

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

July 20, 2012

Midwest Generation)	
Joliet 9, Joliet 29, and Will County Stations)	
)	
)	
Petitioner,)	
)	
v.)	IEPA – 12-20
)	(Provisional Variance-Water)
ILLINOIS ENVIRONMENTAL)	
PROTECTION AGENCY,)	
)	
Respondent.)	

Re: Extension of Provisional Variance From Thermal Limits Contained in Joliet Station 9 NPDES Permit IL0002216; Joliet Station 29 NPDES Permit No. IL0064254; Will County Station NPDES Permit No. IL0002208.

Dear Mr. Claybaugh:

On July 3, 2012, the Illinois Environmental Protection Agency (Agency) granted a provisional variance (Exhibit A) (“July 3 Provisional Variance”) to Midwest Generation for its Joliet Station 9, Joliet Station 29, and Will County Station. The July 3 Provisional Variance ended on July 13, 2012. On July 10, 2012, Midwest Generation submitted a request for an extension to the July 3 Provisional Variance and supplemented the extension request with additional information submitted July 12, 2012. The Agency granted an extension of the July 3 Provisional Variance on July 12, 2012. (Exhibit B) (“July 12 Extension”)

On July 19, 2012, the Agency received Midwest Generation’s request to extend the July 12 Extension.¹ (Exhibit C)² (“July 18 Request”) Midwest Generation requests that the terms and conditions of its July 12 Extension, issued with regard to thermal limits contained in NPDES Permit Numbers IL0002216, IL0064254, and IL0002208, be extended for 14 days through August 5, 2012, so that Midwest Generation can continue operating through this unusually hot and dry period of weather which has resulted in high river temperatures.

¹ The request received on July 19, 2012 is dated July 18, 2012.

² Background documents for the July 3 Provisional Variance and July 12 Extension have been omitted from Exhibit C due to the number of pages and redundancy of documents. The attachments to the July 18 Request are captured in the July 3 Provisional Variance and the July 12 Extension, both of which are exhibits to this Provisional Variance extension.

Based on its review, the Agency GRANTS Midwest Generation another extension to its July 12 Extension, subject to the specific conditions set forth below.

Background

The generating units at each of Midwest Generation's stations are coal-fired, and each utilizes an open cycle, once-through condenser cooling system. The Midwest Generation Stations are steam-electric generating processes that require the use of large volumes of surface water. Basic facts and location of the three Midwest Generation stations subject of the provisional variance remain unchanged from the July 3 Provisional Variance and July 12 Extension.

However, some operational changes have been put into place as a result of the weather conditions that led to the July 3 Provisional Variance and the July 12 Extension. The Will County Station, while not equipped with cooling towers, has been reduced in load since sometime during the July 3 Provisional Variance. Joliet Station 9 is not equipped with cooling towers. Joliet Station 29 is equipped with cooling towers that are capable of cooling approximately one-third of Units 7 & 8's total design discharge. The cooling towers have been in constant operation during the July 3 Provisional Variance and July 12 Extension periods and will remain on indefinitely. Joliet Station 29 was operated at a reduced load during the period of the July 3 Provisional Variance. As of the July 18 Request, Will County and Joliet 29, Units 7 & 8, have continued to be held at minimum loads overnight to help with downstream river temperature moderation.

Joliet 9, Unit 6 was first derated from July 3, to July 7 and then cycled offline from the afternoon of July 7 to the afternoon of July 9 in order to keep water temperatures at the I-55 Bridge under 96° F. Midwest Generation continues to operate Unit 6 at a reduced capacity as of the July 18 Request.

As of July 18, the maximum I-55 Bridge 96° F temperature limit allowed by the provisional variance relief has not been exceeded.

Relief Requested

With the July 18 Request, Midwest Generation seeks a provisional variance from the thermal limits at the I-55 Bridge, contained in Joliet Station 9 NPDES Permit IL0002216; Joliet Station 29 NPDES Permit No. IL0064254; and Will County Station NPDES Permit No. IL0002208, beginning on July 23, 2012, and expiring on August 5, 2012. More specifically, Midwest Generation has requested an increase in the maximum thermal adjusted standard from 93° F to 96° F, as well as a suspension of the counting of excursion hours for periods when the I-55 Bridge temperature exceeds 91° F.

Special Condition 5 in Joliet Station 9 and Joliet Station 29 NPDES permits, and Special Condition 6, in Will County's NPDES permit provide in pertinent part:

[E]ffluent shall not alone or in combination with other sources cause temperatures in the main channel of the Lower Des Plaines River at the I-55 Bridge to exceed the temperatures set forth in the following table, except in accordance with allowable monthly excursions detailed below:

...	July	...	Aug.	...	Sept	...
	91		91		90	

These standards may be exceeded by no more than 3° F during 2% of the hours in the 12-month period ending December 31, *except that at no time shall Midwest Generation's plants cause the water temperature at the I-55 Bridge to exceed 93° F* (emphasis added).

According to the provisional variance request, the water temperature will not exceed 96° F at the I-55 Bridge.

In addition, Midwest Generation requests that "additional excursion hours be granted by the Agency to afford the necessary protection required to ensure continuing compliance with the I-55 alternate thermal standards once the Provisional Variance period ends. A total of 100 hours of additional excursion time is requested."

Necessity for Request

According to Midwest Generation, the summer weather pattern is continuing to greatly impact the ability to maintain compliance with the existing thermal limitations which cover the Midwest Generation stations identified above. Prior to the July 3 Provisional Variance, Midwest Generation had 123.25 excursion hours available at the I-55 Bridge. Over the course of the July 3 Provisional Variance, Midwest Generation consumed 86.75 excursion hours, leaving 36.5 excursion hours. Those 36.5 excursion hours were consumed during the July 12 Extension term. Therefore, all permitted excursion hours have been exhausted.

The hot weather is creating unusually high demand for electricity to support human health and safety needs, as well as the many businesses and households which rely on power through the PJM Interconnection. Midwest Generation states that, "[w]hile no system emergency has been declared at this time, the amount of available power is limited by environmental compliance constraints."

Midwest Generation says that without the relief requested, the Joliet units, and possibly the Will County units, are in jeopardy of needing to shut down completely in order to attempt to meet the 93° F maximum I-55 thermal limit, which may not even be possible due to the current adverse ambient waterway and weather conditions. Midwest Generation reports that a shut down in lieu of the requested extension would result in

operational problems and potential safety risks, as detailed in the original request for the provisional variance dated July 3, 2012.

Alternatives to Requested Relief

Midwest Generation states that given the considerations detailed above, the only alternative method of compliance is to shutdown Joliet Stations 9 and 29 (Units 6, 7 and 8) and the Will County Units 3 and 4, as these are the only Midwest Generation stations which have a potential impact on I-55 Bridge water temperatures. (Midwest Generation notes that previous proceedings and thermal modeling has determined that any potential thermal impacts from the Fisk or Crawford Stations have dissipated prior to reaching Will County).

Environmental Impacts

Midwest Generation states that while observations of the Chicago Sanitary and Ship Canal and Lower Des Plaines River have occurred four times per day during the July 3 Provisional Variance and the July 12 Extension, “none of the observations have indicated any adverse impacts on aquatic life.” Midwest Generation also has its biological consultants performing a routine fisheries monitoring program in the Chicago Sanitary and Ship Canal near Will County Station, and in the Lower Des Plaines River from Brandon Lock and Dam down past the I-55 Bridge. Midwest Generation provides, in the July 18 Request, that any Provisional Variance extension beginning July 23, 2012 and expiring on August 5, 2012, is not reasonably expected to cause mortality or any long-term negative impacts to the aquatic community.

Agency Determinations

The Agency has reviewed the requested provisional variance and has concluded the following:

1. Any environmental impact from the requested relief shall be closely monitored, and the Agency shall be immediately notified of any adverse impacts.
2. No reasonable alternatives appear available;
3. No public water supplies should be affected;
4. The Agency is not authorized to grant additional excursion hours;
5. No federal regulations will preclude the granting of this request; and
6. Midwest Generation will face an arbitrary and unreasonable hardship if the request is not granted.

Conditions

The Agency hereby GRANTS Midwest Generation's Will County and Joliet Stations 9 and 29 an extended provisional variance from the thermal limits indicated in Special Conditions 6 and 7 of the Will County NPDES Permit No. IL0002208, Special Conditions 5 and 6 of the Joliet Unit 6 (Station 9) NPDES Permit No. IL0002216, and Special Conditions 5 and 6 of Joliet Units 7 & 8 (Station 29) NPDES Permit No. 0064254, subject to the following conditions:

- A. The term of this provisional variance begins (1) for excursion hours: when the temperature at the I-55 Bridge exceeds 91° F, but not before July 23, 2012; (2) for maximum temperature limits: when the temperature exceeds 93° F. This provisional variance extension is based on the facts provided by Midwest Generation in the July 18 Request. The term of this provisional variance shall not begin before July 23, 2012 and goes through August 5, 2012. If the facts and circumstances described in the July 18 Request abate, the term of this provisional variance extension will end.
- B. Midwest Generation shall provide the best operation of all available equipment to produce the best effluent possible at all times during the term of this provisional variance extension. At no time shall the water temperature in the main channel of the Lower Dew Plains River at the I-55 Bridge exceed a temperature of 96° F during the term of this provisional variance extension.
- C. Midwest Generation must continuously monitor discharge and receiving water temperatures and visually inspect all discharge areas, including at the I-55 Bridge, at least four times per day, during daylight hours, to assess any mortalities to fish and other aquatic life. This monitoring shall occur during the period of the provisional variance extension and shall continue for a minimum of four days after the provisional variance extension expires.
- D. Midwest Generation shall document environmental conditions during the term of the provisional variance extension, including the activities described in item C. of this Section, and submit the documentation to the Agency and the Illinois Department of Natural Resources ("Illinois DNR") within seven (7) days after this provisional variance extension expires.
- E. Midwest Generation shall immediately notify the Agency and Illinois DNR of any unusual conditions, including mortalities of fish or other aquatic life, immediately take action to remedy the problem, investigate and document the cause and seriousness of the unusual conditions while providing updates to the Agency and Illinois DNR as changes occur until normal conditions return; notify the Agency and Illinois DNR when normal conditions return and submit the documentation to the Agency and Illinois DNR within seven (7) days after normal conditions return.

- F. Midwest Generation shall develop and implement a response and recovery plan to address any adverse environmental impact due to thermal conditions that could result from the provisional variance extension, including loss and damage to aquatic life.
- G. Midwest Generation shall notify Roger Callaway, Illinois Environmental Protection Agency, by telephone at 217-782-9720 when the period of this provisional variance extension begins and ends. Written confirmation shall be sent within five days after the discharge specified in this provisional variance extension ends to the following address:

Illinois Environmental Protection Agency
Bureau of Water - Water Pollution Control
Attention: Roger Callaway
1021 North Grand Avenue East, CAS #19
Springfield IL 62794-9276

- H. Midwest Generation shall sign a certificate of acceptance of this provisional variance extension and forward that certificate to Roger Callaway at the address indicated above within one day of the date of this provisional variance.

The certification should take the following form:

I (We) _____, hereby accept and agree to be bound by all terms and conditions of the provisional variance granted by the Agency in _____ dated _____.

Petitioner

Authorized Agent

Title

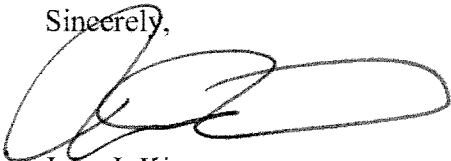
Date

- I. Midwest Generation shall continue to monitor all parameters and comply with all other conditions specified in Joliet Station 9 NPDES Permit IL0002216; Joliet Station 29 NPDES Permit No. IL0064254; and Will County Station NPDES Permit No. IL0002208.

Conclusion

The Agency grants this provisional variance extension in accordance with its authority contained in Sections 35(b), 36 (c), and 37(b) of the Illinois Environmental Protection Act (415 ILCS 5/35(b), 36(c), and 37(b) (2010). The decision to grant this provisional variance extension is not intended to address compliance with any other applicable laws or regulations. In addition, this provisional variance extension does not grant excursion hours additional to those provided in the aforementioned NPDES Permits issued to Midwest Generation.

Sincerely,

A handwritten signature in black ink, appearing to read "John J. Kim", written over a white background.

John J. Kim
Interim Director

cc: Marcia Willhite
Roger Callaway
Chad Kruse

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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

July 3, 2012

Midwest Generation)
Joliet 9, Joliet 29, and Will County Stations)
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Petitioner,)
)
v.)
ILLINOIS ENVIRONMENTAL)
PROTECTION AGENCY,)
)
Respondent.)

IEPA – 12-20
(Provisional Variance-Water)

Re: Provisional Variance From Thermal Limits Contained in Joliet Station 9 NPDES Permit IL0002216; Joliet Station 29 NPDES Permit No. IL0064254; Will County Station NPDES Permit No. IL0002208.

Dear Mr. Claybaugh:

The Illinois Environmental Protection Agency (Agency) has completed its technical review of the attached provisional variance request, dated July 3, 2012 (Attachment A) submitted by Midwest Generation for its Joliet Station 9, Joliet Station 29, and Will County Station. Because of extremely hot weather conditions and the resulting maximum customer demand for electricity needed for cooling Midwest Generation has requested a provisional variance from the thermal limits at the I-55 Bridge in the Lower Des Plaines River contained in these stations' NPDES permits.

Based on its review, the Agency GRANTS Midwest Generation a provisional variance from thermal limits at the I-55 Bridge for its Joliet Station 9, Joliet Station 29, and Will County Station, subject to the specific conditions set forth below.

Background

The generating units at each of Midwest Generation's stations are coal-fired, and each utilizes an open cycle, once-through condenser cooling system. The Midwest Generation Stations are steam-electric generating processes that require the use of large volumes of surface water.

The Will County Station is located in Romeoville at River Mile 295.5 on the Chicago Sanitary and Ship Canal, and is a two-unit steam electric facility with an 897 megawatts

Relief Requested

Midwest Generation seeks a provisional variance from the thermal limits at the I-55 Bridge, contained in Joliet Station 9 NPDES Permit IL0002216; Joliet Station 29 NPDES Permit No. IL0064254; and Will County Station NPDES Permit No. IL0002208, beginning on July 4, 2012, and continuing through July 13, 2012. More specifically, Midwest Generation has requested an increase in the maximum thermal adjusted standard from 93° F to 96° F, as well as a suspension of the counting of excursion hours for periods when the I-55 Bridge temperature exceeds 91° F.

Special Condition 5 in Joliet Station 9 and Joliet Station 29 NPDES permits, and Special Condition 6, in Will County's NPDES permit provide in pertinent part:

[E]ffluent shall not alone or in combination with other sources cause temperatures in the main channel of the Lower Des Plaines River at the I-55 Bridge to exceed the temperatures set forth in the following table, except in accordance with allowable monthly excursions detailed below:

...	July	...	Aug.	...	Sept	...
	91		91		90	

These standards may be exceeded by no more than 3° F during 2% of the hours in the 12-month period ending December 31, *except that at no time shall Midwest Generation's plants cause the water temperature at the I-55 Bridge to exceed 93° F* (emphasis added).

According to the provisional variance request, the water temperature will not exceed 96° F at the I-55 Bridge.

Special Condition 6 in Joliet Station 9 and Joliet Station 29 NPDES permits, and Special Condition 7, in Will County's NPDES permit provide:

Permittee shall comply with all temperature limitations as imposed by the Pollution Control Board's order in AS 96-10, dated October 3, 1996.

Necessity for Request

During this time of extremely hot air temperatures of up to 100° F each day, with little overnight relief, coupled with prolonged drought conditions in Northern Illinois, the alternate I-55 thermal water quality standards currently in effect cannot consistently be met, even with the current measures already taken by Midwest Generation to maintain compliance, including derating of Joliet Unit 6 down to minimum load during periods of low river flows and increased intake temperatures. Intake temperatures are expected to keep increasing given the prolonged low flows in the entire waterway system and continued high air temperatures. On July 3, 2012, the intake temperature at Will County

damage to these turbines. Higher river temperatures may prevent restart altogether, making units unavailable for system grid load demand and support.

Voltage control and regulation – Midwest Generation states that removing units from service will result in localized voltage and VAR control issues. Although this is the province of the Transmission Operator, these effects usually manifest themselves most severely on hot, high load demand days: days that most likely one would shut a unit down to maintain river thermal compliance. Impacts of low voltage would include shortened motor life and the possibility that some motor operated devices, such as air conditioners, will be unable to operate. More severe impacts could include localized power brown outs or blackouts due to insufficient voltage support on the transmission system.

Load regulation would also be impacted by the loss of a generating unit that typically would supply load regulation as the system loaded up. This would put additional burden on transmission lines and transmission equipment, and could cause transmission line overloading in peak conditions.

Alternatives to Requested Relief

Midwest Generation states that given the considerations detailed above, the only alternative method of compliance is to shutdown Joliet Stations 9 and 29 (Units 6, 7 and 8) and the Will County Units 3 and 4, as these are the only Midwest Generation stations which have a potential impact on I-55 Bridge water temperatures. (Midwest Generation notes that previous proceedings and thermal modeling has determined that any potential thermal impacts from the Fisk or Crawford Stations have dissipated prior to reaching Will County).

Environmental Impacts

Midwest Generation has provided details on the environmental impact during the requested variance period from July 4, 2012, through July 13, 2012. Midwest Generation has determined that there should not be any significant environmental impact during the course of this provisional variance.

Agency Determinations

The Agency has reviewed the requested provisional variance and has concluded the following:

1. Any environmental impact from the requested relief shall be closely monitored, and the Agency shall be immediately notified of any adverse impacts.
2. No reasonable alternatives appear available;
3. No public water supplies should be affected;

the Agency and Illinois DNR within seven (7) days after normal conditions return.

- F. Midwest Generation shall develop and implement a response and recovery plan to address any adverse environmental impact due to thermal conditions that could result from the provisional variance, including loss and damage to aquatic life.
- G. Midwest Generation shall notify Roger Callaway, Illinois Environmental Protection Agency, by telephone at 217-782-9720 when the period of this provisional variance begins and ends. Written confirmation shall be sent within five days after the discharge specified in this provisional variance ends to the following address:

Illinois Environmental Protection Agency
 Bureau of Water - Water Pollution Control
 Attention: Roger Callaway
 1021 North Grand Avenue East, CAS #19
 Springfield IL 62794-9276

- H. Midwest Generation shall sign a certificate of acceptance of this provisional variance and forward that certificate to Roger Callaway at the address indicated above within one day of the date of this order.

The certification should take the following form:

I (We) _____, hereby accept and agree to be bound by all terms and conditions of the provisional variance granted by the Agency in _____ dated _____.

Petitioner

Authorized Agent

Title

Date

- I. Midwest Generation shall continue to monitor all parameters and comply with all other conditions specified in Joliet Station 9 NPDES Permit IL0002216; Joliet

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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

July 12, 2012

Midwest Generation)	
Joliet 9, Joliet 29, and Will County Stations)	
)	
)	
Petitioner,)	
)	
v.)	IEPA – 12-20
)	(Provisional Variance-Water)
ILLINOIS ENVIRONMENTAL)	
PROTECTION AGENCY,)	
)	
Respondent.)	

Re: Extension of Provisional Variance From Thermal Limits Contained in Joliet Station 9 NPDES Permit IL0002216; Joliet Station 29 NPDES Permit No. IL0064254; Will County Station NPDES Permit No. IL0002208.

Dear Mr. Claybaugh:

On July 3, 2012, the Illinois Environmental Protection Agency (Agency) granted a provisional variance (Exhibit A) (“July 3 Provisional Variance”) to Midwest Generation for its Joliet Station 9, Joliet Station 29, and Will County Station. The July 3 Provisional Variance ends no later than July 13, 2012. On July 10, 2012, Midwest Generation submitted a request for an extension to the July 3 Provisional Variance (Exhibit B) and supplemented the extension request with additional information submitted July 12, 2012 (Exhibit C).

Midwest Generation requests that the terms and conditions of its July 3 Provisional Variance, issued with regard to thermal limits contained in NPDES Permit Numbers IL0002216, IL0064254, and IL0002208, be extended through July 23, 2012, so that Midwest Generation can continue operating through this unusually hot and dry period of weather which has resulted in high river temperatures.

Based on its review, the Agency GRANTS Midwest Generation an extension to its July 3 Provisional Variance, subject to the specific conditions set forth below.

... July ... Aug. ... Sept ...
91 91 90

These standards may be exceeded by no more than 3° F during 2% of the hours in the 12-month period ending December 31, *except that at no time shall Midwest Generation's plants cause the water temperature at the I-55 Bridge to exceed 93° F* (emphasis added).

According to the provisional variance request, the water temperature will not exceed 96° F at the I-55 Bridge.

Special Condition 6 in Joliet Station 9 and Joliet Station 29 NPDES permits, and Special Condition 7, in Will County's NPDES permit provide:

Permittee shall comply with all temperature limitations as imposed by the Pollution Control Board's order in AS 96-10, dated October 3, 1996.

In addition, Midwest Generation requests that "the Agency grant additional excursion hours to be available for use by [Midwest Generation] upon the termination of the requested extension of the July 3 Provisional Variance. [Midwest Generation] requests that these permitted excursion hours be reinstated upon their exhaustion."

Necessity for Request

According to Midwest Generation, the current summer weather pattern is continuing to greatly impacting the ability to maintain compliance with the existing thermal limitations which cover the MWG generating stations identified above. Prior to the July 3 Provisional Variance, Midwest Generation had 123.25 excursion hours available at the I-55 Bridge. Over the course of the July 3 Provisional Variance, Midwest Generation consumed 86.75 excursion hours, leaving 36.5 excursion hours.

With several days of air temperatures at or over 100° F last week, and the weather forecast calling for more temperatures in the high 90's-100's later this week and into the next, the ability to continue to provide needed power under these increasingly adverse circumstances is becoming further jeopardized.

Additionally, Midwest Generation states that because of the unusually hot, dry weather, the river intake temperatures are continuing to climb and the capacity of the waterway to dissipate heat continues to be greatly reduced. Higher dew points are also compromising the effectiveness of the helper cooling towers at Joliet Station 29. In addition, the hot weather is creating unusually high demand for electricity to support human health and safety needs, as well as the many businesses and households which rely on power through the PJM Interconnection.

Conditions

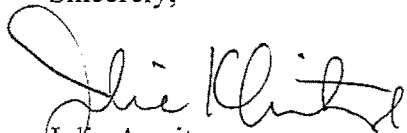
The Agency hereby GRANTS Midwest Generation's Will County and Joliet Stations 9 and 29 an extended provisional variance from the thermal limits indicated in Special Conditions 6 and 7 of the Will County NPDES Permit No. IL0002208, Special Conditions 5 and 6 of the Joliet Unit 6 (Station 9) NPDES Permit No. IL0002216, and Special Conditions 5 and 6 of Joliet Units 7 & 8 (Station 29) NPDES Permit No. 0064254, subject to the following conditions:

- A. The term of this provisional variance begins (1) for excursion hours: when all permitted excursion hours have been exhausted; (2) for maximum temperature limits: when the temperature exceeds 93° F. This provisional variance extension is based on the facts provided by Midwest Generation in the request for extension dated July 10, 2012 and the supplement to the request for extension dated July 12, 2012. The term of this provisional variance shall begin on July 13, 2012 and end no later than July 23, 2012. If the facts and circumstances described in the requests dated July 10, 2012 and July 12, 2012 abate the term of this provisional variance will end.
- B. Midwest Generation shall provide the best operation of its available equipment to produce the best effluent possible at all times during the term of this provisional variance. At no time shall the water temperature in the main channel of the Lower Dew Plains River at the I-55 Bridge to exceed a temperature of 96° F during the term of this provisional variance.
- C. Midwest Generation must continuously monitor discharge and receiving water temperatures and visually inspect all discharge areas, including at the I-55 Bridge, at least four times per day to assess any mortalities to fish and other aquatic life. This monitoring shall occur during the period of the provisional variance and shall continue for a minimum of four days after the provisional variance expires.
- D. Midwest Generation shall document environmental conditions during the term of the provisional variance, including the activities described in item C. of this Section, and submit the documentation to the Agency and the Illinois Department of Natural Resources ("Illinois DNR") within seven (7) days after this provisional variance expires.
- E. Midwest Generation shall immediately notify the Agency and Illinois DNR of any unusual conditions, including mortalities of fish or other aquatic life, immediately take action to remedy the problem, investigate and document the cause and seriousness of the unusual conditions while providing updates to the Agency and Illinois DNR as changes occur until normal conditions return; notify the Agency and Illinois DNR when normal conditions return and submit the documentation to the Agency and Illinois DNR within seven (7) days after normal conditions return.

Conclusion

The Agency grants this provisional variance extension in accordance with its authority contained in Sections 35(b), 36 (c), and 37(b) of the Illinois Environmental Protection Act (415 ILCS 5/35(b), 36(c), and 37(b) (2010). The decision to grant this provisional variance is not intended to address compliance with any other applicable laws or regulations. In addition, this provisional variance extension does not grant additional excursion hours to Midwest Generation or reinstate excursion hours previously held by Midwest Generation.

Sincerely,



Julie Armitage
Acting Chief Legal Counsel

cc: Marcia Willhite
Roger Callaway
Chad Kruse



Donald C. Claybaugh
Managing Director
Coal Generation

July 18, 2012

Mr. Roger Callaway
Wastewater Compliance Unit Manager
Illinois Environmental Protection Agency
Bureau of Water
Compliance Assurance Section # 19
1021 North Grand Avenue East
Springfield, IL 62702

SUBJECT: Request for Extension of the Thermal Provisional Variance (IEPA 12-20)
for Midwest Generation's Will County and Joliet Stations 9 and 29

Will County	NPDES Permit No. IL0002208
Joliet Station 9	NPDES Permit No. IL 0002216
Joliet Station 29	NPDES Permit No. IL 0064254

Dear Mr. Callaway:

Pursuant to Section 35(b) of the Illinois Environmental Protection Act, Midwest Generation (MWG) respectfully submits this application for an extension of the Provisional Variance dated July 3, 2012, as extended on July 12, 2012 through July 22, 2012, granting relief for the Will County Station, Joliet Station 9 and Joliet Station 29 from the AS 96-10 adjusted thermal standards applicable at the I-55 Bridge in the Lower Des Plaines River that are incorporated into the NPDES permits for the MWG stations listed above. This request for an additional fourteen (14) day extension of the July 3, 2012 Provisional Variance through August 5, 2012 is necessitated due to the continuation of the extremely hot, dry weather conditions and the resulting increased power demand for use in air conditioning and other human health and safety support functions since the Provisional Variance was granted. The facts and circumstances described in the MWG provisional variance request dated July 3, 2012, and extension request dated July 12, 2012, are substantially unchanged and are hereby incorporated by reference. A copy of the above-referenced documentation is attached for the Agency's ease of review and reference (See Attachments 1 and 2).

Requested Relief:

MWG requests an additional 14 days of provisional variance relief through August 5, 2012. This extended variance period would begin immediately upon the July 23, 2012 expiration of the term of the July 12, 2012 Provisional Variance extension period. In the unlikely event that consistently more favorable weather and river conditions occur during the July 23-August 5,

significantly derated levels, in a way which assures continued compliance with the I-55 temperature standards without the ability to use additional excursion hours, when necessary. The changes in river flow or localized weather effects, both of which are beyond MWG's control, can result in one to two degree deviations from the stated limits within a very short period of time.

MWG submits that the use of excursion hours was intended to address situations and conditions like those described above. Certainly, MWG does not purposely try to use excursion hours; they are used for the aforementioned emergency situations only. The allowance for additional excursion hours, when and if the current extreme weather conditions moderate, will allow MWG the ability to plan and regulate its stations' operations in a way which both ensures the provision of needed electricity without causing significant adverse effects on the receiving waters. It simply restores the regulatory status quo for the remainder of the year in recognition of the unforeseen, extreme weather conditions that have occurred in 2012. MWG needs to have excursion hours available for use as needed due to these uncontrollable factors.

MWG will continue to abide by the conditions set forth in the existing Provisional Variance (IEPA Docket No. 12-20) through the duration of the requested extension period. Prior to the end of the Provisional Variance extension period, MWG will need to ensure that an adequate number of excursion hours remain available through the end of the year. To that end, MWG requests that additional excursion hours be granted by the Agency to afford the necessary protection required to ensure continuing compliance with the I-55 alternate thermal standards once the Provisional Variance period ends. A total of 100 hours of additional excursion time is requested, which would be effective and available for use from August 6 through December 31, 2012.

Additional Information In Support of Extended Provisional Variance Relief:

Extended period of critical weather and river flow conditions:

The current unusually hot and dry summer weather pattern is continuing to greatly impact the ability to maintain compliance with the existing thermal standards applicable to the subject MWG generating stations. Since early June, the lack of rainfall and higher than normal air temperatures have created an unprecedented situation. With several weeks of air temperatures at or over 100° F since early June, and the weather forecast calling for continued temperatures in the high 90's-100's into next week, MWG's ability to provide needed power under these increasingly adverse circumstances is further jeopardized. (See Attachment 3).

The weather forecast for the current week indicates extreme heat through most of the PJM area. This forecast also extends into next week. Lower forecasted temperatures for the days immediately preceding the current week turned out to be several degrees lower than actual weather temperatures. Consequently, because MWG relies on forecasted temperatures to model

aquatic vegetation in the intake water from the waterway are being managed by station personnel on a 24/7 basis to keep the towers running. Joliet Units 7&8 were derated for a period of time on July 18th due to the compromised efficiency of the towers in providing adequate cooling under high dew point values. This continues to be of concern during hot and humid weather conditions, when the helper towers are most needed.

- Load reductions at all the Will County and Joliet units are taken every evening, down to minimum load in many cases, in an attempt to further moderate downstream water temperatures. Throughout the variance period, MWG has continued to regulate the output of the units at the Will County and Joliet Stations, as river and weather conditions dictate, in order to maintain thermal compliance.

As a result of the actions taken by MWG to mitigate in-stream thermal conditions, to date, the maximum I-55 Bridge 96 deg F temperature limit allowed by the Provisional Variance has not been exceeded.

Because of the extended period of unusually hot, dry weather, the river intake temperatures are continuing to climb and the capacity of the waterway to dissipate heat continues to be further reduced. Higher dew points also continue to compromise the effectiveness of the helper cooling towers at Joliet Station 29. In addition, the extended hot weather is creating unusually high demand for electricity to support human health and safety needs, as well as the many businesses and households which rely on power through the PJM Interconnection.

Consequences of MWG Station Shut-downs/Derates:

To remain in compliance even with the higher in-stream temperature limit allowed by the July 3, 2012 Provisional Variance, as extended, MWG has not been able to supply the full amount of power committed to the PJM system. This reduced supply of power from MWG results in the need for PJM to obtain power from other sources, all of which have been similarly taxed by the widespread heat-wave and drought conditions. While no system emergency has been declared at this time, the amount of available power is limited by environmental compliance constraints. Accordingly, given these extenuating conditions, MWG is requesting this extension to allow it to continue to supply a reduced level of power, while still complying with the terms of the existing Provisional Variance.

In addition, as discussed in MWG's original Provisional Variance request dated July 3, 2012, there are significant safety and operational risks in shutting a unit down and bringing it back up again. Therefore, MWG could not continue to operate these stations without such additional safety and operational risks but for the relief afforded by the Provisional Variance,

With the many consecutive days of hot air temperatures in the mid-90's and up to 100°F, little overnight relief, and prolonged drought conditions in Northern Illinois, meeting even the I-55

backwater (e.g., (e.g., 26.6° C/79.9 °F, 27.5° C/81.5 °F and 29.0° C/84.2 °F at Locations 304, 414, and 418, respectively).. As previously represented, if there are any adverse impacts noted during this monitoring program, for fish or other aquatic organisms or plants, it will be documented and immediately reported to the Agency.

MWG also has a long-term temperature and dissolved oxygen monitoring program in place at the I-55 Bridge, with continuous monitoring equipment from May through September of each year. This data is downloaded on a weekly basis, so there is current data available for review to determine if dissolved oxygen levels remain adequate for aquatic life. During the period from July 5 through July 12, there were no dissolved oxygen levels measured at the I-55 Bridge which would be considered adverse to aquatic life, even though this time period represented some of the warmest water temperatures measured at this location, to date. During the routine fisheries monitoring work performed for MWG during the week of July 8th, the dissolved oxygen readings were consistent with previous years' fisheries monitoring results.

Further, there are many state and federal agencies with sampling crews on these waterways, including IDNR and USFWS personnel, performing Asian Carp monitoring activities, so there are additional trained observers in the field that can also report any unusual findings that could be associated with heat impacts.

I-55 Temperatures:

The I-55 water temperatures were over 93 deg F from the late evening on July 5th and continuing through mid-afternoon on July 8th. I-55 temperature peaked at 95.8 deg F for a very brief period of time on July 6th. I-55 temperatures declined to below 93 deg F by early morning on July 8th. The I-55 temperature again exceeded 93 deg F on July 16th and 17th for a brief period of time

Current I-55 temperature (7/18/2012 at 4:00 pm): 93.6 deg F and increasing, and is expected to reach up to 94 deg F later today. Similar I-55 temperatures are predicted for the next several days. This pattern will continue through the extended period of hot, dry weather as the demand for electricity increases to support residential and commercial uses.

All available I-55 excursion hours (123.25) were expended by the afternoon of July 17, 2012.

The MWG generating stations subject to this Provisional Variance request will remain in compliance with the near-field Secondary Contact thermal standards, and hence, will not be negatively impacting the aquatic life in the waterways immediately adjacent to their discharges. As previously stated in MWG's July 3, 2012 Provisional Variance request, prior thermal studies conducted on the station discharges have shown that the thermal plumes from these stations allow a zone of passage and do not extend from the surface to the bottom of the river, thereby providing additional refugia for the indigenous aquatic community.