this project, as described in the application, will not constitute a modification of the boiler under the federal New Source Performance Standards, 40 CFR 60, as the project has the primary function of reducing emissions and therefore is not considered a modification pursuant to 40 CFR 60.14(e)(5).
- 9. Two copies of required reports and notifications shall be sent to the Illinois EPA's Compliance Section at the following address unless otherwise indicated:

Illinois Environmental Protection Agency Division of Air Pollution Control Compliance Section (#40) P.O. Box 19276 Springfield, Illinois 62794-9276

# Electronic Filing, Received, Clerk's Office, August 27, 2007

Page 4

and one copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency/Regional Office Division of Air Pollution Control 9511 West Harrison Des Plaines, Illinois 60016

10. The affected boilers may be operated with sorbent injection systems pursuant to this construction permit until an operating permit becomes effective that addresses operation of these boilers with these systems.

If you have any questions on this permit, please call Kunj Patel at 217/782-2113.

Edwin C. Balancha

Edwin C. Bakowski, P.E. Acting Manager, Permit Section Division of Air Pollution Control Date Issued:

ECB: CPR: KMP: psj

cc; Region 1

## Electronic Filing, Received, Clerk's Office, August 27, 2007 PCB 2008-020 \*



STATE OF ILLINOIS ENVIRONMENTAL PROTECTION AGENCY DIVISION OF AIR POLLUTION CONTROL P. O. BOX 19506 SPRINGFIELD, ILLINOIS 62794-9506

#### STANDARD CONDITIONS FOR CONSTRUCTION/DEVELOPMENT PERMITS ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

July 1, 1985

The Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111-1/2, Section 1039) authorizes the Environmental Protection Agency to impose conditions on permits which it issues.

The following conditions are applicable unless susperseded by special condition(s).

- 1. Unless this permit has been extended or it has been voided by a newly issued permit, this permit will expire one year from the date of issuance, unless a continuous program of construction or development on this project has started by such time.
- The construction or development covered by this permit shall be done in compliance with applicable provisions of the Illinois Environmental Protection Act and Regulations adopted by the Illinois Pollution Control Board.
- 3. There shall be no deviations from the approved plans and specifications unless a written request for modification, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.
- The permittee shall allow any duly authorized agent of the Agency upon the presentation of credentials, at reasonable times:
  - to enter the permittee's property where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit,
  - to have access to and to copy any records required to be kept under the terms and conditions of this permit,
  - c. to inspect, including during any hours of operation of equipment constructed or operated under this permit, such equipment and any equipment required to be kept, used, operated, calibrated and maintained under this permit,
  - d. to obtain and remove samples of any discharge or emissions of pollutants, and
  - to enter and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.
- 5. The issuance of this permit:
  - a. shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located,
  - b. does not release the permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities,
  - c. does not release the permittee from compliance with other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations,
  - does not take into consideration or attest to the structural stability of any units or parts of the project, and IL 532-0226

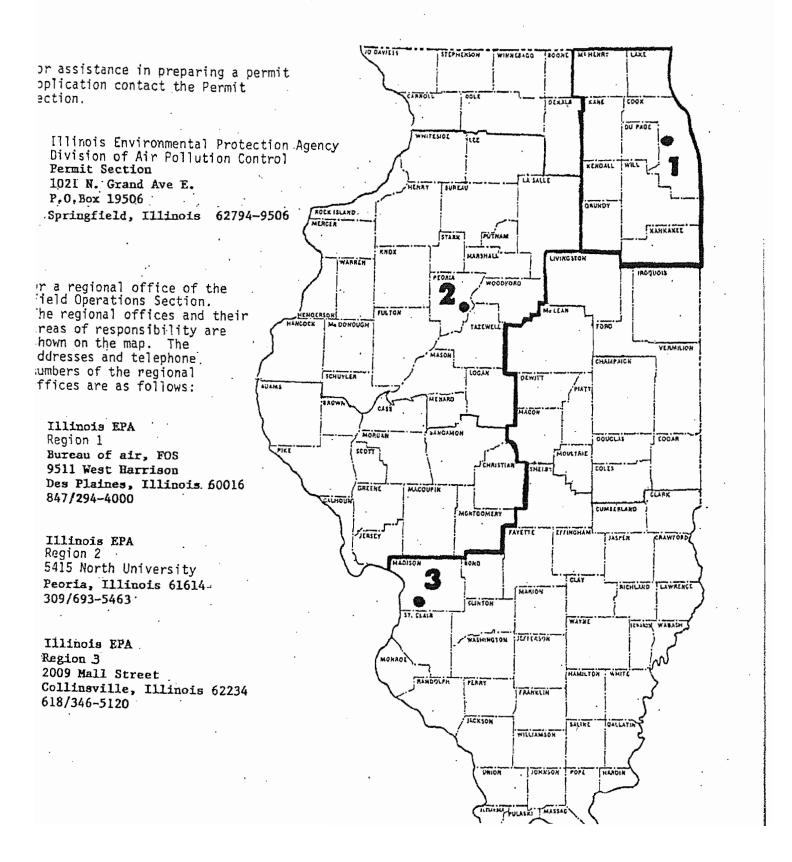
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- e. in no manner implies or suggests that the Agency (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.
- 6. a. Unless a joint construction/operation permit has been issued, a permit for operation shall be obtained from the Agency before the equipment covered by this permit is placed into operation.
  - b. For purposes of shakedown and testing, unless otherwise specified by a special permit condition, the equipment covered under this permit may be operated for a period not to exceed thirty (30) days.
- 7. The Agency may file a complaint with the Board for modification, suspension or revocation of a permit:
  - a. upon discovery that the permit application contained misrepresentations, misinformation or false statements or that all relevant facts were not disclosed, or
  - b. upon finding that any standard or special conditions have been violated, or
  - c. upon any violations of the Environmental Protection Act or any regulation effective thereunder as a result of the construction or development authorized by this permit.

## Electronic Filing, \*\*\*\* \*\* PCB 2008-020 \* \* \* \* \* \*

## DIRECTORY ENVIRONMENTAL PROTECTION AGENCY BUREAU OF AIR



## Exhibit 4

Redlined Permit (Ex. 2 in PCB 08-020) Reflecting the Partial Stay Granted in the Appeal of the Mercury Control Equipment Construction Permit

Electronic Filing, Řěčěi PeB, Werkis Office, August 27. 2007

\* \* \* \* \* PCB 2008-020 \* \* \* \* \*



#### CONSTRUCTION PERMIT

#### PERMITTEE

Midwest Generation EME, LLC - Waukegan Generating Station

Attn: Andrea Crapisi

440 South LaSalle Street, Suite 3500

Chicago, Illinois 60605

Application No.: 07050007 I.D. No.: 097190AAC

Applicant's Designation: Date Received: May 3, 2007

Subject: Sorbent Injection Systems for Units 7 and 8

Date Issued: July 19, 2007

Location: Waukegan Generating Station, 401 East Greenwood Avenue, Waukegan,

60007

Permit is hereby granted to the above-designated Permittee to CONSTRUCT equipment consisting of a sorbent injection system to control mercury emissions for each of the Unit 7 and 8 boilers, as described in the above referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This Permit authorizes construction of sorbent injection systems for each of the existing coal-fired boilers for Units 7 and 8 (affected boilers). The new sorbent injection systems would control mercury emissions by injecting sorbent, i.e., halogenated activated carbon, into the flue gas from these existing coal-fired boilers prior to the electrostatic precipitators (ESPs) for each affected boiler.
- b. This permit is issued based on this project being an emissions control project, whose purpose and effect will be to reduce emissions of mercury from the existing coal-fired boilers and which will not significantly increase emissions of other PSD pollutants. As such, the terms and conditions of the existing permits will continue to govern emissions and operation of the boilers except as specifically indicated.
  - This permit is issued based on negligible particulate matter (PM) emissions from the storage and handling of sorbent for the sorbent injection systems. For this purpose emissions shall not exceed 0.44 tons/year. However Permittee shall comply with all applicable requirements of 35 Ill. Adm. Gode Part 212 that apply to the storage and handling of sorbent.
- c. This permit does not authorize any modifications to the affected boilers or generating units, which would increase capacity or potential emissions.
- 2a. The Permittee shall comply with applicable emission standards and requirements related to mercury emissions for the affected boilers pursuant to 35 IAC Part 225, Subpart 8 and/or Subpart F, by the applicable dates specified by these rules.

Note: The Permittee expects that it will comply with certain provisions of 35 IAG Part 225, Subpart F, which is still proposed, as an

# Electronic Filing - Received, Clerk's Office, 04/10/2012 Electronic Filing; Receiped, Office; August 27, 2007 \* \* \* \* \* PCB 2008-020 \* \* \* \* \*

Page 2

alternative to compliance with 35 IAC Part 225, Subpart B. If the Permittee elects to comply with 35 IAC Part 225, Subpart F, certain provisions of subpart B would not be applicable, and the provisions of Subpart F would set the dates when certain other requirements do become applicable.

- b. This permit does not affect the authorizations in existing operating permits for the affected boilers, pursuant to 35 IAC 201.149, 201.161 and 201.262, that allow the Permittee:
  - i. To operate an affected boiler in violation of certain state emission standards during startup of the boiler or the terms and conditions that accompanied such authorization.
  - ii. To continue to operate an affected boiler in violation of certain state emission standards during malfunction or breakdown of the boiler, including control devices and ancillary systems, or the terms and conditions that accompanied such authorization.
- 3. At all times, the Permittee shall, to the extent practicable, maintain and operate the sorbent injection systems including storage and handling of sorbent, in a manner consistent with good air pollution control practice for minimizing emissions from the existing coal-fired boilers and the source.
- 4a. The Permittee shall comply with all applicable requirements of 35 IAC Part 225, by the dates specified in the rules, related to monitoring of mercury emissions from the affected boilers.
- b. If the sorbent injection systems can be adjusted remotely by personnel in the control room, the Permittee shall install, operate, and maintain instrumentation for measuring rate of sorbent injection for each affected boiler with the status of the system.
- 5a. The Permittee shall maintain following records for the coal supply for the affected boilers:
  - i. Applicable records required by 35 TAC Part 225, by the dates specified in the rules, related to sampling and analysis of the coal supply to the affected boilers for its mercury content.
  - ii. Records of mercury and heat content of the current coal supply to the affected boilers, with supporting data for the associated sampling and analysis methodology, so as to have representative data for the mercury content of the coal supply.
- b. The Permittee shall maintain the following records for the serbent injection system on each affected boiler:
  - i. An operating log or other records for the system that, at a minimum, identify the sorbent that is being used, the setting(s) for sorbent injection rate and each poriod of time when an affected boiler was in operation without the system being

## Electronic Filing, Received, Clerk's Office, August 27, 2007 \* \* \* \* \* PCB 2008-020 \* \* \* \* \*

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operated with explanation, e.g., the boiler was being fired on natural gas.

- ii. Maintenance and repair log or other records for the system that, at a minimum, list the activities performed, with date and description.
- c. The Permittee shall maintain following records related to mercury emissions from the affected boilers:
  - All applicable records required by 35 IAC Part 225, by the dates specified in the rules, related of monitoring mercury emissions.
  - During the period before the Formittee is required to conduct monitoring for the mercury emissions of the affected hotlers pursuant to 35 IAG Part 225, the Permittee shall maintain records of any mercury emission data collected for the affected boilers, including emissions or control efficiency with identification and description of the mode of operation.
- d. The Permittee shall retain all records required by this permit at the source for at least 5 years from the date of entry and these records shall be readily accessible to the Illinois EPA for inspection and copying upon request.
- 6. If there is any deviation from the requirements of this permit, the Permittee shall submit a report to the Illinois EPA within 30 days after the deviation or such other time period specified in the current CAAPP permit issued for the source. The report shall include a description of the deviation, a copy of relevant records, and measures to reduce emissions and future occurrences.
- 7. The Permittee shall notify the Illinois EPA when sorbent injection systems on affected boilers start operating.
- 8. The Illinois EPA has determined that this project, as described in the application, will not constitute a modification of the boiler under the federal New Source Performance Standards, 40 CFR 60, as the project has the primary function of reducing emissions and therefore is not considered a modification pursuant to 40 CFR 60.14(e)(5).
- 9. Two copies of required reports and notifications shall be sent to the Illinois EPA's Compliance Section at the following address unless otherwise indicated:

Illinois Environmental Protection Agency Division of Air Pollution Control Compliance Section (#40) P.O. Box 19276 Springfield, Illinois 62794-9276

<u>and</u> one copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

## Electronic Filing, Řečeived, Clerk office, Åugust 27, 2007

Page 4

Illinois Environmental Protection Agency/Regional Office Division of Air Pollution Control 9511 West Harrison Des Plaines, Illinois 60016

10. The affected boilers may be operated with sorbent injection systems pursuant to this construction permit until an operating permit becomes effective that addresses operation of these boilers with these systems.

If you have any questions on this permit, please call Kunj Patel at 217/782-2113.

Edwin C. Bakowski, P.E. Acting Manager, Permit Section Division of Air Pollution Control Date Issued:

ECB: CPR: KMP: psj

cc: Region 1

## Exhibit 5

Construction Permit Issued to Midwest Generation for Construction of FGD Equipment (Trona Injection System) (November 19, 2010)

## Electronic Filing - Received, Clerk's Office, 04/10/2012 \* \* \* \* \* PCB 2012-121 \* \* \* \* \*



### ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19506, SPRINGFIELD, ILLINOIS 62794-9506 ~ (217) 782-2113

PAT QUINN, GOVERNOR

DOUGLAS P. SCOTT, DIRECTOR

217/782-2113

CONSTRUCTION PERMIT

#### PERMITTEE

Waukegan Generating Station c/o Midwest Generation, LLC Attn: Scott B. Miller 235 Remington Boulevard, Suite A Bolingbrook, Illinois 60440

Application No.: 10090034

I.D. No.: 097190AAC

Applicant's Designation:

Date Received: September 16, 2010

Subject: Dry Sorbent Injection System and ESP Conversion for Unit 7

Date Issued: November 19, 2010

Location: Waukegan Station, 401 East Greenwood Avenue, Waukegan, Lake County

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of a dry sorbent injection system and electrostatic precipitator conversion for Waukegan Unit 7, as described in the above referenced application. This Permit is subject to standard conditions attached hereto and the following special conditions:

#### Conditions for the Project

#### 1.1 Introduction

- i. This permit authorizes construction of a dry sorbent injection system (the affected system) on the boiler for Waukegan Unit 7 (the affected boiler). This system would be designed to inject Trona (a mineral form of sodium carbonate and sodium bicarbonate) into the duct work at a point prior to the electrostatic precipitator (ESP) of the affected boiler to control the sulfur dioxide (SO<sub>2</sub>) emissions of the boiler.
  - ii. This permit also authorizes conversion of the existing ESP to a "cold-side" design, with the ESP being downstream of the air heater. This change will improve the control efficiency of the ESP which controls particulate matter (PM) emissions from affected boiler. This is because the reduction in the temperature of the flue gas through the air heater will decrease the actual gas volume, thereby increasing the gas residence time in the ESP. In addition, injection of sodium based dry sorbents, as planned may reduce resistivity of the fly ash resulting in improved ESP collection efficiency. It will also improve the effectiveness of control of mercury emissions by the activated carbon injection system on the affected boiler.

- iii. This permit also authorizes relocation of the injection points for the activated carbon injection (ACI) system on the affected boiler, which was installed for control of mercury emissions pursuant to Construction Permit 07050007.
- iv. This permit also authorizes construction of a material handling facility to receive, store, and handle sorbent materials for the affected system, including new bulk storage silos and associated fabric filters.
- b. This permit does not authorize any modifications to existing Waukegan Unit 7, which would increase its capacity or emissions.

#### 1.2 Non-Applicability Provisions

- a. i. This permit is issued based on this project, being an emission control project that will reduce emissions of SO<sub>2</sub> from the affected boiler and will not cause emissions increase of any other NSR regulated pollutant. In particular, the construction of the affected system and ESP conversion are being undertaken to meet the requirement of the Combined Pollutants Standards (CPS), 35 IAC 225.296(a)(1) and (c)(1).
  - ii. This permit is issued based on the new material handling facility associated with the affected system, the increase in throughput of the existing fly ash handling facility and the increase in road traffic from handling sorbent and additional ash, as constrained by the limitations and requirements in this permit, not being a major modification for purposes of the federal PSD rules (40 CFR 52.21), the Federal Emission Offset Interpretive Ruling (40 CFR Part 51, Appendix S) and Illinois' MSSCAM rules (35 IAC Part 203). This is because the increases in emissions of individual pollutants from these units are less than the significant emission rates set in these rules.
- b. The Illinois EPA has determined that the changes to the affected boiler, as described in the application, will not constitute a modification of the boiler under the federal New Source Performance Standards, 40 CFR 60 because the changes have the primary function of reducing emissions and therefore are not considered a modification pursuant to 40 CFR 60.14(e)(5).

#### 1.3 Existing Applicable Requirements

This permit does not relax or revise applicable requirements for Waukegan Unit 7 and associated control equipment, including requirements in existing permits for the source, including provisions for continuous opacity monitoring systems, startup, malfunction and breakdown, recordkeeping, and reporting.

- 1.4 Future Applicable Emission Standards under the Combined Pollutant Standards (CPS)
  - a. As provided by 35 IAC 225.296, beginning December 31, 2013, the Permittee shall not operate the affected boiler until the affected system is installed and the ESP conversion is completed.
  - b. Beginning calendar year 2013, the CPS group annual average  $SO_2$  emission rate of the specified EGUs (at Fisk, Crawford, Joliet, Powerton, Waukegan and/or Will County power plants) including the affected boiler shall not exceed the applicable limit in 35 IAC 225.295(b).

#### 1.5. Control Practices

- a. The affected system shall be designed to achieve to 90 percent removal of sulfur dioxide  $(SO_2)$  in the flue gas.
- b. At all times, the Permittee shall maintain and operate affected boiler with the affected system and cold-side ESP in a manner consistent with good air pollution control practices.

#### 1.6 Emission Testing Requirements

- a. i. Within one year after initial startup of the affected boiler with the affected system and cold-side ESP or by June 30, 2014, whichever occurs first, the particulate matter emissions of the boiler shall be measured by an approved testing service.
  - ii. These tests shall be followed by two more tests for particulate matter, which shall be conducted no less than 5 months and no more than 15 months from the previous test.
- b. These tests shall be conducted during conditions that are representative of highest injection rates for sorbent and activated carbon at full load as follows.
- c. The following methods and procedures shall be used for testing of emissions, unless another method is approved by the Agency:
  Refer to 40 CFR 60, Appendix A and 40 CFR 61, Appendix B and 40 CFR Part 51, Appendix M for USEPA test methods.

Location of Sample Points Gas Flow & Velocity Particulate Matter (PM) USEPA Method 1 USEPA Method 2 USEPA Methods 5 & 202\*

\* Measurements of condensable PM are also required by USEPA Method 202 (40 CFR Part 51, Appendix M) or other established test method approved by the Illinois EPA.

- d. The test plan shall be submitted to the Illinois EPA for review at least 60 days prior to the actual date of testing. This plan shall describe the specific procedures for testing and shall, at a minimum, include the following information:
  - The person(s) who will be performing sampling and analysis and their experience with similar tests.
  - ii. The specific conditions, e.g., operating rate and control device operating conditions, under which testing shall be performed including a discussion of why these conditions will be representative and the means by which the operating parameters will be determined.
  - iii. The specific determinations of emissions that are intended to be made, including sampling or monitoring locations. As part of this plan, the Permittee may set forth a strategy for also performing emission testing in the normal load range of the boiler.
  - iv. The test method(s) that will be used, with the specific analysis method if the method can be used with different analysis methods.
- e. Prior to carrying out these tests, the Illinois EPA's Regional Office and Source Emission Test Specialist shall be notified a minimum of 30 days prior to the expected date of these tests and further notified a minimum of 5 working days prior to the tests of the exact date, time and place of these tests, to enable the Agency to witness these tests.
- f. Three copies of the Final Report(s) for these tests shall be submitted to the Illinois EPA within 14 days after the test results are compiled and finalized. The following information shall be submitted with the results:
  - i. The gross power generation and the steam generation rate, including the key operating data for the Unit 7 during the test.
  - ii. Significant operating parameters of the affected system and ESP and the existing ACI system, such as location and injection rate of each dry sorbent material during the period of testing, as measured during the tests.
  - iii. Flue gas temperature before the ESP and other significant operating parameters of the ESP, such as ESP voltage and current flows, and spark rates during the period of testing, as measured during the tests

- iv. SO<sub>2</sub> emission data during the periods of testing based on emission monitoring, and the calculated SO<sub>2</sub> control efficiency on a daily basis.
- v. Opacity data collected by the continuous opacity monitoring systems during each test run, on a minute-by-minute basis, and if conditions are suitable for such observation, observations of opacity at the stack (two 6-minute averages) for each test run.

#### 1.7 Monitoring and Instrumentation Requirements

- a. The Permittee shall install, operate and maintain instrumentation for sorbent injection rate, by volume or mass, which may either be measured directly or by indirectly, e.g., by measuring feeder speed.
- b. The Permittee shall install, operate and maintain instrumentation to measure the temperature of the flue gas entering the cold side ESP or air heater outlet.
- c. This permit does not authorize changes to the existing monitoring systems or instrumentation which already exist on the ESP when converted to a cold—side design.

#### 1.8 Recordkeeping Requirements

- a. The Permittee shall keep a file that contains documentation for the design of the affected system confirming compliance with Condition 1.5(a).
- b. The Permittee shall maintain the following records for the coldside ESP:
  - i. A maintenance and repair log for the ESP, which shall list the activities performed, with date and description.
  - ii. An operating log, including:
    - A. The status of each ESP field shall be recorded at least once per shift.
    - B. The following numerical data shall be recorded at least once per day: (1) Primary voltages and current flows, (2) Secondary voltages and current flows, and (3) Sparking rates.
- c. All records required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA upon request. Any records retained in an electronic format (e.g., computer) shall

be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.

#### 1.9 Notifications

- a. The Permittee shall notify the Illinois EPA in writing within 21 days of the initial startup of the affected system.
- b. The Permittee shall notify the Illinois EPA in advance of using a sorbent other than Trona in the affected system. This notification shall be submitted at least three months in advance if possible or otherwise promptly after the Permittee learns that an alternative sorbent will need to be used. This notification shall identify the alternative sorbent and include an explanation of the reason for use of an alternate sorbent, the expected duration for use of the alternative sorbent (if temporary), and the expected changes in sorbent injection rates.

#### 1.10 Reporting Requirements

a. If there is a deviation from the requirements of this permit, the Permittee shall promptly submit a report of the deviation to the Illinois EPA. Unless otherwise specified, this report shall be submitted within 30 days of the deviation. The report shall describe the deviation, the probable cause of the deviation, corrective actions that were taken and any actions to prevent future occurrences.

#### 1.11 Report/Notifications Submittals

Two copies of all notifications and reports required by the Permit shall be sent to:

Illinois Environmental Protection Agency Division of Air Pollution Control Compliance Section (#40) P.O. Box 19276 Springfield, Illinois 62794-9276

Telephone: 217/782-5811 Fax: 217/782-6348

<u>and</u> one copy of all required notifications and reports shall be sent to the Illinois EPA's regional office at the following address, unless otherwise indicated:

Illinois Environmental Protection Agency Division of Air Pollution Control Regional Field Office 9511 West Harrison Des Plaines, Illinois 60016

Telephone: 847/294-4000 Fax: 847/294-4018

#### 1.12 Authorization for Operation

- a. The affected boiler with affected system and cold-side ESP may be operated for one year under this construction permit, during which period initial emissions testing shall be completed and the Permittee shall apply for a revised CAAPP permit addressing the changes to the control system for the affected boiler, which application shall include a compliance assurance monitoring (CAM) plan for the affected boiler for emissions of particulate matter.
- b. Following completion of required emission testing, the Permittee may operate the affected boiler with affected system and coldside ESP under this permit until the operation of this control equipment is addressed by a CAAPP permit.
- c. These conditions supersede Standard Condition 6.

#### Unit-Specific Conditions for the Material Handling Facilities

#### 2.1 Introduction

The affected facilities for the purpose of these Unit-Specific Conditions are the new facility for handling dry sorbent and the existing facilities for handling fly ash, which would handle additional materials.

#### 2.2 Applicable Federal Emission Standards

- a. The mills, storage silos and conveying system at the affected sorbent handling facility are subject to the NSPS for Nonmetallic Mineral Processing Plants, 40 CFR 60, Subpart 000 and related provisions of 40 CFR 60, Subpart A.
- b. Pursuant to the NSPS, 40 CFR 60.672(b) and (d), fugitive emissions of PM from subject units shall not exceed 7 percent.
- c. Pursuant to the NSPS, 40 CFR 60.672(f), stack emissions of PM, as defined by 40 CFR 60.671, from the subject units shall not exceed 7 percent
- d. At all times, the Permittee shall maintain and operate subject units, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions, pursuant to 40 CFR 60.11(d).

Note: These conditions would not apply if mills or grinding equipment are not present at the affected facility. See Condition 2.4(a).

#### 2.3 Applicable State Emission Standards

- a. The affected facilities are subject to 35 IAC 212.301, which provides that no person shall cause or allow the emission of fugitive particulate matter from any emission unit, that is visible by an observer looking generally toward the zenith (that is looking at the sky directly overhead) from a point beyond the property line of the source pursuant to 35 IAC 212.301.
- b. The emission units at the affected facilities are subject to 35 IAC 212.123 (a) which provides that no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent into the atmosphere from the affected facility, pursuant to 35 IAC 212.123(a).
- c. The emission units at the affected facilities are subject to 35 IAC 212.321(a), which provides that no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other new similar process emission units at a source or premises, exceeds the allowable emission rates specified in 35 IAC 212.321(c).

#### 2.4 Non-Applicability Provisions

a. If the affected sorbent handling facility does not include mills or grinding equipment, which would reduce the size of sorbent, this permit is issued based on this facility not being subject to the federal NSPS, 40 CFR 60 Subpart COO, because it would not crush or grind a non-metallic mineral so that it would not constitute a nonmetallic mineral processing plant, as defined by 40 CFR 60.671. Accordingly, the requirements of Conditions 2.2, 2.7(a) and 2.9(a) would not be applicable.

#### 2.5 Operational Limitations

- a. The amount of dry sorbent received by the affected sorbent handling facility shall not exceed 90,000 tons per year.

  Compliance with this limit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 months total).
- b. i. A. There shall be no visible emissions of fugitive particulate from the affected sorbent handling facility.
  - B. The filters for the affected sorbent handling facility shall have a design outlet loading for particulate matter of no more than 0.01 grains/scf, as shown by the manufacturer's performance

- specifications for the device or representative emission test data for similar filter devices.
- ii. A. Emissions of PM from the affected facility shall each not exceed 1.95 tons per year.
  - B. This permit is issued based upon minimal emissions of PM due to vehicle traffic on plant roadways associated with transport of sorbent. For this purpose, PM emissions shall not exceed 1.1 tons per year.
- c. The transport of dry sorbent and fly ash from the affected boiler shall be on paved roads, which shall be maintained in good condition to control emissions of particulate matter.
- d. i. This permit is issued based on a negligible increase in PM emissions from the affected fly ash facility. For this purpose, the increase in PM emissions shall not exceed 0.1 pound per hour and 0.44 tons per year.
  - ii. This permit is issued based upon a minimal increase in emissions of PM due to the increase in vehicle traffic on plant roads for fly ash. For this purpose, the increase in PM emissions shall not exceed 1.1 tons per year.
- a. At all times, the Permittee shall maintain and operate the emission units at affected facilities including associated air pollution control measures, in a manner consistent with good air pollution control practices for minimizing emissions.

#### 2.6 Inspection and Maintenance Requirements

- a. Inspections of the dry sorbent and fly ash handling facilities including emission control measures shall be conducted at least once per month when the facility is in operation to confirm compliance with the requirements of this permit.
- b. Maintenance and repair of filters, and other control measures shall be performed to assure that such measures function properly when material is being handled.
- c. The Permittee shall maintain records of the above inspections and maintenance/repair activity in an operating and maintenance log. This log shall contain, at a minimum, the time and description of the inspections or maintenance/repair activities.

#### 2.7 Opacity Measurements

a. For the affected sorbent handling facility, the Permittee shall comply with applicable requirements of the NSPS related to observation of opacity.

b. Upon written request by the Illinois EPA, the Permittee shall conduct opacity observations for specific operation(s) or unit(s) at the affected facility within 45 calendar days of the request or on the date agreed upon by the Illinois EPA, whichever is later.

#### 2.8 Recordkeeping Requirements

- a. The Permittee shall maintain a file containing documentation for the emission guarantee for each filter in the affected sorbent handling facility, in grains/dscf, as provided by the supplier of the device.
- b. The Permittee shall maintain operating records for the following items:
  - i. Amount of dry sorbent received, tons/month and tons/year.
  - ii. Amount of dry sorbent transferred to the affected system, tons/month and tons/year.
- c. The Permittee shall keep records for the implementation of fugitive dust control measures on roadways used by trucks that handle dry sorbent and fly ash.
- d. The Permittee shall keep the following records related to PM emissions (tons/month and tons/year), with supporting calculations. For this purpose, roadway emissions shall be calculated using USEPA methods.
  - Records of emissions of PM and PM10 from the affected facility.
  - ii. Records of emissions of PM and PM10 from roadways/truck traffic associated with the affected facility.
  - iii. Records of PM and PM10 emissions from roadways/truck traffic associated with handling of fly ash from the affected boiler

#### 2.9 Reporting Requirements

a. The Fermittee shall either comply with applicable reporting requirements of the NSPS unless crushing or grinding equipment will not be installed at the facility, in which case the Permittee shall notify the Illinois EPA of this decision.

Note: Reporting of deviation is addressed by Condition 1.10(a).

### Electronic Filing - Received, Clerk's Office, 04/10/2012 \* \* \* \* \* PCB 2012-121 \* \* \* \* \*

Page 11

2.10 The affected facilities may be operated pursuant to this construction permit until an operating permit becomes effective that addresses these facilities. This condition supersedes Standard Condition 6.

Date Signed: Movember 19, 2016

If you have any questions on this permit, please contact Shashi Shah at 217/782-2113.

Edwin C. Bakowski, P.E.

Edwin C. Balund

Manager, Permit Section

Division of Air Pollution Control

ECB:SRS:psj

cc: FOS - Region 1, Illinois EPA

Permit File - 95090047

## Exhibit 6

Letter from Midwest Generation to Mr. Ed Bakowski at Illinois EPA Requesting Extension of Trona Construction Permit (February 28, 2012) and Revised Construction Permit Reflecting the Extension in Condition 1.12a (March 28, 2012)

## Electronic Filing - Received, Clerk's Office, 04/10/2012 \* \* \* \* \* PCB 2012-121 \* \* \* \* \*



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February 28, 2012

Mr. Ed Bakowski Manager, Permit Section Division of Air Pollution Control Illinois Environmental Protection Agency 1021 North Grand Avenue East Springfield, Illinois 62702

Federal Express

Subject: Waukegan Unit 7

Construction Permit Extension Request

I.D. No.: 097190AAC Application No.: 10090034

County: Lake

Dear Mr. Bakowski:

Midwest Generation (MWGen) respectfully requests a twenty four month extension for the Waukegan Unit 7 construction permit which authorizes the installation of dry sorbent injection flue gas desulfurization (FGD) equipment and the associated electrostatic precipitator hot to cold conversion.

Although construction began in November 2011, MWGen is seeking the flexibility to perform the installation of the pollution control upgrades in a manner which will not be continuous at all times. This extension will not impact our ability to meet the requirements of the Combined Pollutant Standard Rate Program for sulfur dioxide (35 IAC 225.295(b)) and mercury (35 IAC 225.294(c)).

Enclosed is the appropriate permit application fee.

Baril & Outent on

If you have any questions regarding this extension, please contact Scott Miller of my staff at (630) 771-7859.

Sincerely,

Basil G. Constantelos Managing Director

**Environmental Services** 

Enclosure

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## Electronic Filing - Received, Clerk's Office, 04/10/2012 \* \* \* \* \* PCB 2012-121 \* \* \* \* \*



#### ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19506, SPRINGFIELD, ILLINOIS 62794-9506 - (217) 782-2113

PAT QUINN, GOVERNOR JOHN J. KIM, INTERIM DIRECTOR

217/785-1705

CONSTRUCTION PERMIT -- REVISED

#### PERMITTEE

Waukegan Generating Station c/o Midwest Generation, LLC Attn: Scott B. Miller 235 Remington Boulevard, Suite A Bolingbrook, Illinois 60440

Applicant's Designation: Date Received: March 20, 2012

Subject: Dry Sorbent Injection System and ESP Conversion for Unit 7

Date Issued: March 28, 2012

Location: Waukegan Station, 401 East Greenwood Avenue, Waukegan, Lake County

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of a dry sorbent injection system and electrostatic precipitator conversion for Waukegan Unit 7, as described in the above referenced application. This Permit is subject to standard conditions attached hereto and the following special conditions:

#### Conditions for the Project

#### 1.1 Introduction

- a. i. This permit authorizes construction of a dry sorbent injection system (the affected system) on the boiler for Waukegan Unit 7 (the affected boiler). This system would be designed to inject Trona (a mineral form of sodium carbonate and sodium bicarbonate) into the duct work at a point prior to the electrostatic precipitator (ESP) of the affected boiler to control the sulfur dioxide (SO2) emissions of the boiler.
  - to a "cold-side" design, with the ESP being downstream of the air heater. This change will improve the control efficiency of the ESP which controls particulate matter (PM) emissions from affected boiler. This is because the reduction in the temperature of the flue gas through the air heater will decrease the actual gas volume, thereby increasing the gas residence time in the ESP. In addition, injection of sodium based dry sorbents, as planned may reduce resistivity of the fly ash resulting in improved ESP collection efficiency. It will also improve the effectiveness of control of mercury emissions by the activated carbon injection system on the affected boiler.

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- iii. This permit also authorizes relocation of the injection points for the activated carbon injection (ACI) system on the affected boiler, which was installed for control of mercury emissions pursuant to Construction Permit 07050007.
- iv. This permit also authorizes construction of a material handling facility to receive, store, and handle sorbent materials for the affected system, including new bulk storage silos and associated fabric filters.
- b. This permit does not authorize any modifications to existing Waukegan Unit 7, which would increase its capacity or emissions.

#### 1.2 Non-Applicability Provisions

- a. i. This permit is issued based on this project, being an emission control project that will reduce emissions of SO<sub>2</sub> from the affected boiler and will not cause emissions increase of any other NSR regulated pollutant. In particular, the construction of the affected system and ESP conversion are being undertaken to meet the requirement of the Combined Pollutants Standards (CPS), 35 TAC 225.296(a)(1) and (c)(1).
  - ii. This permit is issued based on the new material handling facility associated with the affected system, the increase in throughput of the existing fly ash handling facility and the increase in road traffic from handling sorbent and additional ash, as constrained by the limitations and requirements in this permit, not being a major modification for purposes of the federal PSD rules (40 CFR 52.21), the Federal Emission Offset Interpretive Ruling (40 CFR Part 51, Appendix S) and Illinois' MSSCAM rules (35 IAC Part 203). This is because the increases in emissions of individual pollutants from these units are less than the significant emission rates set in these rules.
- b. The Illinois EPA has determined that the changes to the affected boiler, as described in the application, will not constitute a modification of the boiler under the federal New Source Performance Standards, 40 CFR 60 because the changes have the primary function of reducing emissions and therefore are not considered a modification pursuant to 40 CFR 60.14(e)(5).

#### 1.3 Existing Applicable Requirements

This permit does not relax or revise applicable requirements for Waukegan Unit 7 and associated control equipment, including requirements in existing permits for the source, including provisions for continuous opacity monitoring systems, startup, malfunction and breakdown, recordkeeping, and reporting.

- 1.4 Future Applicable Emission Standards under the Combined Pollutant Standards (CPS)
  - a. As provided by 35 IAC 225.296, beginning December 31, 2013, the Permittee shall not operate the affected boiler until the affected system is installed and the ESP conversion is completed.
  - b. Beginning calendar year 2013, the CPS group annual average SQ<sub>2</sub> emission rate of the specified EGUs (at Fisk, Crawford, Joliet, Powerton, Waukegan and/or Will County power plants) including the affected boiler shall not exceed the applicable limit in 35 IAC 225.295(b).

#### 1.5. Control Practices

- a. The affected system shall be designed to achieve to 90 percent removal of sulfur dioxide  $(SO_2)$  in the flue gas.
- b. At all times, the Permittee shall maintain and operate affected boiler with the affected system and cold-side ESP in a manner consistent with good air pollution control practices.

#### 1.6 Emission Testing Requirements

- a. i. Within one year after initial startup of the affected boiler with the affected system and cold-side ESP or by June 30, 2014, whichever occurs first, the particulate matter emissions of the boiler shall be measured by an approved testing service.
  - ii. These tests shall be followed by two more tests for particulate matter, which shall be conducted no less than 5 months and no more than 15 months from the previous test.
- b. These tests shall be conducted during conditions that are representative of highest injection rates for sorbent and activated carbon at full load as follows.
- c. The following methods and procedures shall be used for testing of emissions, unless another method is approved by the Agency: Refer to 40 CFR 60, Appendix A and 40 CFR 61, Appendix B and 40 CFR Part 51, Appendix M for USEPA test methods.

Location of Sample Points Gas Flow & Velocity Particulate Matter (PM) USEPA Method 1 USEPA Method 2 USEPA Methods 5 & 202\*

\* Measurements of condensable PM are also required by USEPA Method 202 (40 CFR Part 51, Appendix M) or other established test method approved by the Illinois EPA.

- d. The test plan shall be submitted to the Illinois EPA for review at least 60 days prior to the actual date of testing. This plan shall describe the specific procedures for testing and shall, at a minimum, include the following information:
  - i. The person(s) who will be performing sampling and analysis and their experience with similar tests.
  - ii. The specific conditions, e.g., operating rate and control device operating conditions, under which testing shall be performed including a discussion of why these conditions will be representative and the means by which the operating parameters will be determined.
  - iii. The specific determinations of emissions that are intended to be made, including sampling or monitoring locations. As part of this plan, the Permittee may set forth a strategy for also performing emission testing in the normal load range of the boiler.
  - iv. The test method(s) that will be used, with the specific analysis method if the method can be used with different analysis methods.
- e. Prior to carrying out these tests, the Illinois EPA's Regional Office and Source Emission Test Specialist shall be notified a minimum of 30 days prior to the expected date of these tests and further notified a minimum of 5 working days prior to the tests of the exact date, time and place of these tests, to enable the Agency to witness these tests.
- f. Three copies of the Final Report(s) for these tests shall be submitted to the Illinois EPA within 14 days after the test results are compiled and finalized. The following information shall be submitted with the results:
  - The gross power generation and the steam generation rate, including the key operating data for the Unit 7 during the test.
  - ii. Significant operating parameters of the affected system and ESP and the existing ACI system, such as location and injection rate of each dry sorbent material during the period of testing, as measured during the Lests.
  - iii. Flue gas temperature before the ESP and other significant operating parameters of the ESP, such as ESP voltage and current flows, and spark rates during the period of testing, as measured during the tests

- iv.  $SO_2$  emission data during the periods of testing based on emission monitoring, and the calculated  $SO_2$  control efficiency on a daily basis.
- v. Opacity data collected by the continuous opacity monitoring systems during each test run, on a minute-by-minute basis, and if conditions are suitable for such observation, observations of opacity at the stack (two 6-minute averages) for each test run.

### 1.7 Monitoring and Instrumentation Requirements

- a. The Permittee shall install, operate and maintain instrumentation for sorbent injection rate, by volume or mass, which may either be measured directly or by indirectly, e.g., by measuring feeder speed.
- b. The Permittee shall install, operate and maintain instrumentation to measure the temperature of the flue gas entering the cold side ESP or air heater outlet.
- c. This permit does not authorize changes to the existing monitoring systems or instrumentation which already exist on the ESP when converted to a cold-side design.

# 1.8 Recordkeeping Requirements

- a. The Permittee shall keep a file that contains documentation for the design of the affected system confirming compliance with Condition 1.5(a).
- b. The Permittee shall maintain the following records for the coldside ESP:
  - A maintenance and repair log for the ESP, which shall list the activities performed, with date and description.
  - ii. An operating log, including:
    - A. The status of each ESP field shall be recorded at least once per shift.
    - B. The following numerical data shall be recorded at least once per day: (1) Primary voltages and current flows, (2) Secondary voltages and current flows, and (3) Sparking rates.
- c. All records required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA upon request. Any records retained in an electronic format (e.g., computer) shall

be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.

### 1.9 Notifications

- a. The Permittee shall notify the Illinois EPA in writing within 21 days of the initial startup of the affected system.
- b. The Permittee shall notify the Illinois EPA in advance of using a sorbent other than Trona in the affected system. This notification shall be submitted at least three months in advance if possible or otherwise promptly after the Permittee learns that an alternative sorbent will need to be used. This notification shall identify the alternative sorbent and include an explanation of the reason for use of an alternate sorbent, the expected duration for use of the alternative sorbent (if temporary), and the expected changes in sorbent injection rates.

# 1.10 Reporting Requirements

a. If there is a deviation from the requirements of this permit, the Permittee shall promptly submit a report of the deviation to the Illinois EPA. Unless otherwise specified, this report shall be submitted within 30 days of the deviation. The report shall describe the deviation, the probable cause of the deviation, corrective actions that were taken and any actions to prevent future occurrences.

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Illinois Environmental Protection Agency Division of Air Pollution Control Regional Field Office 9511 West Harrison Des Plaines, Illinois 60016

Telephone: 847/294-4000 Fax: 847/294-4018

### 1.12 Duration of Authorization for Construction

a. The authorization to construct this project (i.e., upgrades to the affected boiler and construction of affected facilities as addressed by Section 2 of this permit) that is provided by this permit will expire if a continuous program of construction has not been started by March 1, 2013. This condition supersedes Standard Condition 1.

### 1.13 Authorization for Operation

- a. The affected boiler with affected system and cold-side ESP may be operated for one year under this construction permit, during which period initial emissions testing shall be completed and the Permittee shall apply for a revised CAAPP permit addressing the changes to the control system for the affected boiler, which application shall include a compliance assurance monitoring (CAM) plan for the affected boiler for emissions of particulate matter.
- b. Following completion of required emission testing, the Permittee may operate the affected boiler with affected system and coldside ESP under this permit until the operation of this control equipment is addressed by a CAAPP permit.
- c. These conditions supersede Standard Condition 6.

### Unit-Specific Conditions for the Material Handling Facilities

### 2.1 Introduction

The affected facilities for the purpose of these Unit-Specific Conditions are the new facility for handling dry sorbent and the existing facilities for handling fly ash, which would handle additional materials.

# 2.2 Applicable Federal Emission Standards

- a. The mills, storage silos and conveying system at the affected sorbent handling facility are subject to the NSPS for Nonmetallic Mineral Processing Plants, 40 CFR 60, Subpart 000 and related provisions of 40 CFR 60, Subpart A.
- b. Pursuant to the NSPS, 40 CFR 60.672(b) and (d), fugitive emissions of PM from subject units shall not exceed 7 percent.
- c. Pursuant to the NSPS, 40 CFR 60.672(f), stack emissions of PM, as defined by 40 CFR 60.671, from the subject units shall not exceed 7 percent
- d. At all times, the Permittee shall maintain and operate subject units, including associated air pollution control equipment, in a

manner consistent with good air pollution control practices for minimizing emissions, pursuant to 40 CFR 60.11(d).

Note: These conditions would not apply if mills or grinding equipment are not present at the affected facility. See Condition 2.4(a).

### 2.3 Applicable State Emission Standards

- a. The affected facilities are subject to 35 IAC 212.301, which provides that no person shall cause or allow the emission of fugitive particulate matter from any emission unit, that is visible by an observer looking generally toward the zenith (that is looking at the sky directly overhead) from a point beyond the property line of the source pursuant to 35 IAC 212.301.
- b. The emission units at the affected facilities are subject to 35 IAC 212.123 (a) which provides that no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent into the atmosphere from the affected facility, pursuant to 35 IAC 212.123(a).
- c. The emission units at the affected facilities are subject to 35 IAC 212.321(a), which provides that no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other new similar process emission units at a source or premises, exceeds the allowable emission rates specified in 35 IAC 212.321(c).

# 2.4 Non-Applicability Provisions

a. If the affected sorbent handling facility does not include mills or grinding equipment, which would reduce the size of sorbent, this permit is issued based on this facility not being subject to the federal NSPS, 40 CFR 60 Subpart 000, because it would not crush or grind a non-metallic mineral so that it would not constitute a nonmetallic mineral processing plant, as defined by 40 CFR 60.671. Accordingly, the requirements of Conditions 2.2, 2.7(a) and 2.9(a) would not be applicable.

# 2.5 Operational Limitations

- a. The amount of dry sorbent received by the affected sorbent handling facility shall not exceed 90,000 tons per year. Compliance with this limit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 months total).
- b. i. A. There shall be no visible emissions of fugitive particulate from the affected sorbent handling feeility.

- B. The filters for the affected sorbent handling facility shall have a design outlet loading for particulate matter of no more than 0.01 grains/scf, as shown by the manufacturer's performance specifications for the device or representative emission test data for similar filter devices.
- A. Emissions of PM from the affected facility shall each not exceed 1.95 tons per year.
  - B. This permit is issued based upon minimal emissions of PM due to vehicle traffic on plant roadways associated with transport of sorbent. For this purpose, PM emissions shall not exceed 1.1 tons per year.
- c. The transport of dry sorbent and fly ash from the affected boiler shall be on paved roads, which shall be maintained in good condition to control emissions of particulate matter.
- d. i. This permit is issued based on a negligible increase in PM emissions from the affected fly ash facility. For this purpose, the increase in FM emissions shall not exceed 0.1 pound per hour and 0.44 tons per year.
  - ii. This permit is issued based upon a minimal increase in emissions of PM due to the increase in vehicle traffic on plant roads for fly ash. For this purpose, the increase in PM emissions shall not exceed 1.1 tons per year.
- e. At all times, the Permittee shall maintain and operate the emission units at affected facilities including associated air pollution control measures, in a manner consistent with good air pollution control practices for minimizing emissions.

### 2.6 Inspection and Maintenance Requirements

- Inspections of the dry sorbent and fly ash handling facilities including emission control measures shall be conducted at least once per month when the facility is in operation to confirm compliance with the requirements of this permit.
- b. Maintenance and repair of filters, and other control measures shall be performed to assure that such measures function properly when material is being handled.
- c. The Permittee shall maintain records of the above inspections and maintenance/repair activity in an operating and maintenance log. This log shall contain, at a minimum, the time and description of the inspections or maintenance/repair activities.

# 2.7 Opacity Measurements

- a. For the affected sorbent handling facility, the Permittee shall comply with applicable requirements of the NSPS related to observation of opacity.
- b. Upon written request by the Illinois EPA, the Permittee shall conduct opacity observations for specific operation(s) or unit(s) at the affected facility within 45 calendar days of the request or on the date agreed upon by the Illinois EPA, whichever is later.

### 2.8 Recordkeeping Requirements

- a. The Permittee shall maintain a file containing documentation for the emission guarantee for each filter in the affected sorbent handling facility, in grains/dscf, as provided by the supplier of the device.
- b. The Permittee shall maintain operating records for the following items:
  - i. Amount of dry sorbent received, tons/month and tons/year.
  - Amount of dry sorbent transferred to the affected system, tons/month and tons/year.
- c. The Permittee shall keep records for the implementation of fugitive dust control measures on roadways used by trucks that handle dry sorbent and fly ash.
- d. The Permittee shall keep the following records related to PM emissions (tons/month and tons/year), with supporting calculations. For this purpose, roadway emissions shall be calculated using USEPA methods.
  - i. Records of emissions of PM and  $PM_{10}$  from the affected facility.
  - ii. Records of emissions of PM and  ${\rm PM}_{10}$  from roadways/truck traffic associated with the affected facility.
  - iii. Records of PM and PM10 emissions from roadways/truck traffic associated with handling of fly ash from the affected boiler

# 2.9 Reporting Requirements

a. The Permittee shall either comply with applicable reporting requirements of the NSPS unless crushing or grinding equipment will not be installed at the facility, in which case the Permittee shall notify the Illinois EPA of this decision.

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Note: Reporting of deviation is addressed by Condition 1.10(a).

2.10 The affected facilities may be operated pursuant to this construction permit until an operating permit becomes effective that addresses these facilities. This condition supersedes Standard Condition 6.

Please note that this permit has been revised at the request of the Permittee to provide additional time for a continuous program of construction on this project to be started (See Condition 1.12).

Date Signed: Manh 28,2012

Please note that this permit has been revised to correct a typographical

If you have any questions on this permit, please contact Kunj Patel at 217/785-1710.

Edwin C. Bakowski, P.E.

Edwin C. Bahula

Manager, Permit Section

Division of Air Pollution Control

ECB: KMP: psj /mp 3/28/12

FOS - Region 1, Illinois EPA Permit File - 95090047

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STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
P. O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

# STANDARD CONDITIONS FOR CONSTRUCTION/DEVELOPMENT PERMITS ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

July 1, 1985

The Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111-1/2, Section 1039) authorizes the Environmental Protection Agency to impose conditions on permits which it issues.

The following conditions are applicable unless susperseded by special condition(s).

- Unless this permit has been extended or it has been voided by a newly issued permit, this permit will expire one
  year from the date of issuance, unless a continuous program of construction or development on this project has
  started by such time.
- 2. The construction or development covered by this permit shall be done in compliance with applicable provisions of the Illinois Environmental Protection Act and Regulations adopted by the Illinois Pollution Control Board.
- 3. There shall be no deviations from the approved plans and specifications unless a written request for modification, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.
- 4. The permittee shall allow any duly authorized agent of the Agency upon the presentation of credentials, at reasonable times:
  - a. to enter the permittee's property where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit,
  - b. to have access to and to copy any records required to be kept under the terms and conditions of this permit,
  - to inspect, including during any hours of operation of equipment constructed or operated under this permit, such equipment and any equipment required to be kept, used, operated, calibrated and maintained under this permit,
  - d. to obtain and remove samples of any discharge or emissions of pollutants, and
  - e. to enter and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.
- 5. The issuance of this permit:
  - a. shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located,
  - b. does not release the permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities,
  - c. does not release the permittee from compliance with other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations,
- d. does not take into consideration or attest to the structural stability of any units or parts of the project, and IL 532-0225

APC 166 Rev. 5/99 Printed on Recycled Paper 090-00

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- e. in no manner implies or suggests that the Agency (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.
- 6. a. Unless a joint construction/operation permit has been issued, a permit for operation shall be obtained from the Agency before the equipment covered by this permit is placed into operation.
  - b. For purposes of shakedown and testing, unless otherwise specified by a special permit condition, the equipment covered under this permit may be operated for a period not to exceed thirty (30) days.
- 7. The Agency may file a complaint with the Board for modification, suspension or revocation of a permit:
  - a. upon discovery that the permit application contained misrepresentations, misinformation or false statements or that all relevant facts were not disclosed, or
  - b. upon finding that any standard or special conditions have been violated, or
  - c. upon any violations of the Environmental Protection Act or any regulation effective thereunder as a result of the construction or development authorized by this permit.

# Exhibit 7

Two Letters to Mr. Mike Kormos, Senior Vice President, System Operations & Planning, PJM Interconnection, Notifying PJM of Midwest Generation's Intention to Shut Down the Coal-Fired Units at the Fisk and Crawford Generating Stations (March 8, 2012)

# Electronic Filing - Received, Clerk's Office, 04/10/2012 \*\*\*\*PCB 2012-121 \*\*\*\*



March 8, 2012

By fax (610) 666-2296; then U.S. Mail

Mr. Mike Kormos Senior Vice President, System Operations & Planning PJM Interconnection 955 Jefferson Avenue Norristown, PA 19403

Re: Decommissioning of Fisk Unit 19

Dear Mr. Kormos:

On behalf of Midwest Generation, LLC, ("MidwestGen"), I am writing to provide notice of MidwestGen's intent to decommission Fisk 19. MidwestGen seeks PJM's determination that the unit could be retired as early as the date upon which we receive PJM approval (i.e. 30 days from today), but no later than December 31, 2012.

MidwestGen provides this notice pursuant to the PJM Open Access Transmission Tariff ("OATT"), Part V "Generation Deactivation". MidwestGen believes that under the standard of review for plant retirements, there are no reliability issues associated with MidwestGen's retirement of this unit.

In order to facilitate MidwestGen's retirement plan, we are requesting that PJM proceed now with a thirty (30) day reliability review as contemplated in the PJM OATT, Part V, and section 113.2.

We would be pleased to discuss this matter further with you and look forward to hearing from you. Please feel free to contact Reem Fahey (312-583-6033) to discuss any questions or concerns.

Very truly yours,

John C. Kennedy

Senior Vice President, Generation

235 Remington Blvd. Suite A Bolingbrook, Il 60440

# Electronic Filing - Received, Clerk's Office, 04/10/2012 \*\*\*\*PCB 2012-121 \*\*\*\*



March 8, 2012

By fax (610) 666-2296; then U.S. Mail

Mr. Mike Kormos Senior Vice President, System Operations & Planning PJM Interconnection 955 Jefferson Avenue Norristown, PA 19403

Re: Decommissioning of Crawford Units 7 & 8

Dear Mr. Kormos:

On behalf of Midwest Generation, LLC, ("MidwestGen"), I am writing to provide notice of MidwestGen's intent to decommission Crawford units 7 & 8. MidwestGen seeks PJM's determination that the units could be retired as early as the date upon which we receive PJM approval (i.e. 30 days from today), but no later than December 31, 2014.

MidwestGen provides this notice pursuant to the PJM Open Access Transmission Tariff ("OATT"), Part V "Generation Deactivation". MidwestGen believes that under the standard of review for plant retirements, there are no reliability issues associated with MidwestGen's retirement of these units.

In order to facilitate MidwestGen's retirement plan, we are requesting that PJM proceed now with a thirty (30) day reliability review as contemplated in the PJM OATT, Part V, section 113.2.

We would be pleased to discuss this matter further with you and look forward to hearing from you. Please feel free to contact Reem Fahey (312-583-6033) to discuss any questions or concerns.

Very truly yours,

John C. Kennedy

Senior Vice President, Generation

235 Remington Blvd. Suite A Bolingbrook, Il 60440

# Exhibit 8

Letter to Cheryl Newton, USEPA Region 5, from Illinois EPA (June 24, 2011) Conveying the State's BART SIP Submittal

and

Selected Pages from Illinois EPA's Technical Support Document for Best Available Retrofit Technology Under the Regional Haze Rule, AQPSTR 09-06 (April 29, 2011)

# Electronic Filing - Received, Clerk's Office, 04/10/2012 \* \* \* \* \* PCB 2012-121 \* \* \* \* \*



# ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 North Grand Avenue East, P.O. Box 19276, Springfield, Illinois 62794-9276 • (217) 782 2829 James R. Thompson Center, 100 West Randolph, Suite 11-300, Chicago, IL 60601 • (312) 814-6026

PAT OUINN, GOVERNOR

217/782-5544 217/782-9143 (TDD)

June 24, 2011

CERTIFIED MAIL 7009 2820 0001 7492 1699

Ms. Cheryl A. Newton, Director
Office of the Air and Radiation Division
U. S. Environmental Protection Agency Region V (R-18J)
77 West Jackson Boulevard
Chicago, IL 60604-3507

Re:

Regional Haze Program Requirements

Dear Ms. Dewton:

Pursuant to Section 169A of the Clean Air Act ("CAA") (42 U.S.C. § 7491) and Section 4 of the Illinois Environmental Protection Act (415 ILCS 5/4), the Illinois Environmental Protection Agency submits the enclosed revision to the Illinois State Implementation Plan ("SIP"). This revision has been prepared to satisfy Illinois' obligation under these sections to develop a Regional Haze SIP with measures necessary to make reasonable progress towards remedying visibility impairment in Class I areas. Under 40 CFR § 51.308, the core requirements for the plan include reasonable progress goals, calculations of baseline and natural visibility conditions, a long-term strategy for regional haze, a monitoring strategy, and Best Available Retrofit Technology requirements for regional haze visibility impairment.

In order to assist with your review of this plan submittal, the following documents are enclosed (two hard copies and one electronic copy on disc):

- Attachment 1) Regional Haze State Implementation Plan for Illinois, AQPSTR 10-08, May 10, 2011.
  - Appendix A, Draft List of Class I Areas Located Within (or Impacted by) Midwest RPO States, June 26, 2007.
  - Appendix B, Regional Air Quality Analysis for Ozone, PM<sub>2.5</sub>, and Regional Haze: Final Technical Support Document, April 25, 2008.
  - Appendix C, 2012 Site Directory (Illinois Air Monitoring Network).

# Electronic Filing - Received, Clerk's Office, 04/10/2012 \*\*\*\*PCB 2012-121 \*\*\*\*

- Attachment 2) Technical Support Document for Best Available Retrofit Technology Under the Regional Haze Rule, AQPSTR 09-06, April 29, 2011.
  - Appendix A, Single Source Modeling to Support Regional Haze BART Modeling Protocol, March 21, 2006, Lake Michigan Air Directors Consortium.
  - Appendix B, Regional Air Quality Analysis for Ozone, PM<sub>2.5</sub>, and Regional Haze: Final Technical Support Document, April 25, 2008. (See Attachment 1, above)
  - Appendix C, Illinois Mercury Rule, 35 Ill. Adm. Code 225.
  - Appendix D, BART Analysis for the Kineaid Power Plant, ENSR Corporation, January 2009, Document No. 02285-076-400.
  - Appendix E, Consent Decree between the United States of America, et al. and ExxonMobil Corporation, et al.
  - Appendix F. Consent Decree between the United States of America, et al. and CITGO Petroleum Corporation, et al.
- Attachment 3) Ameren Energy Resources, Notice of Intent, dated December 27, 2007.

  Dynegy Midwest Generation, Inc., Notice of Intent, dated November 26, 2007.
- Attachment 5) Midwest Generation, LLC, Notice of Intent, dated December 27, 2007.
- Attachment 6) Notice of Hearing
- Attachment 7) Presentations of Hearing held December 6, 2010
- Attachment 8) Transcript of Hearing held December 6, 2010
- Attachment 9) Responsiveness Summary
- Attachment 10) Kincaid Generation, LLC, Joint Construction and Operating Permit
- Attachment 11) City of Springfield (CWLP) Joint Construction and Operating Permit

In addition, the Regional Haze SIP Checklist is enclosed to assist in your review. If further information is required, please contact Rob Kaleel, Manager, Air Quality Planning Section, Bureau of Air, at 217/785-4140.

Sincerely,

Laurel L. Kroack Chief, Bureau of Air

Attachments

# TECHNICAL SUPPORT DOCUMENT FOR BEST AVAILABLE RETROFIT TECHNOLOGY UNDER THE REGIONAL HAZE RULE

**AQPSTR 09-06** 

April 29, 2011

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY 1021 NORTH GRAND AVENUE EAST P.O. BOX 19276 SPRINGFIELD, ILLINOIS 62794-9276

- a multi-pollutant agreement between the Illinois EPA and Dominion Energy Services, as operator, and Kincaid Generation, LLC, as owner, of the Kincaid Generating Station (collectively "Dominion Kincaid"), to achieve BART-control levels; and
- a similar agreement between the Illinois EPA and the City of Springfield, Illinois d/b/a
   City, Water, Light and Power (CWLP), to achieve BART-control levels and to shut down one of its existing subject-to-BART units.

Table 4.1 Presumptive BART Emission Limits for Coal-Fired EGUs

Pollutant	Boiler Type	Coal Type	Presumptive Limit (lbs/mmBTU)
SO <sub>2</sub>	All units	All coal types	0.15 (or 95% control)
NOx	Dry-bottom wall-fired	Bituminous Sub-bituminous Lignite	0.39 0.23 0.29
	Tangential-fired	Bituminous Sub-bituminous Lignite	0.28 0.15 0.17
	Cell burners	Bituminous Sub-bituminous	0.40 0.45
	Dry-turbo-fired	Bituminous Sub-bituminous	0.32 0.23
	Wet-bottom tangential-fired	All	0.62
	Cyclone	All	0.10

# 4.1.1 EGUs under the MPS and CPS

Three electric utilities operating in Illinois, Dynegy, Ameren, and Midwest Generation have committed to comply with the MPS and CPS under the Illinois Mercury Rule, requiring the installation of state-of-the-art pollution controls on many of their electric generating units in

Illinois. These regulations were promulgated to allow coal-fired electric utilities more flexibility in meeting the Illinois Mercury Rule in exchange for significant NO<sub>x</sub> and SO<sub>2</sub> reductions. Appendix C contains the relevant portions of the fully adopted Illinois Mercury Rule, with the requirements for NO<sub>x</sub> and SO<sub>2</sub> emission reductions highlighted. Illinois intends to submit Appendix C to USEPA, the highlighted portions of which will become part of Illinois' SIP to satisfy BART obligations for affected units at these three utilities. In addition, the MPS and CPS requirements will ultimately be contained in federally enforceable permits.

The MPS and CPS require affected utilities to meet fleet-wide average emission rates, which will require installation of controls on emission units regardless of whether or not they are subject to BART. The agreements between Illinois and the utilities are intended to allow the companies the flexibility to meet the fleet-wide emission limits in the most cost-effective manner. The agreements contain a range of compliance dates, beginning as early as 2012 and as late as 2019. The Illinois EPA recognizes that, in general, the compliance date for BART controls is within 5 years of USEPA's approval of the State's SIP. Assuming USEPA approves Illinois' SIP in 2011 or 2012, the compliance date for BART controls would be in 2016 or 2017. The Illinois EPA's analysis of emission reductions that will result from implementation of the MPS and CPS by the year 2015 demonstrates conclusively that Illinois' approach will yield much larger reductions of NO<sub>x</sub> and SO<sub>2</sub> than will implementation of BART controls on just subject to BART emission units. Emission reductions occurring after 2015 will improve visibility in Class I areas impacted by sources in Illinois, regardless of USEPA's decision of whether to approve those reductions as meeting BART requirements. The following subsections provide Illinois EPA's analysis of the emission reductions expected from the MPS and CPS and a description of the controls that will most likely be installed as a result of the MPS and CPS.

# 4.1.1.1 Dynegy

Dynegy operates several electric generating stations in Illinois, all of which are affected by the requirements of the MPS. Only the three coal-fired boilers at Baldwin are subject to BART, however. Units 1 and 2 at Baldwin are cyclone-fired boilers burning sub-bituminous coal, while Unit 3 is a tangentially-fired unit burning sub-bituminous coal. Currently, Units 1 and 2 are controlled by over-fire air ("OFA") and selective catalytic reduction ("SCR") for NO<sub>x</sub>, while

Table 4.5 SO<sub>2</sub> reductions from Ameren EGUs BART vs. MPS

		Base Year			Presumptive BART		MPS 2015*		MPS Finat*	
Plant	Unit	1000 mmBTU	Lbs/ mmBTU	Tons	Lbs/ mmBTU	Tons/Year Reduction	Lbs/ mmBTU	Tons/Year Reduction	Lbs/ mmBTU	Tons/Year Reduction
Coffeen	1	18,570	1.54	14,332	0.15	12,906	0.25	11,978	0.23	12,163
Coffeen	2	37,545	1.49	27,999	0.15	25,155	0.25	23,278	0.23	23,653
Duck Creek	1	22,635	0.97	11,026	0.15	9,280	0.25	8,149	0.23	8,375
E D Edwards	1	6,417	3.55	11,399	NA.	NA	0.25	10,588	0.23	10,652
E D Edwards	2	17,222	1.7	14,666	0.15	13,347	0,25	12,486	0.23	12,658
E D Edwards	3	15,972	1.21	9,683	0.15	8,465	0.25	7,667	0.23	7,826
Hutsonyille	5	3,161	4.53	7,163	NA	NA	0.25	6,765	0.23	6,796
Hutsonville	6	3,443	4.53	7,791	NA	NA	0.25	7,368	0.23	7,402
Joppa	1	13,548	0.51	3,441	NA	NA	0.25	1,761	0.23	1,897
Joppa	2	16,258	0.51	4,139	NA	NA	0.25	2,114	0.23	2,276
Joppa	3	15,396	0.51	3,947	NA	NA	0.25	2,001	0.23	2,155
Joppa	4	13,402	0.52	3,488	NA	NA	0.25	1,809	0.23	1,943
Joppa	5	15,094	0.52	3,932	NA	NA	0.25	2,038	0.23	2,189
Joppa	6	16,063	0.52	4,182	NA	NA	0.25	2,169	0.23	2,329
Meredosia	1	1,134	5.02	2,844	NA	NA	0.25	2,705	0.23	2,716
Meredosia	2	1,337	5.02	3,356	NA	NA	0.25	3,189	0.23	3,202
Meredosia	3	1,069	5.04	2,694	NA	NA.	0.25	2,560	0.23	2,571
Meredosia	4	1,406	5	3,518	NA	NA	0.25	3,339	0.23	3,353
Meredosia	5	10,810	2,34	12,639	NA	NA	0.25	11,296	0.23	11,405
Newton	1	40,631	0.45	9,046	NA	NA	0.25	4,063	0.23	4,459
Newton	2	38,533	0.46	8,823	NA	NA	0.25	4,046	0.23	4,431
			1.099			69,154		131,367		134,464

<sup>\*</sup>The MPS emission limits are a system-wide average and are not intended to reflect unit-specific emission limits.

# 4.1.1.3 Midwest Generation

Midwest Generation operates 19 coal-fired EGUs at six separate locations in Illinois. Nine of these units, located at Powerton, Joliet, and Will County, are subject to BART.

# Powerton

All four units at the Powerton station are subject to BART. All four units are cyclone-type boilers firing sub-bituminous coal and vent to a common stack. Current NO<sub>x</sub> control for all units

consists of low- $NO_x$  burners and OFA. Midwest Generation is expected to install selective non-catalytic reduction (SNCR) controls on all four units by 2012. The units currently burn low-sulfur coal to control for  $SO_2$ , but Midwest Generation currently plans to install flue gas desulfurization (FGD) equipment by the end of 2013 on all four units.

# Joliet

Four of the five units (Units 71, 72, 81, and 82) at the Joliet facility are subject to BART. The four units of interest are all tangentially-fired boilers burning sub-bituminous coal. Current  $NO_x$  controls for Boilers 71, 72, 81, and 82 consist of low- $NO_x$  burners and OFA. Midwest Generation is expected to install SNCR controls on these four units by 2012. For  $SO_2$ , Midwest Generation is expected to install FGD equipment on all four BART units at Joliet by 2019.

# Will County

Of the four units at the Will County plant, only Unit 4 is subject to BART. Unit 4 is tangentially fired and burns sub-bituminous coal. NO<sub>x</sub> emissions from Unit 4 are currently controlled by low-NO<sub>x</sub> burners and OFA. Midwest Generation is expected to install an SNCR on this unit by 2012. For SO<sub>2</sub>, Midwest Generation is expected to install FGD equipment by 2019.

It should be noted that under the CPS, Midwest Generation is not required to meet unit specific emission limits for NO<sub>x</sub> or SO<sub>2</sub>, and that the anticipated CPS emission estimates given in Tables 4.6 and 4.7 reflect the fleet-wide average emissions for all units. Tables 4.6 and 4.7 show that the CPS will lead to system-wide reductions of more than 38,000 TPY of NO<sub>x</sub> and more than 35,000 TPY of SO<sub>2</sub> by 2015, which are much greater than the reductions that would be achieved by meeting the presumptive BART emission levels at the subject-to-BART units.

# 4.1.2 Other Illinois EGUs

The MPS and CPS requirements do not apply to Dominion Kincaid or to CWLP. The Illinois EPA has negotiated separate agreements with these companies to address the BART requirements. Consistent with these agreements, both plants have either installed controls or plan to install controls that will meet or exceed the presumptive BART limits. Unit-specific requirements for these sources are contained in federally-enforceable permits, which are included

Table 4.7 SO<sub>2</sub> reductions from Midwest Generation EGUs BART vs. MPS

THE PARTY		Base Year			Presumptive BART		CPS 2015*		CPS Final*	
Plant	Unit	1000 mmBTU	Lbs/ mmBTU	Tons	Lbs/ mmBTU	Tons/Year Reduction	Lbs/ mmBTU	Tons/Year Reduction	Lbs/ mmBTU	Tons/Year Reduction
Crawford	7	11,627	0.54	3,142	NA	NA	0.28	1,512	0.11	2,500
Crawford	8	17.348	0.51	4,453	NA	NA	0.28	1,995	0.11	3,470
Fisk	19	14,650	0.52	3,843	NA	NA	0.28	1,758	0.11	3,003
Joliet 29	71	15,034	0.7	5,276	0.15	4,134	0.28	3,157	0.11	4,435
Joliet 29	72	13,824	0.7	4,828	0.15	3,802	0.28	2,903	0.11	4,078
Joliet 29	81	15,585	0.68	5,300	0.15	4,130	0.28	3,117	0.11	4,442
Jollet 29	82	15,403	0.68	5,260	0.15	4,082	0.28	3,081	0.11	4,390
Joliet 9	5	14,369	0.63	4,559	NA	NA	0.28	2,515	0.11	3,736
Powerton	51	20,936	0.42	4,444	0.15	2,826	0.28	1,466	0.11	3,245
Powerton	52	21,137	0.43	4,497	0.15	2,959	0.28	1,585	0.11	3,382
Powerton	61	18,293	0.43	3,984	0.15	2,561	0.28	1,372	0.11	2,927
Powerton	62	18,088	0.43	3,909	0.15	2,532	0.28	1,357	0.11	2,894
Waukegan	17	7,502	0.44	1,642	NA	NA	0.28	600	0.11	1,238
Waukegan	7	16,117	0.47	3,754	NA	NA	0.28	1,531	0.11	2,901
Waukegan	8	21,950	0.49	5,385	NA	NA	0.28	2,305	0.11	4,171
Will County	1	9,398	0.42	1,969	NA	NA	0.28	658	0.11	1,457
Will County	2	8,293	0.39	1,617	NA	NA	0.28	456	0.11	1,161
Will County	3	15,559	0.47	3,636	NA	NA	0.28	1,478	0.11	2,801
Will County	4	27.585	0.47	6,462	0.15	4,414	0.28	2,621	0.11	4,965
			0.515			31,440		35,465		61,194

<sup>\*</sup>The CPS emission limits are a system-wide average and are not intended to reflect unit-specific emission limits.

# 4.1.2.1 CWLP

The subject-to-BART units at CWLP are Dallman 31, Dallman 32, and Lakeside 8. CWLP shut down the Lakeside unit in 2009. The Dallman 31 and 32 units are cyclone boilers and burn bituminous coal. CWLP currently operates SCRs and scrubbers on both Dallman units. It should be noted that CWLP's generating capacity is less than 750 MW, so the presumptive BART emission limits shown in Table 4.1 do not apply. Rather, the BART rule requires that such units operate SCRs, or equivalent controls, to control NO<sub>x</sub> emissions on an annual basis. For SO<sub>2</sub>, the BART rule requires 95% emissions reduction.

# Appendix C

# Illinois Mercury Rule

The Illinois EPA is seeking approval from the United States Environmental Protection Agency of the following bolded provisions of the Illinois Mercury Rule, 35 Ill. Adm. Code Part 225, Subpart B: Control of Mercury Emissions from Coal-Fired Electric Generating Units, under this submission. Please note that the non-bolded provisions are included for context.

# Section 225.233 Multi-Pollutant Standards (MPS)

- a) General.
  - As an alternative to compliance with the emissions standards of Section 225.230(a), the owner of eligible EGUs may elect for those EGUs to demonstrate compliance pursuant to this Section, which establishes control requirements and standards for emissions of NO<sub>x</sub> and SO<sub>2</sub>, as well as for emissions of mercury.
  - 2) For the purpose of this Section, the following requirements apply:
    - A) An eligible EGU is an EGU that is located in Illinois and which commenced commercial operation on or before December 31, 2004; and
    - B) Ownership of an eligible EGU is determined based on direct ownership, by the holding of a majority interest in a company that owns the EGU or EGUs, or by the common ownership of the company that owns the EGU, whether through a parent-subsidiary relationship, as a sister corporation, or as an affiliated corporation with the same parent corporation, provided that the owner has the right or authority to submit a CAAPP application on behalf of the EGU.
  - The owner of one or more EGUs electing to demonstrate compliance with this Subpart B pursuant to this Section must submit an application for a CAAPP permit modification to the Agency, as provided in Section 225.220, that includes the information specified in subsection (b) of this Section and which clearly states the owner's election to demonstrate compliance pursuant to this Section 225.233.
    - A) If the owner of one or more EGUs elects to demonstrate compliance with this Subpart pursuant to this Section, then all EGUs it owns in Illinois as of July 1, 2006, as defined in subsection (a)(2)(B) of this Section, must be thereafter subject to the standards and control

requirements of this Section, except as provided in subsection (a)(3)(B). Such EGUs must be referred to as a Multi-Pollutant Standard (MPS) Group.

- B) Notwithstanding the foregoing, the owner may exclude from an MPS Group any EGU scheduled for permanent shutdown that the owner so designates in its CAAPP application required to be submitted pursuant to subsection (a)(3) of this Section, with compliance for such units to be achieved by means of Section 225.235.
- 4) When an EGU is subject to the requirements of this Section, the requirements apply to all owners or operators of the EGU.

# b) Notice of Intent.

The owner of one or more EGUs that intends to comply with this Subpart B by means of this Section must notify the Agency of its intention by December 31, 2007. The following information must accompany the notification:

- 1) The identification of each EGU that will be complying with this Subpart B by means of the multi-pollutant standards contained in this Section, with evidence that the owner has identified all EGUs that it owned in Illinois as of July 1, 2006 and which commenced commercial operation on or before December 31, 2004;
- 2) If an EGU identified in subsection (b)(1) of this Section is also owned or operated by a person different than the owner submitting the notice of intent, a demonstration that the submitter has the right to commit the EGU or authorization from the responsible official for the EGU accepting the application;
- The Base Emission Rates for the EGUs, with copies of supporting data and calculations;
- A summary of the current control devices installed and operating on each EGU and identification of the additional control devices that will likely be needed for the each EGU to comply with emission control requirements of this Section, including identification of each EGU in the MPS group that will be addressed by subsection (c)(1)(B) of this Section, with information showing that the eligibility criteria for this subsection (b) are satisfied; and
- 5) Identification of each EGU that is scheduled for permanent shut down, as provided by Section 225.235, which will not be part of the MPS Group and which will not be demonstrating compliance with this Subpart B pursuant to this Section.

- 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 SO<sub>2</sub> 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 SO<sub>2</sub> Scrubber.
    - B) An owner of an EGU in an MPS Group has two options under this subsection (c). For an MPS Group that contains EGUs smaller than 90 gross MW in capacity, the owner may designate any such EGUs to be not subject to subsection (c)(1)(A) of this Section. Or, for an MPS Group that contains EGUs with gross MW capacity of less than 115 MW, the owner may designate any such EGUs to be not subject to subsection (c)(1)(A) of this Section, provided that the aggregate gross MW capacity of the designated EGUs does not exceed 4% of the total gross MW capacity of the MPS Group. For any EGU subject to one of these two options, unless the EGU is subject to the emission standards in subsection (d)(2) of this Section, beginning on January 1, 2013, and continuing until such date that the owner or operator of the EGU commits to comply with the mercury emission standard in subsection (d)(2) of this Section, the owner or operator of the EGU must install and properly operate and maintain a Halogenated Activated Carbon Injection System that complies 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 either a Cold-Side Electrostatic Precipitator or Fabric Filter. The use of a properly installed, operated, and maintained Halogenated Activated Carbon Injection System that meets the sorbent injection requirements of subsection (c)(2) of this Section is defined as the "principal control technique."

- 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, Calgon Carbon's FLUEPAC CF Plus, or Calgon Carbon's FLUEPAC MC Plus, 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 lbs 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 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 shall be the gas flow rate in the stack for all units except for those

equipped with activated carbon injection prior to a hot-side electrostatic precipitator; for units equipped with activated carbon injection prior to a hot-side electrostatic precipitator, the flue gas flow rate shall be the gas flow rate at the inlet to the hot-side electrostatic precipitator, which shall be determined as the stack flow rate adjusted through the use of Charles' Law for the differences in gas temperatures in the stack and at the inlet to the electrostatic precipitator ( $V_{esp} = V_{stack} \times T_{esp}/T_{stack}$ , where V = gas flow rate in acf and T = gas temperature in Kelvin or Rankine

- The owner or operator of an EGU that seeks to operate an EGU with an activated carbon injection rate or rates that are set on a unit-specific basis pursuant to subsection (c)(2)(C)(iv) of this Section must submit an application to the Agency proposing such rate or rates, and must meet the requirements of subsections (c)(3)(A) and (c)(3)(B) of this Section, subject to the limitations of subsections (c)(3)(C) and (c)(3)(D) of this Section:
  - A) The application must be submitted as an application for a new or revised federally enforceable operating permit for the EGU, and it must include a summary of relevant mercury emission data for the EGU, the unit-specific injection rate or rates that are proposed, and detailed information to support the proposed injection rate or rates; and
  - B) This application must be submitted no later than the date that activated carbon must first be injected. For example, the owner or operator of an EGU that must inject activated carbon pursuant to subsection (c)(1)(A) of this subsection must apply for unit-specific injection rate or rates by July 1, 2009. Thereafter, the owner or operator of the EGU may supplement its application; and
  - C) Any decision of the Agency denying a permit or granting a permit with conditi that set a lower injection rate or rates may be appealed to the Board pursuant to Section 39 of the Act; and
  - D) The owner or operator of an EGU may operate at the injection rate or rates proposed in its application until a final decision is made on the application, including a final decision on any appeal to the Board.
- During any evaluation of the effectiveness of a listed sorbent, an alternative sorbent, or other technique to control mercury emissions, the owner or operator of an EGU need not comply with the requirements of subsection (c)(2) of this Section for any system needed to carry out the evaluation, as further provided as follows:
  - A) The owner or operator of the EGU must conduct the evaluation in accordance with a formal evaluation program submitted to the Agency at least 30 days prior to commencement of the evaluation;

- B) The duration and scope of the evaluation may not exceed the duration and scope reasonably needed to complete the desired evaluation of the alternative control technique, as initially addressed by the owner or operator in a support document submitted with the evaluation program;
- C) The owner or operator of the EGU must submit a report to the Agency no later than 30 days after the conclusion of the evaluation that describes the evaluation conducted and which provides the results of the evaluation; and
- D) If the evaluation of the alternative control technique shows less effective control of mercury emissions from the EGU than was achieved with the principal control technique, the owner or operator of the EGU must resume use of the principal control technique. If the evaluation of the alternative control technique shows comparable effectiveness to the principal control technique, the owner or operator of the EGU may either continue to use the alternative control technique in a manner that is at least as effective as the principal control technique, or it may resume use of the principal control technique. If the evaluation of the alternative control technique shows more effective control of mercury emissions than the control technique, the owner or operator of the EGU must continue to use the alternative control technique in a manner that is more effective than the principal control technique, so long as it continues to be subject to this subsection (c).
- 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 fluegas flow rate from the EGU (and, if the unit is equipped with activated carbon injection prior to a hot-side electrostatic precipitator, flue gas temperature at the inlet of the hot-side electrostatic precipitator and in the stack), and the sorbent feed rate, in pounds per million actual cubic feet of flue, 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, gas flow rate in the stack, and, if the unit is equipped with activated carbon injection prior to a hot-side electrostatic precipitator, flue gas temperature at the inlet of the hot-side electrostatic precipitator and in the stack. It must automatically record this data and the sorbent carbon feed rate, in pounds per million actual cubic feet of flue gas, 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.
- Until June 30, 2012, as an alternative to the CEMS or excepted monitoring system (sorbent trap system) monitoring, recordkeeping, and reporting requirements in Sections 225.240 through 225.290, the owner or operator of an EGU may elect to comply with the emissions testing, monitoring, recordkeeping, and reporting requirements in Section 225.239(c), (d), (e), (f)(1) and (2), (h)(2), (i)(3) and (4), and (j)(1).
- 7) In addition to complying with the applicable reporting 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 submit quarterly reports for the recordkeeping and monitoring conducted pursuant to subsection (c)(5) of this Section.
- d) Emission Standards for Mercury.
  - 1) For each EGU in an MPS Group that is not addressed by subsection (c)(1)(B) of this Section, beginning January 1, 2015 (or such earlier date when the owner or operator of the EGU notifies the Agency that it will comply with these standards) and continuing thereafter, the owner or operator of the EGU must comply with one of the following standards on a rolling 12-month basis:
    - A) An emission standard of 0.0080 lb mercury/GWh gross electrical output; or
    - B) A minimum 90-percent reduction of input mercury.
  - 2) For each EGU in an MPS Group that has been addressed under subsection (c)(1)(B) of this Section, beginning on the date when the owner or operator of the EGU notifies the Agency that it will comply with these standards and continuing thereafter, the owner or operator of the EGU must comply with one of the following standards on a rolling 12-month basis:
    - A) An emission standard of 0.0080 lb mercury/GWh gross electrical output; or
    - B) A minimum 90-percent reduction of input mercury.
  - 3) Compliance with the mercury emission standard or reduction requirement of this subsection (d) must be calculated in accordance with Section 225.230(a) or (d), or Section 225.232 until December 31, 2013.

- 4) Until June 30, 2012, as an alternative to demonstrating compliance with the emissions standards in this subsection (d), the owner or operator of an EGU may elect to comply with the emissions testing requirements in Section 225.239(a)(4), (b), (c), (d), (e), (f), (g), (h), (i), and (j) of this Subpart.
- e) Emission Standards for NO<sub>x</sub> and SO<sub>2</sub>.
  - 1) NO<sub>x</sub> Emission Standards.
    - A) Beginning in calendar year 2012 and continuing in each calendar thereafter, for the EGUs in each MPS Group, the owner and operator of the EGUs must comply with an overall NOx annual emission rate of no more than 0.11 lb/million Btu or an emission rate equivalent to 52 percent of the Base Annual Rate of NO<sub>x</sub> emissions, whichever is more stringent.
    - B) Beginning in the 2012 ozone season and continuing in each ozone season thereafter, for the EGUs in each MPS Group, the owner and operator of the EGUs must comply with an overall NO<sub>x</sub> seasonal emission rate of no more than 0.11 lb/million Btu or an emission rate equivalent to 80 percent of the Base Seasonal Rate of NO<sub>x</sub> emissions, whichever is more stringent.
  - 2) SO<sub>2</sub> Emission Standards.
    - A) Beginning in calendar year 2013 and continuing in calendar year 2014, for the EGUs in each MPS Group, the owner and operator of the EGUs must comply with an overall SO<sub>2</sub> annual emission rate of 0.33 lb/million Btu or a rate equivalent to 44 percent of the Base Rate of SO<sub>2</sub> emissions, whichever is more stringent.
    - B) Beginning in calendar year 2015 and continuing in each calendar year thereafter, for the EGUs in each MPS Grouping, the owner and operator of the EGUs must comply with an overall annual emission rate for SO<sub>2</sub> of 0.25 lbs/million Btu or a rate equivalent to 35 percent of the Base Rate of SO<sub>2</sub> emissions, whichever is more stringent.
  - Ameren MPS Group Multi-Pollutant Standard
    - A) Notwithstanding the provisions of subsections (e)(1) and (2) of this Section, this subsection (e)(3) applies to the Ameren MPS Group as described in the notice of intent submitted by Ameren Energy Resources in accordance with subsection (b) of this Section.
    - B) NO. Emission Standards.

- i) Beginning in the 2010 ozone season and continuing in each ozone season thereafter, for the EGUs in the Ameren MPS Group, the owner and operator of the EGUs must comply with an overall  $NO_x$  seasonal emission rate of no more than 0.11 lb/million Btu.
- ii) Beginning in calendar year 2010 and continuing in calendar year 2011, for the EGUs in the Ameren MPS Group, the owner and operator of the EGUs must comply with an overall NO<sub>x</sub> annual emission rate of no more than 0.14 lb/million Btu.
- iii) Beginning in calendar year 2012 and continuing in each calendar year thereafter, for the EGUs in the Ameren MPS Group, the owner and operator of the EGUs must comply with an overall NO<sub>x</sub> annual emission rate of no more than 0.11 lb/million Btu.

# C) SO<sub>2</sub> Emission Standards

- Beginning in calendar year 2010 and continuing in each calendar year through 2013, for the EGUs in the Ameren MPS Group, the owner and operator of the EGUs must comply with an overall SO<sub>2</sub> annual emission rate of 0.50 lb/million Btu.
- ii) In calendar year 2014, for the EGUs in the Ameren MPS Group, the owner and operator of the EGUs must comply with an overall SO<sub>2</sub> annual emission rate of 0.43 lb/million Btu.
- iii) Beginning in calendar year 2015 and continuing in calendar year 2016, for the EGUs in the Ameren MPS Group, the owner and operator of the EGUs must comply with an overall SO<sub>2</sub> annual emission rate of 0.25 lb/million Btu.
- iv) Beginning in calendar year 2017 and continuing in each calendar year thereafter, for the EGUs in the Ameren MPS Group, the owner and operator of the EGUs must comply with an overall SO<sub>2</sub> annual emission rate of 0.23 lb/million Btu.
- 4) Compliance with the NO<sub>x</sub> and SO<sub>2</sub> emission standards must be demonstrated in accordance with Sections 225.310, 225.410, and 225.510. The owner or operator of EGUs must complete the demonstration of compliance before March 1 of the following year for annual standards and before November 1 for seasonal standards, by which date a compliance report must be submitted to the Agency.
- Requirements for NO<sub>x</sub> and SO<sub>2</sub> Allowances.

- The owner or operator of EGUs in an MPS Group must not sell or trade to any person or otherwise exchange with or give to any person NO<sub>x</sub> allowances allocated to the EGUs in the MPS Group for vintage years 2012 and beyond that would otherwise be available for sale, trade, or exchange as a result of actions taken to comply with the standards in subsection (e) of this Section. Such allowances that are not retired for compliance must be surrendered to the Agency on an annual basis, beginning in calendar year 2013. This provision does not apply to the use, sale, exchange, gift, or trade of allowances among the EGUs in an MPS Group.
- 2) The owners or operators of EGUs in an MPS Group must not sell or trade to any person or otherwise exchange with or give to any person SO<sub>2</sub> allowances allocated to the EGUs in the MPS Group for vintage years 2013 and beyond that would otherwise be available for sale or trade as a result of actions taken to comply with the standards in subsection (e) of this Section. Such allowances that are not retired for compliance, or otherwise surrendered pursuant to a consent decree to which the State of Illinois is a party, must be surrendered to the Agency on an annual basis, beginning in calendar year 2014. This provision does not apply to the use, sale, exchange, gift, or trade of allowances among the EGUs in an MPS Group.
- The provisions of this subsection (f) do not restrict or inhibit the sale or trading of allowances that become available from one or more EGUs in a MPS Group as a result of holding allowances that represent over-compliance with the NO<sub>x</sub> or SO<sub>2</sub> standard in subsection (e) of this Section, once such a standard becomes effective, whether such over-compliance results from control equipment, fuel changes, changes in the method of operation, unit shut downs, or other reasons.
- For purposes of this subsection (f), NO<sub>x</sub> and SO<sub>2</sub> allowances mean allowances necessary for compliance with Sections 225.310, 225.410, or 225.510, 40 CFR 72, or Subparts AA and AAAA of 40 CFR 96, or any future federal NO<sub>x</sub> or SO<sub>2</sub> emissions trading programs that modify or replace these programs. This Section does not prohibit the owner or operator of EGUs in an MPS Group from purchasing or otherwise obtaining allowances from other sources as allowed by law for purposes of complying with federal or state requirements, except as specifically set forth in this Section.
- By March 1, 2010, and continuing each year thereafter, the owner or operator of EGUs in an MPS Group must submit a report to the Agency that demonstrates compliance with the requirements of this subsection (f) for the previous calendar year, and which includes identification of any allowances that have been surrendered to the USEPA or to the Agency and any allowances that were sold, gifted, used, exchanged, or traded because they became available due to overcompliance. All allowances that are required to be surrendered must be surrendered by August 31, unless USEPA has not yet deducted the allowances

from the previous year. A final report must be submitted to the Agency by August 31 of each year, verifying that the actions described in the initial report have taken place or, if such actions have not taken place, an explanation of all changes that have occurred and the reasons for such changes. If USEPA has not deducted the allowances from the previous year by August 31, the final report will be due, and all allowances required to be surrendered must be surrendered, within 30 days after such deduction occurs.

g) Notwithstanding 35 III. Adm. Code 201.146(hhh), until an EGU has complied with the applicable emission standards of subsections (d) and (e) of this Section for 12 months, the owner or operator of the EGU must obtain a construction permit for any new or modified air pollution control equipment that it proposes to construct for control of emissions of mercury, NO<sub>x</sub>, or SO<sub>2</sub>.

(Source: Amended at 33 Ill. Reg. 10427, effective June 26, 2009)

# Section 225.291 Combined Pollutant Standard: Purpose

The purpose of Sections 225.291 through 225.299 (hereinafter referred to as the Combined Pollutant Standard ("CPS")) is to allow an alternate means of compliance with the emissions standards for mercury in Section 225.230(a) for specified EGUs through permanent shut-down, installation of ACI, and the application of pollution control technology for NO<sub>x</sub>, PM, and SO<sub>2</sub> emissions that also reduce mercury emissions as a co-benefit and to establish permanent emissions standards for those specified EGUs. Unless otherwise provided for in the CPS, owners and operators of those specified EGUs are not excused from compliance with other applicable requirements of Subparts B, C, D, and E.

(Source: Added at 33 III. Reg. 10427, effective June 26, 2009)

# Section 225.292 Applicability of the Combined Pollutant Standard

As an alternative to compliance with the emissions standards of Section 225.230(a), the owner or operator of specified EGUs in the CPS located at Fisk, Crawford, Joliet, Powerton, Waukegan, and Will County power plants may elect for all of those EGUs as a group to demonstrate compliance pursuant to the CPS, which establishes control requirements and emissions standards for NO<sub>x</sub>, PM, SO<sub>2</sub>, and mercury. For this purpose, ownership of a specified EGU is determined based on direct ownership, by holding a majority interest in a company that owns the EGU or EGUs, or by the common ownership of the company that owns the EGU, whether through a parent-subsidiary relationship, as a sister corporation, or as an affiliated corporation with the same parent corporation, provided that the owner or operator has the right or authority to submit a CAAPP application on behalf of the EGU.

- b) A specified EGU is a coal-fired EGU listed in Appendix A, irrespective of any subsequent changes in ownership of the EGU or power plant, the operator, unit designation, or name of unit.
- The owner or operator of each of the specified EGUs electing to demonstrate compliance with Section 225.230(a) pursuant to the CPS must submit an application for a CAAPP permit modification to the Agency, as provided for in Section 225.220, that includes the information specified in Section 225.293 that clearly states the owner's or operator's election to demonstrate compliance with Section 225.230(a) pursuant to the CPS.
- d) If an owner or operator of one or more specified EGUs elects to demonstrate compliance with Section 225.230(a) pursuant to the CPS, then all specified EGUs owned or operated in Illinois by the owner or operator as of December 31, 2006, as defined in subsection (a) of this Section, are thereafter subject to the standards and control requirements of the CPS. Such EGUs are referred to as a Combined Pollutant Standard (CPS) group.
- e) If an EGU is subject to the requirements of this Section, then the requirements apply to all owners and operators of the EGU.

(Source: Added at 33 Ill. Reg. 10427, effective June 26, 2009)

# Section 225.293 Combined Pollutant Standard: Notice of Intent

The owner or operator of one or more specified EGUs that intends to comply with Section 225.230(a) by means of the CPS must notify the Agency of its intention on or before December 31, 2007. The following information must accompany the notification:

- a) The identification of each EGU that will be complying with Section 225.230(a) pursuant to the CPS, with evidence that the owner or operator has identified all specified EGUs that it owned or operated in Illinois as of December 31, 2006, and which commenced commercial operation on or before December 31, 2004;
- b) If an EGU identified in subsection (a) of this Section is also owned or operated by a person different than the owner or operator submitting the notice of intent, a demonstration that the submitter has the right to commit the EGU or authorization from the responsible official for the EGU submitting the application; and
- c) A summary of the current control devices installed and operating on each EGU and identification of the additional control devices that will likely be needed for each EGU to comply with emission control requirements of the CPS.

(Source: Added at 33 Ill. Reg. 10427, effective June 26, 2009)

# Section 225.295 Combined Pollutant Standard: Emissions Standards for NO<sub>x</sub> and SO<sub>2</sub>

- a) Emissions Standards for NO<sub>x</sub> and Reporting Requirements.
  - 1) Beginning with calendar year 2012 and continuing in each calendar year thereafter, the CPS group, which includes all specified EGUs that have not been permanently shut down by December 31 before the applicable calendar year, must comply with a CPS group average annual NO<sub>x</sub> emissions rate of no more than 0.11 lbs/mmBtu.
  - Beginning with ozone season control period 2012 and continuing in each ozone season control period (May 1 through September 30) thereafter, the CPS group, which includes all specified EGUs that have not been permanently shut down by December 31 before the applicable ozone season, must comply with a CPS group average ozone season NO<sub>x</sub> emissions rate of no more than 0.11 lbs/mmBtu.
  - 3) The owner or operator of the specified EGUs in the CPS group must file, not later than one year after startup of any selective SNCR on such EGU, a report with the Agency describing the NO<sub>x</sub> emissions reductions that the SNCR has been able to achieve.
- b) Emissions Standards for SO<sub>2</sub>. Beginning in calendar year 2013 and continuing in each calendar year thereafter, the CPS group must comply with the applicable CPS group average annual SO<sub>2</sub> emissions rate listed as follows:

year	lbs/mmBtu
2013	0.44
2014	0.41
2015	0.28
2016	0.195
2017	0.15
2018	0.13
2019	0.11

c) Compliance with the NO<sub>x</sub> and SO<sub>2</sub> emissions standards must be demonstrated in accordance with Sections 225.310, 225.410, and 225.510. The owner or operator of the specified EGUs must complete the demonstration of compliance pursuant to Section 225.298(c) before March 1 of the following year for annual standards and before November 30 of the particular year for ozone season control periods (May 1 through September 30) standards, by which date a compliance report must be submitted to the Agency. [NOTE: This subsection is relying on the compliance requirements of the Clean Air Interstate Rule Trading Program under Subparts C, D, and E of Part 225 and will need to be amended accordingly when the Transport Rule is promulgated.]

d) The CPS group average annual SO<sub>2</sub> emission rate, annual NO<sub>x</sub> emission rate and ozone season NO<sub>x</sub> emission rates shall be determined as follows:

$$ER_{avy} = \sum_{i=1}^{n} (SO_{2i} \text{ or } NO_{xi} \text{ tons}) \Sigma (HI_i)$$

$$i=1$$

Where:

ER<sub>ayg</sub> = average annual or ozone season emission rate in Ibs/mmBbtu of all EGUs in the CPS group.

 $\mathrm{HI_{i}}_{\cdot}$  = heat input for the annual or ozone control period of each EGU, in mmBtu.

SO<sub>2i</sub> = actual annual SO<sub>2</sub> tons of each EGU in the CPS group.

 $NO_{xi}$  = actual annual or ozone season  $NO_x$  tons of each EGU in the CPS group.

N = number of EGUs that are in the CPS group.

I = each EGU in the CPS group.

(Source: Amended at 33 Ill. Reg. 10427, effective June 26, 2009)

Section 225.296 Combined Pollutant Standard: Control Technology Requirements for NO<sub>x</sub>, SO<sub>2</sub>, and PM Emissions

- a) Control Technology Requirements for NO<sub>x</sub> and SO<sub>2</sub>.
  - On or before December 31, 2013, the owner or operator must either permanently shut down or install and have operational FGD equipment on Waukegan 7;
  - On or before December 31, 2014, the owner or operator must either permanently shut down or install and have operational FGD equipment on Waukegan 8;
  - On or before December 31, 2015, the owner or operator must either permanently shut down or install and have operational FGD equipment on Fisk 19;
  - 4) If Crawford 7 will be operated after December 31, 2018, and not permanently shut down by this date, the owner or operator must:
    - A) On or before December 31, 2015, install and have operational SNCR or equipment capable of delivering essentially equivalent NO<sub>x</sub> reductions on Crawford 7; and

- B) On or before December 31, 2018, install and have operational FGD equipment on Crawford 7;
- 5) If Crawford 8 will be operated after December 31, 2017 and not permanently shut down by this date, the owner or operator must:
  - A) On or before December 31, 2015, install and have operational SNCR or equipment capable of delivering essentially equivalent NO<sub>x</sub> emissions reductions on Crawford 8; and
  - B) On or before December 31, 2017, install and have operational FGD equipment on Crawford 8.
- b) Other Control Technology Requirements for SO<sub>2</sub>. Owners or operators of specified EGUs must either permanently shut down or install FGD equipment on each specified EGU (except Joliet 5), on or before December 31, 2018, unless an earlier date is specified in subsection (a) of this Section.
- c) Control Technology Requirements for PM. The owner or operator of the two specified EGUs listed in this subsection that are equipped with a hot-side ESP must replace the hot-side ESP with a cold-side ESP, install an appropriately designed fabric filter, or permanently shut down the EGU by the dates specified. Hot-side ESP means an ESP on a coal-fired boiler that is installed before the boiler's air-preheater where the operating temperature is typically at least 550° F, as distinguished from a cold-side ESP that is installed after the air pre-heater where the operating temperature is typically no more than 350° F.
  - 1) Waukegan 7 on or before December 31, 2013; and
  - 2) Will County 3 on or before December 31, 2015.
- d) Beginning on December 31, 2008, and annually thereafter up to and including December 31, 2015, the owner or operator of the Fisk power plant must submit in writing to the Agency a report on any technology or equipment designed to affect air quality that has been considered or explored for the Fisk power plant in the preceding 12 months. This report will not obligate the owner or operator to install any equipment described in the report.
- e) Notwithstanding 35 Ill. Adm. Code 201.146(hhh), until an EGU has complied with the applicable requirements of subsections 225.296(a), (b), and (c), the owner or operator of the EGU must obtain a construction permit for any new or modified air pollution control equipment that it proposes to construct for control of emissions of mercury, NO<sub>x</sub>, PM, or SO<sub>2</sub>.

(Source: Added at 33 Ill. Reg. 10427, effective June 26, 2009)

225.APPENDIX A Specified EGUs for Purposes of the CPS (Midwest Generation's Coal-Fired Boilers as of July 1, 2006)

Plant	Permit Number	Boiler	Permit designation	CPS Designation	
Crawford	031600AIN	7 8	Unit 7 Boiler BLR1 Unit 8 Boiler BLR2	Crawford 7 Crawford 8	
Fisk	031600AMI	19	Unit 19 Boiler BLR19	Fisk 19	
Joliet	197809AAO	71 72 81 82 5	Unit 7 Boiler BLR71 Unit 7 Boiler BLR72 Unit 8 Boiler BLR81 Unit 8 Boiler BLR82 Unit 6 Boiler BLR5	Joliet 7 Joliet 7 Joliet 8 Joliet 8 Joliet 6	
Powerton	179801AAA	51 52 61 62	Unit 5 Boiler BLR 51 Unit 5 Boiler BLR 52 Unit 6 Boiler BLR 61 Unit 6 Boiler BLR 62	Powerton 5 Powerton 6 Powerton 6	
Waukegan	097190AAC	17 7 8	Unit 6 Boiler BLR17 Unit 7 Boiler BLR7 Unit 8 Boiler BLR8	Waukegan 6 Waukegan 7 Waukegan 8	
Will County	197810AAK	1 2 3 4	Unit 1 Boiler BLR1 Unit 2 Boiler BLR2 Unit 3 Boiler BLR3 Unit 4 Boiler BLR4	Will County 1 Will County 2 Will County 3 Will County 4	

(Source: Amended at 33 Ill. Reg. 10427, effective June 26, 2009)

## Exhibit 9

Table of Calculations Prepared by Midwest Generation in Support of Table 1 in the Petition for Variance

Exhibit 9

Waukegan Unit 7 Table 1 Calculations Column G Table 1 Column J 2014 Column H **Emission Rate** Column B Column E Column F Estimated Heat input 2014 Estimated in Column K Table 1 Column C Column D based on 2014 (Column H x J) Emission Rate 2011 (Column D x E) **Emissions at** Column I Column A 2011 Emissions Source of Data for Heat input (lbs/mmBtu or 2008 to 2011 avg. **Emission Rate** (lbs/mmBtu or tons or tons or Waukegan 7 at Waukegan 7 lbs for Hg Pollutant Column B 2011 (mmBtu) lbs/Tbtu for Hg) without variance (mmBtu) Assumptions lbs/Tbtu for Hg) lbs for Hg USEPA Acid Rain Program EDR for 2011 502 3,801 tons based on CEMS data 16,454,701 18,481,465 SO2 CPS Rate 0.11 1,016 0.462 3,801 1,016 tons Hg Rate - 90% reduction from 74 lbs 18,481,465 4.497 lbs/Tbtu 0.4497 Mercury stack testing 16,454,701 4.497 74 8 lbs 8 Hg PM rate based on ESP upgrade Latest PM Stack Test from Hot to Cold 18,481,465 with Trona 0.015 PM 140 tons at Waukegan 7 16,454,701 140 0.017 140 140 tons USEPA Acid Rain NOx Rate - avg. of years 2008 to Program EDR for 2011 1,073 tons based on CEMS data 18,481,465 2011 0.143 1,321 NOx 16,454,701 0.13042 1,073 1,321 tons

Note: In columns F and K some formulas have conversions from lbs to tons or other unit conversions not listed in Column Header

## Electronic Filing - Received, Clerk's Office, 04/10/2012 \* \* \* \* \* PCB 2012-121 \* \* \* \* \*

	Waukegan	Unit 7 Tab	le 1 Calculati	ons	FORM A FOREST TO A STORY TO SERVER OF	. He is the company with most as is not make promise at most 2.2	· · · · · · · · · · · · · · · · · · ·
	Column L Table 1 2014			Column O		Column Q	
	Estimated Emissions at	Column M		Emission Rate Estimated in		Table 1 Difference in	
	Waukegan	Heat input		2014	Column P	Emissions at	Column R
	Unit 7 if the	2014 based on	Column N	(lbs/mmBtu or	(Column M x O)		tons or
Column A	Variance Is	2008 to 2011	Emission Rate	lbs/Tbtu for	tons or	if the Variance Is	lbs for Hg
Pollutant	Granted	avg. (mmBtu)	Assumptions	Hg)	lbs for Hg	Granted	(Column P-K)
SO2	3,974 tons	18,481,465	SO2 Rate - Uncontrolled based on 2011 avg.	0.43	3,974	2,957 tons	2,957
Hg	83 lbs	18,481,465	Hg Rate - based on stack test	4.497	83	75 lbs	75
₽M	157 tons	18,481,465	PM rate - based on recent stack test	0.017	157	18 tons	18
NOx	1,321 tons	18,481,465	NOx Rate - avg. of years 2008 to	0.143	1.321	0 tons	C

Note: In column P some formulas have conversions from lbs to tons or other unit conversions not listed in Header

## Electronic Filing - Received, Clerk's Office, 04/10/2012 \* \* \* \* \* PCB 2012-121 \* \* \* \* \*

	Waukegan (	Jnit 7 Table 1	Calculations			
	Column S Table 1 Net Benefit in Emissions Reduced if the Variance Is Granted 2013- 2015 (Fisk Unit 19	Column T Heat input 2013 to 2015 based on	Column U	Column V Emission Rate Extimated in 2013 to 2015 for Fisk	Column W Fisk Emissions in	Column X tons or
Column A	1 '	3x of 2008 to 2011	Fisk 19 Emission	(lbs/mm8tu or	2013 to 2015.	lbs for Hg
Pollutant	2012)	avg. (mmBtu)	Rate Assumptions	lbs/Tbtu for Hg)	(Column T x V)	(Column W-R)
SO2	8,385 tons	52,755,775	SO2 Rate - Uncontrolled based on 2011	0.43	11,342	8,385
Hg	<51 lbs>	52,755,775	Hg Rate - based on stack tests avg. of 2010/2011	0.4582		-51
			PM rate - based on recent stack			
PM	2,066 tons	52,755,775	test	0.079	2,084	2,066
NOx	3,456 tons	52,755,775	NOx Rate - avg. of years 2008 to 2011	i .	3,456	3,456

Note: In column W some formulas have conversions from lbs to tons or other unit conversions not listed

### Electronic Filing - Received, Clerk's Office, 04/10/2012 \* \* \* \* \* PCB 2012-121 \* \* \* \* \*

	Waukegan Un	it 7 Table 1 C	alculations			•	•	,				
	Column Y					-						
	Table 1											
	Total Net Benefit in											
	Emissions Reduced										Column Al	
1	if Variance Is			]							Fisk 19 2013 to	
	Granted			Column AB	Column AC			Column AF	Column AG		2015 and	
	2013-2018	Column Z		Emission Rate	Crawford 7	Column AD		Emission Rate	Crawford 8	Columa AH	Crawford 7/8	
	(Fisk Unit 19 Shut	Crawford 7 Heat		Estimated in	Emissions in	Crawrford 8 Heat		Estimated in	Emissions in	Crawford 7&8	2015 to 2018	Column Al
	Down in 2012 and	input 2015 to	Column AA	2015 to 2018 for	2015 to 2018	input 2015 to	Column AE	2015 to 2018 for	2015 to 2018	Emissions	tons or	tons or
	Crawford Units 7	2018 based on	Crawford 7	Crawford 7	tons or	2018 based on	Crawford 8	Crawford 8	tons or	tons and lbs for	lbs for Hg	lbs for Hg
Column A	and 8 Shut Down	4x of 2008 to 2011	Emission Rate	(lbs/mmBtu or	lbs for Hg	4x of 2008 to 2011	Emission Rate	(ibs/mm8ta or	lbs for Hg	Нg	(Column W+	(Column Al -
Pollutant	End of 2014)	avg. (mmBtu)	Assumptions	lbs/Tbtu for Hg)	(Column Z * A8)	avg. (mmBtu)	Assumptions	lbs/Tbtu for Hg)	(Column AD*AF)	(Column AC+AG)	Column AH)	Calumn R)
			SO2 Rate -				SO2 Rate -					
			Uncontrolled			İ	Uncontrolled					
		I	based on 2011				based on 2011					
502	32,231 tons	48,409,883	avg.	0,43	10,408	62,499,392	avg.	0.43	13,437	23,845	35,188	32,231
			Hg Rate - based	1			on stack tests					
			on stack tests avg.			Ties and the second sec	avg. of					
Hg	<20 lbs>	48,409,883	of 2010/2011	0.40	19	62,499,392	2010/2011	0.19	1.2	31	55	-2(
			PM rate - based		AAPP-1-1-PROSPER		PM rate - based					
			on recent stack				on recent stack					
PM	5,602 tons	48,409,883	test	0,057	1,380	62,499,392	test	0.069	2,156	3,536	5,620	5,602
			NOx Rate - CPS		nacon and a second	Landard Control of the Control of th	NOx Rate - CP5					
NOx	9,556 tons	48,409,883	1	0.11	2,663	62,499,392	ł .	0.11	3,437	6,100	9,556	9,556

Note: In columns AC & AG some formulas have conversions from Ibs to tons or other unit conversions not listed in Column Header

# Exhibit 10

Proposed Approval of Illinois' BART SIP, 77 Fed.Reg. 3966 (January 26, 2012)

Federal Register/Vol. 77, No. 17/Thursday, January 26, 2012/Proposed Rules

information described in paragraph (b) of this section.

(b) Required information—(1) In general. The information required under paragraph (a) of this section shall include the following information:

(i) The passport applicant's full name and, if applicable, previous name;

(ii) Address of the passport applicant's regular or principal place of residence within the country of residence and, if different, mailing address;

(iii) The passport applicant's taxpayer identifying number (TIN), if such a number has been issued to the passport applicant. A TIN means the individual's social security number (SSN) issued by the Social Security Administration. A passport applicant who does not have an SSN must enter zeros in the appropriate space on the passport application; and

(iv) The passport applicant's date of

birth.

(2) Time for furnishing information. A passport applicant must provide the information required by this section at the time of submitting his or her passport application, whether by personal appearance or mail, to the Department of State (including United States Embassies and Consular posts

abroad).

(c) Penalties—(1) In general. If the information required by paragraph (b)(1) of this section is incomplete or incorrect, or the information is not timely filed, then the passport applicant shall be subject to a penalty equal to \$500 per application. Before assessing a penalty under this section, the IRS will ordinarily provide to the passport applicant written notice of the potential assessment of the \$500 penalty, requesting the information being sought, and offering the applicant an opportunity to explain why such information was not provided at the time the passport application was submitted. A passport applicant has 60 days (90 days if the notice is addressed to an applicant outside the United States) to respond to the notice. If, after considering all the surrounding circumstances, the passport applicant demonstrates to the satisfaction of the Commissioner or his delegate that the failure is due to reasonable cause and not due to willful neglect, then the IRS will not assess the penalty.

(2) Example. The following example illustrates the provisions of paragraph

(c) this section.

Example. G, a citizen of the United States, makes an error in supplying information on his passport application. Based on the nature of the error and C's timely response to correct the error after being contacted by the IRS,

and considering all the surrounding circumstances, the Commissioner concludes that the mistake is due to reasonable cause and not due to willful neglect. Accordingly, no penalty is assessed.

(d) Effective/applicability date. The rules of this section apply to passport applications submitted after the date of publication of the Treasury decision adopting these rules as final regulations in the Federal Register.

#### Steven T. Miller,

Deputy Commissioner for Services and Enforcement.

[FR Doc. 2012-1567 Filed 1-25-12; 6:45 am] BILLING CODE 4830-01-P

#### **ENVIRONMENTAL PROTECTION** AGENCY

40 CFR Part 52

[EPA-R05-OAR-2011-0598; FRL-9622-6]

Approval and Promulgation of Air Quality Implementation Plans; Illinois; Regional Haze

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing to approve revisions to the Illinois State Implementation Plan (SIP) addressing regional haze for the first implementation period. Illinois submitted its regional haze plan on June 24, 2011. The Illinois regional haze plan addresses Clean Air Act (CAA) section 169B and Regional Haze Rule requirements for states to remedy any existing and prevent future anthropogenic impairment of visibility at mandatory Class I areas. EPA is also proposing to approve two state rules and incorporating two permits into the

DATES: Comments must be received on or before February 27, 2012. ADDRESSES: Submit your comments,

identified by Docket ID No. EPA-R05-OAR-2011-0598, by one of the

following methods:

1. www.regulations.gov: Follow the on-line instructions for submitting comments.

2. Email: blakley.pamela@epa.gov.

3. Fax: (312) 692-2450.

4. Mail: Pamela Blakley, Chief, Control Strategies Section, Air Programs Branch (AR-18J), U.S. Environmental Protection Agency, 77 West Jackson Boulevard, Chicago, Illinois 60604.

5. Hand Delivery: Pamela Blakley, Chief, Control Strategies Section, Air Programs Branch (AR-18J), U.S. Environmental Protection Agency, 77

West Jackson Boulevard, Chicago, Illinois 60604. Such deliveries are only accepted during the Regional Office normal hours of operation, and special arrangements should be made for deliveries of boxed information. The Regional Office official hours of business are Monday through Friday, 8:30 a.m. to 4:30 p.m., excluding Federal holidays

Instructions: Direct your comments to Docket ID No. EPA-R05-OAR-2011-0598. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through www.regulations.gov or email. The www.regulations.gov Web site is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to EPA without going through www.regulations.gov your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional instructions on submitting comments, go to Section I of this document.

Docket: All documents in the docket are listed in the www.regulations.gov index. Although listed in the index. some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in www.regulations.gov or in hard copy at the Environmental Protection Agency, Region 5, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. This facility is open from 8:30 a.m. to 4:30 p.m., Monday through

Friday, excluding Federal holidays. We recommend that you telephone Matt Rau, Environmental Engineer, at (312) 886–6524 before visiting the Region 5 office.

FOR FURTHER INFORMATION CONTACT: Matt Rau, Environmental Engineer, Control Strategies Section, Air Programs Branch (AR-18]), Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 886-6524, rau.matthew@epa.gov.

#### SUPPLEMENTARY INFORMATION:

Throughout this document whenever ''we,'' "us," or "our" is used, we mean

#### Table of Contents

- I. What should I consider as I prepare my comments for EPA?
- II. What is the background for EPA's proposed action?
- III. What are the requirements for regional haze SIPs?
- IV. What is EPA's analysis of Illinois' regional haze plan?
- V. What action is EPA taking?
- VI. Statutory and Executive Order Reviews

#### What should I consider as I prepare my comments for EPA?

When submitting comments, remember to:

 Identify the rulemaking by docket number and other identifying information (subject heading, Federal Register date and page number).

2. Follow directions—EPA may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.

Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.

4. Describe any assumptions and provide any technical information and/ or date that you used.

If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.

Provide specific examples to illustrate your concerns, and suggest alternatives.

Explain your views as clearly as possible, avoiding the use of profanity or personal threats.

8. Make sure to submit your comments by the comment period deadline identified.

#### II. What is the background for EPA's proposed action?

#### A. The Regional Haze Problem

Regional haze is visibility impairment that is produced by a multitude of sources and activities located across a broad geographic area that emit fine

particles (PM25) (e.g., sulfates, nitrates, organic carbon, elemental carbon, and soil dust) and its precursors—sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), and in some cases ammonia (NH3) and volatile organic compound (VOCs). Fine particle precursors react in the atmosphere to form fine particulate matter. Aerosol PM<sub>2,5</sub> impairs visibility by scattering and absorbing light. Visibility impairment reduces the clarity and distance one can see. PM<sub>2.5</sub> can also cause serious health effects and mortality in humans and contributes to detrimental environmental effects such as acid deposition and eutrophication.

Data from the existing visibility monitoring network, the "Interagency Monitoring of Protected Visual Environments" (IMPROVE) monitoring network, show that visibility impairment caused by air pollution occurs virtually all of the time at most national park and wilderness areas. The average visual range, the distance at which an object is barely discernable, in many Class I areas 1 in the western United States is 100-150 kilometers. That is about one-half to two-thirds of the visual range that would exist without anthropogenic air pollution. In the eastern and midwestern Class I areas of the United States, the average visual range is generally less than 30 kilometers, or about one-fifth of the visual range that would exist under estimated natural conditions. 64 FR 35715 (July 1, 1999).

### B. Requirements of the Clean Air Act and EPA's Regional Haze Rule

In section 169A of the 1977 Amendments to the CAA, Congress created a program for protecting visibility in the nation's national parks and wilderness areas. This section of the CAA establishes as a national goal the "prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I

Federal areas which impairment results from manmade air pollution." On December 2, 1980, EPA promulgated regulations to address visibility impairment in Class I areas that is "reasonably attributable" to a single source or small group of sources known as, "reasonably attributable visibility impairment" (RAVI). 45 FR 80084. These regulations represented the first phase in addressing visibility impairment. EPA deferred action on regional haze that emanates from a variety of sources until monitoring, modeling, and scientific knowledge about the relationships between pollutants and visibility impairment

were improved.

Congress added section 169B to the CAA in 1990 to address regional haze issues. EPA promulgated the Regional Haze Rule (RHR) on July 1, 1999 (64 FR 35713). The RHR revised the existing visibility regulations to integrate into the regulations provisions addressing regional haze impairment and established a comprehensive visibility protection program for Class I areas. The requirements for regional haze, found at 40 CFR 51.308 and 51.309, are included in EPA's visibility protection regulations at 40 CFR 51.300-309. Some of the main elements of the regional haze requirements are summarized in section III. The requirement to submit a regional haze SIP applies to all 50 states. the District of Columbia, and the Virgin

#### C. Roles of Agencies in Addressing Regional Haze

Successful implementation of the regional haze program will require longterm regional coordination among states, tribal governments, and Federal agencies. Pollution affecting the air quality in Class I areas can be transported over long distances, even hundreds of kilometers. Therefore, effectively addressing the problem of visibility impairment in Class I areas means that states need to develop coordinated strategies that take into account the effect of emissions from one jurisdiction on the air quality of another state.

EPA has encouraged the states and tribes to address visibility impairment from a regional perspective because the pollutants that lead to regional haze can originate from sources located across broad geographic areas. Five regional planning organizations (RPOs) were developed to address regional haze and

<sup>&</sup>lt;sup>1</sup> Areas designated as mandatory Class I Federal areas consist of national parks exceeding 6000 acres, wildomess areas, and national memorial parks exceeding 5000 acres and all international parks that were in existence on August 7, 1977, 42 U.S.C. 7472(a). In accordance with section 169A of the CAA, EPA, in consultation with the Department of interior, promulgated a list of 158 areas where visibility is identified as an important value. 44 FR 69122 (November 30, 1979). The extent of a mandatory Class I area includes subsequent changes in boundaries, such as park expansions. 42 U.S.C. 7472(a). Although states and tribes may designate as Class I additional arees which they consider to have visibility as an important value, the requirements of the visibility program set forth in section 189A of the CAA apply only to "mandatory Class I Federal areas." Each mandatory Class I Federal area is the responsibility of a "Fedural Land Manager." 42 U.S.C. 7602(i). When we use the term "Class I area," we mean "mandatory Class I Federal

<sup>&</sup>lt;sup>2</sup> Albuquerque/Bernslillo County, New Mexico must also submit a regional haze SIP to satisfy the section 110(a)(2)(D) requirements of the CAA for the entire state under the New Maxico Air Quality Control Act (section 74-2-4).

related issues. The RPOs first evaluated technical information to better understand how their states and tribes impact Class I areas across the country and then pursued the development of regional strategies to reduce PM<sub>2.5</sub> emissions and other pollutants leading to regional haze.

The Midwest RPO (MRPO) is a collaborative effort of state governments and various Federal agencies established to initiate and coordinate activities associated with the management of regional haze, visibility, and other air quality issues in the Midwest. The member states are Illinois, Indiana, Michigan, Ohio, and

## III. What are the requirements for regional haze SIPs?

Regional haze SIPs must assure reasonable progress toward the national goal of achieving natural visibility conditions in Class I areas. Section 169A of the CAA and EPA's implementing regulations require states to establish long-term strategies for making reasonable progress toward meeting this goal. Plans must also give specific attention to certain stationary sources that were in existence on August 7, 1977, but were not in operation before August 7, 1962, and must require those sources to install emission controls reducing visibility impairment if appropriate. The specific regional haze SIP requirements are discussed in further detail below.

# A. Determination of Baseline, Natural, and Current Visibility Conditions

The RHR establishes the deciview 3 (dv) as the principal metric or unit for expressing visibility impairment. This visibility metric expresses uniform proportional changes in haziness in terms of common increments across the entire range of visibility conditions, from pristine to extremely hazy conditions. Visibility expressed in deciviews is determined by using air quality measurements to estimate light extinction and then transforming the value of light extinction using a logarithm function. The deciview is a more useful measure for tracking progress in improving visibility than light extinction itself because each deciview change is an equal incremental change in visibility perceived by the human eye. Most people can detect a change in visibility at one deciview.

The deciview is used in expressing RPGs, defining baseline, current, and

natural conditions, and tracking changes in visibility. The regional haze SIPs must contain measures that ensure "reasonable progress" toward the national goal of preventing and remedying visibility impairment in Class I areas caused by anthropogenic air pollution. The national goal is a return to natural conditions such that anthropogenic sources of air pollution would no longer impair visibility in Class I areas.

To track changes in visibility over time at each of the 156 Class I areas covered by the visibility program (40 CFR 81.401-437) and as part of the process for determining reasonable progress, states must calculate the degree of existing visibility impairment at each Class I area at the time of each regional haze SIP submission and at the progress review every five years, midway through each 10-year implementation period. The RHR requires states with Class I areas (Class I states) to determine the degree of impairment in deciviews for the average of the 20 percent least impaired (best) and 20 percent most impaired (worst) visibility days over a specified time period at each of its Class I areas. Each state must also develop an estimate of natural visibility conditions for the purpose of comparing progress toward the national goal. Natural visibility is determined by estimating the natural concentrations of pollutants that cause visibility impairment and then calculating total light extinction based on those estimates. EPA has provided guidance to states regarding how to calculate baseline, natural, and current visibility conditions in documents titled, EPA's Guidance for Estimating Natural Visibility Conditions Under the Regional Haze Rule, September 2003, (EPA-454/B-03-005 located at http:// www.epa.gov/ttncaaa1/t1/memoranda/ rh\_envcurhr\_gd.pdf) (hereinafter referred to as "EPA's 2003 Natural Visibility Guidance'') and Guidance for Tracking Progress Under the Regional Haze Rule (EPA-454/B-03-004 September 2003 located at http://www. epa.gov/ttncaaa1/t1/memoranda/rh tpurhr\_gd.pdf) (EPA's 2003 Tracking

Progress Guidance).
For the first regional haze SIP, the "baseline visibility conditions" are the starting points for assessing "current" visibility impairment. Baseline visibility conditions represent the degree of visibility impairment for the 20 percent best days and 20 percent worst days for each calendar year from 2000 to 2004. Using monitoring data for 2000 through 2004, states calculate the average degree of visibility impairment for each Class I area, based on the average of annual

values over the five-year period. The comparison of initial baseline visibility conditions to natural visibility conditions indicates the amount of improvement necessary to attain natural visibility, while the future comparison of baseline conditions to the then current conditions will indicate the amount of progress made. In general, the 2000 to 2004 baseline period is considered the time from which improvement in visibility is measured.

#### B. Determination of Reasonable Progress Goals (RPGs)

The vehicle for ensuring continuing progress towards achieving the natural visibility goal is the submission of a series of regional haze SIPs from the states that establish two distinct RPGs, one for the best days and one for the worst days for every Class I area for each approximately 10-year implementation period. The RHR does not mandate specific milestones or rates of progress, but instead calls for states to establish goals that provide for "reasonable progress" toward achieving natural visibility conditions. In setting RPGs, Class I states must provide for an improvement in visibility for the worst days over the approximately 10-year period of the SIP and ensure no degradation in visibility for the best days.

Class I states have significant discretion in establishing RPGs, but are required to consider the following factors established in section 169A of the CAA and in EPA's RHR at 40 CFR 51.308(d)(1)(i)(A): (1) The costs of compliance; (2) the time necessary for compliance; (3) the energy and non-air quality environmental impacts of compliance; and, (4) the remaining useful life of any potentially affected sources. The state must demonstrate in its SIP how these factors are considered when selecting the RPGs for the best and worst days for each applicable Class I area. States have considerable flexibility in how they take these factors into consideration, as noted in EPA's Guidance for Setting Reasonable Progress Goals Under the Regional Haze Program, ("EPA's Reasonable Progress Guidance''), July 1, 2007, memorandum from William L. Wehrum, Acting Assistant Administrator for Air and Radiation, to EPA Regional Administrators, EPA Regions 1-10 (pp. 4-2, 5-1). In setting the RPGs, states must also consider the rate of progress needed to reach natural visibility conditions by 2064 ("uniform rate of progress" or "glide path") and the emissions reduction needed to achieve that rate of progress over the approximately 10-year period of the SIP.

<sup>&</sup>lt;sup>3</sup> The preamble to the RHR provides additional details about the deciviow. 64 FR 35714, 35725 (July 1, 1999).

In setting RPGs, each Class I state must also consult with potentially contributing states, i.e. those states that may affect visibility impairment at the Class I state's areas. 40 CFR 51.308(d)(1)(iv).

C. Best Available Retrofit Technology

Section 169A of the CAA directs states to evaluate the use of retrofit controls at certain older large stationary sources to address visibility impacts from these sources. Specifically, CAA section 169A(b)(2)(A) requires states to revise their SIPs to contain such measures as may be necessary to make reasonable progress towards the natural visibility goal including a requirement that certain categories of existing major stationary sources built between 1962 and 1977 procure, install, and operate BART as determined by the state. The set of "major stationary sources" potentially subject to BART is listed in CAA section 169A(g)(7). The state can require source-specific BART controls, but it also has the flexibility to adopt an alternative such as a trading program as long as the alternative provides greater progress towards improving visibility than BART.

On July 6, 2005, EPA published the Guidelines for BART Determinations Under the Regional Haze Rule at Appendix Y to 40 CFR Part 51 (BART Guidelines) to assist states in determining which of their sources should be subject to the BART requirements and in determining appropriate emission limits for each applicable source. A state must use the approach in the BART Guidelines in making a BART determination for fossil fuel-fired electric generating units (EGUs) with total generating capacity in excess of 750 megawatts. States are encouraged, but not required, to follow the BART Guidelines in making BART determinations for other sources.

States must address all visibilityimpairing pollutants emitted by a source in the BART determination process. The most significant visibility impairing pollutants are  $SO_2$ ,  $NO_X$ , and PM. EPA has stated that states should use their best judgment in determining whether VOC or NH<sub>3</sub> compounds impair visibility in Class I areas.

States may select an exemption threshold value for their BART modeling under the BART Guidelines, below which a BART-eligible source would not be expected to cause or contribute to visibility impairment in any Class I area. The state must document this exemption threshold value in the SIP and must state the basis for its selection of that value. The

exemption threshold set by the state should not be higher than 0.5 dv. Any source with emissions that model above the threshold value would be subject to a BART determination review. The BART Guidelines acknowledge varying circumstances affecting different Class I areas. States should consider the number of emission sources affecting the Class I areas at issue and the magnitude of the individual source's impact.

The state must identify potential BART sources in its SIP, described as "BART-eligible sources" in the RHR, and document its BART control determination analyses. In making BART determinations, section 169A(g)(2) of the CAA requires the state to consider the following factors: (1) The costs of compliance; (2) the energy and non-air quality environmental impacts of compliance; (3) any existing pollution control technology in use at the source; (4) the remaining useful life of the source; and, (5) the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology. A regional haze SIP must include source-specific BART emission limits and compliance schedules for each source subject to BART. The BART controls must be installed and in operation as expeditiously as practicable, but no later than five years after the date of EPA's approval of the state's regional haze SIP. CAA section 169(g)(4); 40 CFR 51.308(e)(1)(iv). In addition to what is required by the RHR, general SIP requirements mandate that the SIP must also include all regulatory requirements related to monitoring, recordkeeping, and reporting for the BART controls on the source.

### D. Long-Term Strategy

Consistent with the requirement in section 169A(b) of the CAA that states include in their regional haze SIP a 10 to 15 year strategy for making reasonable progress, section 51.308(d)(3) of the RHR requires that states include a long-term strategy (LTS) in their regional haze SIPs. The LTS is the compilation of all control measures a state will use during the implementation period of the specific SIP submittal to meet applicable RPGs. The LTS must include enforceable emissions limitations, compliance schedules, and other measures as necessary to achieve the RPGs for all Class I areas within or affected by emissions from the state. 40 CFR 51.308(d)(3).

When a state's emissions are reasonably anticipated to cause or contribute to visibility impairment in a

Class I area located in another state, the RHR requires the impacted state to coordinate with the contributing states in order to develop coordinated emissions management strategies. 40 CFR 51.308(d)(3)(i). In such cases, the contributing state must demonstrate that it has included in its SIP all measures necessary to obtain its share of the emission reductions needed to meet the RPGs for the Class I area. The RPOs have provided forums for significant interstate consultation, but additional consultations between states may be required to address interstate visibility issues sufficiently.

States should consider all types of anthropogenic sources of visibility impairment in developing their LTS, including stationary, minor, mobile, and area sources. At a minimum, states must describe how each of the following seven factors are taken into account in developing their LTS: (1) Emission reductions due to ongoing air pollution control programs, including measures to address RAVI; (2) measures to mitigate the impacts of construction activities; (3) emissions limitations and schedules for compliance to achieve the RPG; (4) source retirement and replacement schedules; (5) smoke management techniques for agricultural and forestry management purposes including plans as currently exist within the state for these purposes; (6) enforceability of emissions limitations and control measures; and, (7) the anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions over the period addressed by the LTS. 40 CFR 51.308(d)(3)(v).

E. Coordinating Regional Haze and Reasonably Attributable Visibility Impairment Long-Term Strategy

EPA revised 40 CFR 51.306(c) as part of the RHR regarding the LTS for RAVI to require that the RAVI plan must provide for a periodic review and SIP revision not less frequently than every three years until the date of submission of the state's first plan addressing regional haze visibility impairment in accordance with 40 CFR 51.308(b) and (c). The state must revise its plan to provide for review and revision of a coordinated LTS for addressing RAVI and regional haze on or before this date. It must also submit the first such coordinated LTS with its first regional haze SIP. Future coordinated LTSs, and periodic progress reports evaluating progress towards RPGs, must be submitted consistent with the schedule for SIP submission and periodic progress reports set forth in 40 CFR 51.308(f) and 51.308(g), respectively.

The periodic review of a state's LTS must report on both regional haze and RAVI impairment and be submitted to EPA as a SIP revision.

F. Monitoring Strategy and Other Implementation Plan Requirements

Section 51.308(d)(4) of the RHR includes the requirement for a monitoring strategy for measuring, characterizing, and reporting of regional haze visibility impairment that is representative of all mandatory Class I Federal areas within the state. The strategy must be coordinated with the monitoring strategy required in section 51.305 for RAVI. Compliance with this requirement may be met through participation in the IMPROVE network, meaning that the state reviews and uses monitoring data from the network. The monitoring strategy must also provide for additional monitoring sites if the IMPROVE network is not sufficient to determine whether RPGs will be met. The monitoring strategy is due with the first regional haze SIP and must be reviewed every five years.

The SIP must also provide for the

following:

 Procedures for using monitoring data and other information in a state with mandatory Class I areas to determine the contribution of emissions from within the state to regional haze visibility impairment at Class I areas both within and outside of the state;

 Procedures for using monitoring data and other information in a state with no mandatory Class I areas to determine the contribution of emissions from within the state to regional haze visibility impairment at Class I areas in other states.

 Reporting of all visibility monitoring data to the Administrator at least annually for each Class I area in the state, and where possible in electronic format;

• A statewide inventory of emissions of pollutants that are reasonably anticipated to cause or contribute to visibility impairment in any Class I area. The inventory must include emissions for a baseline year, emissions for the most recent year with available data, and future projected emissions. A state must also make a commitment to update the inventory periodically; and

 Other elements including reporting, recordkeeping, and other measures necessary to assess and report on

visibility;

The RHR requires control strategies to cover an initial implementation period extending to the year 2018 with a comprehensive reassessment and revision of those strategies, as appropriate, every 10 years thereafter.

Periodic SIP revisions must meet the core requirements of section 51.308(d) with the exception of BART. The requirement to evaluate sources for BART applies only to the first regional haze SIP. Facilities subject to BART must continue to comply with the BART provisions of section 51.308(e), as noted above. Periodic SIP revisions will assure that the statutory requirement of reasonable progress will continue to be met.

### G. Consultation With States and Federal Land Managers

The RHR requires that states consult with Federal Land Managers (FLMs) before adopting and submitting their SIPs. 40 CFR 51.308(i). States must provide FLMs an opportunity for consultation, in person and at least 60 days prior to holding any public hearing on the SIP. This consultation must include the opportunity for the FLMs to discuss their assessment of impairment of visibility in any Class I area and to offer recommendations on the development of the RPGs and on the development and implementation of strategies to address visibility impairment. Further, a state must include in its SIP a description of how it addressed any comments provided by the FLMs. Finally, a SIP must provide procedures for continuing consultation between the state and FLMs regarding the state's visibility protection program, including development and review of SIP revisions, five-year progress reports, and the implementation of other programs having the potential to contribute to impairment of visibility in Class I areas.

# IV. What is EPA's analysis of Illinois' regional haze plan?

Illinois submitted its regional haze plan on June 24, 2011, which included revisions to the Illinois SIP to address regional haze.

### A. Class I Areas

States are required to address regional haze affecting Člass I areas within a state and in Class I areas outside the state that may be affected by the state's emissions. 40 CFR 51.308(d). Illinois does not have any Class I areas within the state. Illinois reviewed technical analyses conducted by MRPO to determine what Class I areas outside the state are affected by Illinois emission sources. MRPO conducted both a back trajectory analysis and modeling to determine the affects of its states' emissions. The conclusion from the technical analysis is that emissions from Illinois sources affect 19 Class I areas. The affected Class I areas are: Sipsey

Wilderness Area in Alabama; Caney Creek and Upper Buffalo Wilderness Areas in Arkansas; Mammoth Cave in Kentucky: Acadia National Park and Moosehorn Wilderness Area in Maine; Isle Royale National Park and Seney Wilderness Area in Michigan; Boundary Waters Canoe Wilderness Area in Minnesota; Hercules-Glades and Mingo Wilderness Areas in Missouri; Great Gulf Wilderness Area in New Hampshire; Brigantine Wilderness Area in New Jersey; Great Smoky Mountains National Park in North Carolina and Tennessee; Lye Brook Wilderness Area in Vermont: James River Face Wilderness Area and Shenandoah National Park in Virginia; and, Dolly Sods/Otter Creek Wilderness Area in West Virginia.

## B. Baseline, Current, and Natural Conditions

The RHR requires states with Class I areas to calculate the baseline and natural conditions for their Class I areas. Because Illinois does not have any Class I areas, it was not required to address the requirements for calculating baseline and natural conditions.

### C. Reasonable Progress Goals

Class I states must set RPGs that achieve reasonable progress toward achieving natural visibility conditions. Because Illinois does not have any Class I areas, it is not required to establish RPGs. Illinois consulted with affected Class I states to ensure that it achieves its share of the overall emission reductions necessary to achieve the RPGs of Class I areas that it impacts. Illinois's coordination with affected Class I states is discussed under Illinois Long Term Strategy, in Section IV. E.

Illinois included the MRPO technical support document (TSD) in its submission. In Section 5 of the TSD, MRPO assessed the reasonable progress for regional haze. It first assessed potential control measures using the four factors required to be considered by Class I states when selecting the RPGs: the cost of compliance, time needed. energy and non-air impacts, and remaining useful life of any potentially affected sources. The cost of compliance factor includes calculating the average cost effectiveness and can include costs to health and industry vitality as well as considering the different visibility effects of different pollutants. The time necessary for compliance factor considers whether control measures can be implemented by 2018. The third factor, energy and non-air quality impacts, considers additional energy consumed by or because of the control measure as well as effects due to waste

generated or water consumption. The final factor, remaining useful life, allows states to consider planned source retirements in calculating costs.

MRPO also assessed the visibility benefits of existing programs. MRPO considered existing on-highway mobile source, off-highway mobile source, area source, power plant, and other point source programs. MRPO also included reductions from the Clean Air Interstate Rule (CAIR) in its analysis, as well from rules adopted by Illinois and included in its regional haze SIP requiring the control of emissions from EGUs.

Illinois has a distinctive situation regarding CAIR, insofar as it has adopted state rules that require EGUs to control NO<sub>x</sub> and SO<sub>2</sub> emissions beyond the control expected from CAIR, even in the absence of CAIR, particularly by 2018 and beyond. Further discussion of these Illinois rules is provided below. The RPGs that pertinent Class I states have adopted are predicated on other contributing states achieving the EGU emission reductions anticipated under CAIR. Since Illinois is mandating a greater degree of control than is expected from other states, EPA concludes that Illinois's regional haze plan is expected to provide emission reductions representing an appropriate contribution toward meeting the RPGs for the affected Class I areas, irrespective of the status of CAIR and irrespective of the associated issues regarding the adequacy of other state's plans. For similar reasons, EPA believes that the approvability of the Illinois plan is also not affected by the status of the Transport Rule, which was promulgated on August 8, 2011 at 76 FR 48208 and stayed on December 30,

### D. Best Available Retrofit Technology

States are required to submit an implementation plan containing emission limitations representing BART and schedules for compliance with BART for each BART-eligible source that may reasonably be anticipated to cause or contribute to any impairment in a Class I area, unless the State demonstrates that an emissions trading program or other alternative will achieve greater reasonable progress toward natural visibility conditions. 40 CFR 51.308(e).

Using the criteria in the BART Guidance at 40 CFR 51.308(e) and Appendix Y, Illinois first identified all of the BART-eligible sources and assessed whether the BART-eligible sources were subject to BART. Illinois initially identified 26 potential BART facilities—11 EGUs, four petroleum refineries, three chemical process

plants, two Portland cement plants, two glass fiber processing plants, one lime plant, and one iron and steel plant. The state further analyzed these facilities to identify those sources subject to BART'. Illinois relied on modeling conducted by MRPO using a modeling protocol MRPO developed. MRPO conferred with its states, EPA, and the FLMs in developing its BART modeling protocol. EPA guidance says that, "any threshold that you use for determining whether a source 'contributes' to visibility impairment should not be higher than 0.5 dv." The Guidelines affirm that states are free to use a lower threshold if the location of a large number of BART-eligible sources in proximity of a Class I area justifies this approach. Illinois used a contribution threshold of 0.5 dv for determining which sources warrant being subject to BART. Illinois concluded that the threshold of 0.5 dv was appropriate since its BART-eligible sources are located state-wide and no Class I areas are nearby causing Illinois to correctly conclude that a stricter contribution threshold is not justified. The modeled impact of these facilities indicated that 11 sources have at least 0.5 dv impact (98th percentile) and thus are subject to BART. The 11 sources determined to be subject to BART are nine EGUs and two petroleum refineries. The other 15 potential BART sources were determined not to be subject to BART because the analysis showed impacts well below the 0.5 dv contribution threshold.

The EGUs subject to BART are:

Dynegy Midwest Generating—
Baldwin Boilers 1, 2, and 3.

- Dominion Kincaid Generation— Boilers 1 and 2.
- Ameren Energy Generating— Coffeen Boilers CB-1 and CB-2.
- Ameren Energy Generating—E.D. Edwards Boilers 2 and 3.
- Ameren Energy Generating—Duck Creek Boiler 1.
   Midwest Congression Bossesses
- Midwest Generation—Powerton Boilers 51, 52, 61, and 62.
- Midwest Generation—Joliet Boilers 71, 72, 81, and 82.
- Midwest Generation—Will County Boiler 4.
- City Water, Light, and Power— Dallman Boiler 1 and 2.
- City Water, Light, and Power— Lakeside Boiler 8.

To address mercury emissions from EGUs, Illinois adopted Part 225 of Illinois's air pollution regulations, entitled "Control of Emissions from Large Combustion Sources." In this rule, Illinois offered affected utilities two options, one of which imposes stringent limits on mercury emissions alone and the other of which mandates

implementation of specific mercury control technology in conjunction with satisfaction of stringent emission limits for SO2 and NOx. Part 225 includes section 225.233, entitled "Multi-Pollutant Standards," addressing emissions from facilities owned by Ameren and Dynegy, and sections 225.293 to 225.299, collectively referred to as the Combined Pollutant Standards (CPS), addressing emissions from facilities owned by Midwest Generation. In all cases, the utilities have selected the option including mercury control technology and applicability of the SO<sub>2</sub> and NOx limits. The emission limits are in the earlier noted sections of the state rules, so these  $SO_2$  and  $NO_X$  limits are now fully enforceable by the state.

The SO<sub>2</sub> and NO<sub>3</sub> emission limits in Part 225 rules reflect substantial averaging across units and across facilities. For example, the collective set of facilities in Illinois owned by Midwest Generation (as listed in the Part 225 rules) are subject to NOx and SO<sub>2</sub> limits based on annual average emissions across all facilities. The limit for  $NO_X$  emissions is 0.11 pounds per million British Thermal Units (lb/ MMBTU) starting in 2012 and the limits for SO<sub>2</sub> are 0.15 lb/MMBTU in 2017 and 0.11 lb/MMBTU starting in 2019. The collective set of Ameren facilities in Illinois, under the Multi-Pollutant Standards (MPS), must meet an annual average emission limit for NOx of 0.11 lb/MMBTU starting in 2012 and for SO2 of 0.23 lb/MMBTU starting in 2017. Similar limits under the MPS apply to the Dynegy facilities in Illinois.

EPA believes this degree of averaging is acceptable in this context. The limits that Illinois has imposed are sufficiently stringent that the companies have only limited latitude to over control at some facilities in trade for having elevated emissions at other facilities. The facilities owned by each company are sufficiently close to each other, relative to their distances from the nearest Class I areas, that modest shifts in emissions from one facility to another should have minimal impact on the combined impact on regional haze at the Class I areas. Furthermore, regional haze is evaluated across a considerable number of days, e.g., the 20 percent of days with the worst visibility. Therefore, a limit that allows elevated emissions on individual days, so long as other days have lower emissions, should suffice to address the pertinent measures of regional haze. Illinois's limits should also be adequately enforceable since the sources at issue are required to conduct continuous emission monitoring of both  $SO_2$  and  $NO_X$ .

authority in the SIP and submitted the two permits as part of its Regional Haze plan to be incorporated into the SIP. The permits set Federally enforceable NO<sub>X</sub> and SO<sub>2</sub> limits as necessary to meet the Regional Haze requirements of the CAA and effectively mandate that the utilities to run the SCRs year round and for CWLP to shut down its Lakeside unit 8

Two petroleum refineries, the CITGO and Exxon Mobil refineries, also have units subject to BART: the CITGO refinery in Lemont, Illinois and the Exxon Mobil refinery south of Joliet, Illinois. Both refineries will be required to reduce emissions by a Federal consent decree resolving an enforcement action brought by EPA against a number of refineries. The consent decrees require the CITGO, Exxon Mobil, and the other refineries to operate controls at the Best Available Control Technology level. Illinois evaluated the subject-to-BART units at the CITGO and Exxon Mobil refineries. It found that the  $NO_X$  and  $SO_2$  emission limits on the subject-to-BART units in the consent decrees satisfy BART.

A consent decree between the United States and CITGO Petroleum Corporation was entered in the U.S. District Court for the Southern District of Texas on October 6, 2004 (No. H-04-3883). The consent decree requires the company to operate SCR and a wet scrubbing system at its Fluid Catalytic Cracking Unit (FCCU) that will reduce NO<sub>x</sub> emissions by more than 90 percent and SO<sub>2</sub> emissions by 85 percent. The controls on the FCCU will result in a reduction of NOx emissions from 1,065.7 to 106.6 TPY and SO<sub>2</sub> emissions from 10,982.5 to 107.9 TPY by 2013. CITGO has also added a tail gas recovery unit that reduces SO2 emissions from its sulfur train units from 4340.0 to 91.2 TPY, a 98 percent reduction. The emission controls on all units at CITGO's Lemont refinery will reduce NO<sub>X</sub> emissions by 1,268 TPY and  $SO_2$  emissions by 15,123 TPY.

A consent decree between the United States and Exxon Mobil Corporation was entered in the U.S. District Court for the Northern District of Illinois on October 11, 2005 (No. O5-C-5809). The consent decree for Exxon Mobil requires SCR operation on its FCCU in addition to maintenance of the existing wet scrubbing system. The controls on the FCCU result in a 1,636.2 TPY decrease in NO $_{
m X}$  emissions from 1,818.0 to 181.8 TPY and a 9,667.7 TPY decrease in  $SO_2$ emissions from 9,865.0 to 197.3 TPY. Exxon Mobil also has added a tail gas recovery unit on its south sulfur recovery unit. That reduces SO2 emissions by 9,153.8 TPY to 186.8 TPY.

The emission controls at Exxon Mobil's Joliet refinery will reduce 1,695 TPY NO<sub>X</sub> and 18,821 TPY SO<sub>2</sub>.

These two consent decrees are Federally enforceable and also require that the refineries submit permit applications to Illinois to incorporate the required emission limits into Federally enforceable air permits (other than Title V). Therefore, emission limits established by the consent decrees may be relied upon by Illinois for addressing the BART requirement for these facilities.

Based on modeling, MRPO determined that the visibility impact of directly emitted particulate matter from the facilities with subject to BART units is minimal. In particular, MRPO assessed the impact of the directly emitted particulate matter from all facilities potentially subject to BART in the five MRPO states, and found the impact to be less than 0.5 dv at any Class I area as compared to natural background conditions. Illinois therefore concludes that PM emissions from its subset of these BART sources have a negligible visibility impact. Furthermore, these facilities are already subject to federally enforceable PM emission control requirements mandated by SIP-approved state particulate matter regulations, so that there is minimal potential for further PM emission reductions. Therefore, based particularly on the substantial existing controls on these facilitiesfabric filters, electrostatic precipitators, and cyclones; and the minimal benefits of further control, Illinois concluded that BART did not include further control of PM emissions from these facilities.

EPA is satisfied with the state's BART determinations. The emission limits that Illinois adopted generally will require state-of-the-art emission controls, not just at the units subject to BART requirements but also at numerous units that are not subject to BART. The Illinois facilities subject to BART are a long distance from any Class I area such that, so the geographical redistributions of emissions within Illinois do not significantly affect visibility and the benefits of alternate control strategies may be judged simply by comparing the net emission reductions. The MPS and CPS provide emission reduction well in excess of simply implementing BART on subject units. The reduction in NO<sub>X</sub> emissions from the Ameren, Dynegy, and Midwest Generation units by 2015 from MPS and CPS is expected to be 89,882 TPY. Illinois estimated that simply implementing BART on the subject units from these entities would yield 32,002 TPY of NOx emission

reductions, which is 56,890 TPY less that from MPS and CPS, Illinois estimated that implementing BART on the subject units at Ameren, Dynegy, and Midwest Generation facilities would require an 117,252 TPY reduction in SO<sub>2</sub> emission, but MPS and CPS will require a 214,179 TPY SO<sub>2</sub> reduction by 2015. Thus, Illinois estimated that its plan will require 96,927 TPY lower SO<sub>2</sub> emissions than simply requiring BART. EPA believes that Illinois has thereby demonstrated the emission limits on the subject to BART units covered by MPS and CPS satisfy the BART requirements.

Illinois did not rely on the Clean Air Interstate Rule (CAIR) for its BART determinations. Illinois is in the CAIR region. However, it used its state rules, permits, and consent decrees to achieve emission reductions that satisfy BART. This means that Illinois is not reliant on CAIR and, thus, it has avoided the issues of other CAIR region states that relied on CAIR. For similar reasons, Illinois' satisfaction of regional haze rule requirements is not contingent on the Transport Rule and thus is not affected by the stay of that rule.

#### E. Long-Term Strategy

Under section 169A(b)(2) of the CAA and 40 CFR 51.308(d), states' regional haze programs must include an LTS for making reasonable progress toward meeting the national visibility goal. Illinois's LTS must address visibility improvement for the Class I areas impacted by Illinois sources. Section 51.308(d)(3) requires that Illinois consult with the affected states in order to develop a coordinated emission management strategy. A contributing state, such as Illinois, must demonstrate that it has included, in its SIP, all measures necessary to obtain its share of the emissions reductions needed to meet the RPGs for the Class I areas affected by Illinois sources. As described in section III.D. of this proposed rule, the LTS is the compilation of all control measures Illinois will use to meet applicable RPGs. The LTS must include enforceable emissions limitations. compliance schedules, and other measures as necessary to achieve the RPGs for all Class I areas affected by Illínois emissions.

Illinois complied with the consulting requirements by participating in meetings and conference calls with affected Class I states and RPOs to discuss the states' assessments of visibility conditions, analyses of culpability, and possible measures that could be taken to meet visibility goals. Illinois engaged in extensive

consultations with other MRPO states, including Indiana, Michigan, Ohio, and Wisconsin. Illinois also consulted with Arkansas, Kentucky, Minnesota, Missouri, New Hampshire, New Jersey, and Vermont. As part of the MRPO, Illinois participated in inter-RPO consultation on regional haze. This consultation is detailed in Chapter 9 of the state's plan. EPA finds that the state's consultation with Class I states satisfies applicable consultation requirements.

Illinois's LTS includes the modeling and monitoring results on which it relied to determine its share of emission reductions necessary to meet the reasonable progress goals of impacted Class I areas. This information is provided in Chapter 9 of the Illinois regional haze plan. Portions of this technical work were provided by MRPO as it worked with other RPOs to provide this information on Class I areas outside

the Midwest.

At 40 CFR 51.308(d)(3)(v), the RHR identifies seven factors that a state must consider in developing its LTS: (A) Emission reductions due to ongoing programs; (B) measures to mitigate impact from construction; (C) emission limits to achieve the RPG; (D) replacement and retirement of sources; (E) smoke management techniques; (F) Federally enforceable emission limits and control measures; and (G) the net effect on visibility due to projected emission changes over the LTS period. Illinois considered the seven factors in developing its LTS. Chapter 8 of the Illinois regional haze plan provides a

full analysis of each factor.

Illinois relied on MRPO's modeling and analysis along with its emission information in developing a LTS. Illinois considered the factors set out in 51.308(d)(3)(v) in developing its LTS. Based on these factors and the MRPO's technical analysis, in conjunction with RPGs that were set by the pertinent Class I states in consultation with Illinois and other contributing states, Illinois concludes that existing control programs, together with the BART controls described above, address Illinois's impact on Class I areas. This is because the combination of the existing controls and the BART controls suffice to meet the impacted Class I areas' RPGs by 2018. These existing control programs include Federal motor vehicle emission control program, reformulated gasoline, emission limits for area sources of VOCs, Title IV, the NO<sub>X</sub> SIP Call, NO<sub>X</sub> Reasonable Achievable Control Technology, Maximum Achievable Control Technology standards, and Federal nonroad standards for construction

equipment and vehicles. As discussed in prior sections, implementation of the existing control programs, supplemented by the control measures in the submission that require power plant and petroleum refinery emission reductions, will satisfy the LTS requirements because, for reasons discussed above, the expected emission reductions will meet requirements both to provide for BART and to provide emission reductions in Illinois that, in combination with emission reductions elsewhere, should improve visibility sufficiently for the pertinent Class I areas to meet their RPGs.

Illinois assessed all point sources in the state that emit at least 1,000 TPY of NO<sub>x</sub> and SO₂ combined and are more than 100 km from a Class I area to determine if the sources could potentially affect visibility in a Class I area. The assessment followed EPA guidance in calculating the ratio of emission rate in TPY (Q) to the distance to the nearest Class I area (d). The exclusions also followed guidance. Illinois found 15 facilities with a Q/d ratio equal to and greater than 10, EPA's recommended threshold. The results of the Q/d assessment are found in Table 8.1 in the Illinois TSD. Illinois found that it expects the implementation of existing control measures will result in emission reductions from the 15 facilities. As such, Illinois believes that the expected emission reductions will ensure reasonable progress.

#### F. Monitoring Strategy

Illinois maintains a monitoring network that provides data to analyze air quality problems including regional haze. Illinois's monitoring network includes State and Local Air Monitoring Sites (SLAMS), Special Purpose Monitors (SPM), Photochemical Assessment Monitoring Sites (PAMS), and PM<sub>2.5</sub> speciation sites. Illinois does not operate any sites under the IMPROVE program, but does have a site in Bondville, Illinois that monitors using the IMPROVE procedure method. Illinois is required under 40 CFR 51.308(d)(4) to have procedures for using the monitoring data to determine the contribution of emissions from within the state to affected Class I areas. Illinois developed procedures in conjunction with the MRPO. The procedures are detailed in the MRPO TSD. EPA finds that Illinois's regional haze plan meets the monitoring requirements for the RHR and that Illinois's network of monitoring sites is satisfactory to measure air quality and assess its contribution to regional haze.

### G. Federal Land Manager Consultation

Illinois was required to consult with the FLMs under 40 CFR 51.308(i). Illinois consulted with the FLMs electronically and by telephone. The FLMs were also included in discussions with Illinois during MRPO conference calls and meetings. A draft regional haze plan was submitted for FLMs comments on August 6, 2009. Illinois then provided the FLMs a revised regional haze plan on October 7, 2010 for review. That provided the FLMs enough time to comment prior to the December 6, 2010, public hearing on the regional haze plan. Illinois has included comments from the FLMs in Attachment 9 to its regional haze plan, a document providing the comments Illinois received and its responses. The state has committed to consulting the FLMs on future SIP revisions and progress reports.

#### H. Comments

Illinois took comments on its proposed regional haze plan. It held a public hearing on December 6, 2010. The public comment period ended on January 5, 2011. Evidence of the public notice and evidence of the public hearing were submitted to EPA.

Illinois's submission includes a document, Attachment 9, which summarized the comments it received from both the FLMs and from the public and provides its responses to the comments. The state revised portions of its plan based on the comments to correct errors and clarify portions that caused confusion. Illinois responded to other comments without revising its plan. EPA concludes that Illinois has satisfied the requirements from 40 CFR Part 51, Appendix V to provide evidence that it gave public notice, took comments, and that it compiled and responded to comments.

### V. What action is EPA taking?

EPA is proposing to approve revisions to the Illinois SIP, submitted on June 24, 2011, addressing regional haze for the first implementation period. The revisions address CAA and regional haze rule requirements for states to remedy any existing anthropogenic and prevent future impairment of visibility at Class I areas. EPA finds that Illinois has satisfied all the requirements and, thus, is proposing approval of the regional haze plan. EPA is also proposing to approve two state rules, MPS and CPS, and incorporating two permits, issued to City Water, Light, & Power and to Dominion Energy, into the

#### VI. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k): 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seg.);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 et seq.);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the state, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt

### List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Intergovernmental relations, Nitrogen dioxide, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

Dated: January 17, 2012.

#### Susan Hedman,

Regional Administrator, Region 5. [FR Doc. 2012-1606 Filed 1-25-12; 8:45 am] BILLING CODE 6550-50-P

## ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R05-OAR-2011-0080; FRL-9622-7]

Approval and Promulgation of Air Quality Implementation Plans; Indiana; Regional Haze

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

summary: EPA is proposing a limited approval of revisions to the Indiana State Implementation Plan (SIP) addressing regional haze for the first implementation period. Indiana submitted its regional haze plan on January 14, 2011, and supplemented it on March 10, 2011. The Indiana regional haze plan addresses the requirements of the Clean Air Act (CAA or Act) and Regional Haze Rule (RHR) requirements for states to remedy any existing and prevent future anthropogenic impairment of visibility in mandatory Class I areas caused by emissions of air pollutants from numerous sources located over a wide geographic area (also referred to as the "regional haze program"). States are required to assure reasonable progress toward the national goal of achieving natural visibility conditions in Class I areas. EPA is proposing a limited approval of these SIP revisions to implement the regional haze requirements for Indiana on the basis that the revisions, as a whole, strengthen the Indiana SIP. In a separate action, EPA has previously proposed a limited disapproval of the Indiana regional haze SIP because of the deficiencies in Indiana's regional haze SIP submittal arising from the remand by the U.S. Court of Appeals for the District of Columbia (D.C. Circuit) to EPA of the Clean Air Interstate Rule (CAIR). Consequently, we are not proposing to take action in this notice to address the state's reliance on CAIR to meet certain regional haze requirements.

**DATES:** Comments must be received on or before February 27, 2012.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R05-OAR-2011-0080, by one of the following methods:

- 1. www.regulations.gov: Follow the on-line instructions for submitting comments.
  - 2. Email: blakley.pamela@epa.gov.
  - 3. Fax: (312) 692-2450.
- 4. Mail: Pamela Blakley, Chief, Control Strategies Section, Air Programs Branch (AR-18J), U.S. Environmental Protection Agency, 77 West Jackson Boulevard, Chicago, Illinois 60604.

5. Hand Delivery: Pamela Blakley, Chief, Control Strategies Section, Air Programs Branch (AR-18]), U.S. Environmental Protection Agency, 77 West Jackson Boulevard, Chicago, Illinois 60604. Such deliveries are only accepted during the Regional Office normal hours of operation, and special arrangements should be made for deliveries of boxed information. The Regional Office official hours of business are Monday through Friday, 8:30 a.m. to 4:30 p.m., excluding Federal holidays.

Instructions: Direct your comments to Docket ID No. EPA--R05--OAR-2011-0080. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through www.regulations.gov or email. The www.regulations.gov Web site is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to EPA without going through www.regulations.gov your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of