BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

SIERRA CLUB, NATURAL RESOURCES DEFENSE COUNCIL, PRAIRIE RIVERS NETWORK, and ENVIRONMENTAL LAW & POLICY CENTER	)	
Petitioners,	)	
v.	)	PCB _____ (Third Party NPDES Appeal)
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY and MIDWEST GENERATION, LLC	)	
Respondents.	)	

NOTICE OF FILING

To:

Division of Legal Counsel
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

Midwest Generation, LLC
401 East Greenwood Ave.
Waukegan, IL 60087

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Pollution Control Board the *Petition for Administrative Review of an NPDES Permit Issued by the Illinois Environmental Protection Agency* of Sierra Club, Natural Resources Defense Council, Prairie Rivers Network, and Environmental Law & Policy Center, a copy of which is herewith served upon you.

4/29/2015

Jessica Dexter
Staff Attorney
Environmental Law & Policy Center
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Chicago, IL 60601
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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

SIERRA CLUB, NATURAL RESOURCES DEFENSE COUNCIL, PRAIRIE RIVERS NETWORK, and ENVIRONMENTAL LAW & POLICY CENTER	)	
Petitioners,	)	
v.	)	PCB _____ (Third Party NPDES Appeal)
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY and MIDWEST GENERATION, LLC	)	
Respondents.	))	

PETITION FOR ADMINISTRATIVE REVIEW OF AN NPDES PERMIT ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Pursuant to 415 ILCS 5/40(a)(1) and 35 Ill. Adm. Code § 105, the Sierra Club, Natural Resources Defense Council, Prairie Rivers Network and Environmental Law & Policy Center (collectively, "Petitioners") hereby petition for review of the March 25, 2015 decision of the Illinois Environmental Protection Agency ("IEPA") to grant a renewed National Pollutant Discharge Elimination System ("NPDES") permit (Permit No. IL0002259) to Midwest Generation, LLC to discharge pollutants from its Waukegan Generating Station (the "Facility") into Lake Michigan.

In support of their petition, Petitioners state:

Statement of Petitioners

1. The Sierra Club is a national nonprofit organization with 64 chapters and over 650,000 members dedicated to exploring, enjoying, and protecting the wild places of the earth; to practicing and promoting the responsible use of the earth's ecosystems and resources; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. The Sierra Club's concerns encompass protecting and restoring the quality of the natural and human environment. The Club's particular interest in this case and the issues which the case concerns stem from members who are adversely affected by the unnecessary degradation of water quality in Lake Michigan. Members depend on Lake Michigan for recreational activities including swimming, wading, fishing, boating, kayaking, hiking, nature study, and birdwatching and as a drinking water source. The Illinois Chapter of the Sierra Club has approximately 24,000 members in the state of Illinois.

2. Natural Resources Defense Council is a New York not-for-profit corporation that has among its purposes to ensure safe and sufficient water and protect public health by preventing pollution. Members residing in the State of Illinois are adversely affected by the degradation of water quality in Lake Michigan and depend on the lake for drinking water as well as recreational activities.

3. Prairie Rivers Network is an Illinois not-for-profit corporation concerned with river conservation and water quality issues in Illinois. It works with concerned citizens throughout the state to address issues that impact Illinois streams. Prairie Rivers Network members depend on clean water in Lake Michigan for activities including swimming, wading, fishing, canoeing, kayaking, hiking, nature study, bird watching and other wildlife viewing. These members are concerned that increased pollution and declining ecological health of Lake Michigan will adversely affect their enjoyment of these activities.

4. Environmental Law & Policy Center is an Illinois not-for-profit corporation and legal advocacy organization concerned with improving environmental quality and protecting Illinois natural resources. It works with concerned citizens and organizations throughout the state to address issues that affect Illinois water quality. Environmental Law and Policy Center members live and recreate in Waukegan and nearby areas, where they depend on clean drinking water from Lake Michigan. Members depend on clean water from Lake Michigan for activities that include fishing, swimming, nature study, boating, bird watching and other wildlife viewing.

5. Members of the Petitioners, including Jessica Dexter, Cindy Skrukrud, and Curt Volkmann, appeared at the hearing held in this proceeding or submitted comments in opposition to the permit. Because they are concerned that additional pollution from Midwest Generation's Waukegan Generating Station will degrade the water resources they enjoy for drinking and recreational purposes, these members and other members of Petitioners are so situated as to be affected by pollution in Lake Michigan.

6. Pursuant to Article XI of the 1970 Illinois constitution, Petitioners have associational standing to seek administrative review of the renewal of NPDES permit No. IL0002259 to Midwest Generation's Waukegan Generating Station. Article XI provides, "Each person has the right to a healthful environment. Each person may enforce this right against any party, governmental or private, through appropriate legal proceedings subject to reasonable limitation and regulation as the General Assembly may provide by law." Ill. Const. art. XI, § 2. This constitutional right eliminates the need for individual plaintiffs to demonstrate personalized injuries in actions seeking to protect a healthful environment. See Glisson v. City of Marion, 188 Ill. 2d 211, 228 (Ill. 1999) ("It was the intent of the committee to broaden the law of standing by eliminating the traditional special injury prerequisite for standing to bring an environmental action.").

7. Furthermore, Petitioners have authority to ask the Board to review the NPDES permit, pursuant to 35 Ill. Admin. Code § 105.204 and 415 ILCS 5/40(a)(1). Section 105.204 states, "If the Agency grants or denies a permit under subsection (b) of Section 39 of the Act, a third

party, other than the permit applicant or Agency, may petition the Board for a hearing to contest the decision of the Agency."

Grounds for Appeal

8. This permit appeal presents two claims.

COUNT ONE: IEPA Should Not Have Reissued Midwest Generation's Permit Without Thermal Effluent Limitations

9. Petitioners hereby repeat, reallege, adopt, and incorporate by reference paragraphs 1 through 8 above as if fully set out in this Cause of Action.

10. IEPA should not have reissued the final permit because it cannot assure compliance with the terms of the permit, with Illinois water quality standards, with the Clean Water Act or the Illinois Environmental Protection Act.

11. The Waukegan Generating Station discharges thermal pollution, among other pollution, into Lake Michigan.

12. Specifically, it discharges over five hundred million gallons of heated water into Lake Michigan per day, transferring over 5 billion BTUs of heat hourly. The resulting unnaturally warm water disrupts nearby aquatic ecosystems, and can even cause fatal heat shock to some organisms.

13. Illinois' water quality standards for Lake Michigan are set forth in 35 Ill. Adm. Code Part 302, Subpart E.

14. Under Clean Water Act ("CWA") regulations, "No permit may be issued…When the conditions of the permit do not provide for compliance with the applicable requirements of CWA, or regulations promulgated under CWA" or "When the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States." 40 CFR 122.4.

15. Every NPDES permit must comply with the Clean Water Act and regulations adopted thereunder.

16. When writing an NPDES permit, IEPA must "ensure compliance with" both technology- and water quality-based effluent limitations. 35 Ill. Admin. Code 309.141 (a).

17. Section 316(a) of the Clean Water Act authorizes U.S. EPA or, as appropriate, the State, to set alternative thermal limitations for specific point sources, if the owner or operator of a source, after opportunity for public hearing, can demonstrate that the alternative thermal limitation "will require effluent limitations more stringent than necessary to assure the [protection] and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of water into which the discharge is to be made." 33 U.S.C. § 1326 (a).

18. 40 C.F.R. § 125.72 provides that: "At the expiration of the permit, any discharger holding a section 316(a) variance should be prepared to support the continuation of the variance with studies based on the discharger's actual operation experience."

19. On August 3, 1978, the Board issued an order in the proceeding PCB 77-82, *In the Matter of: Proposed Determination of Thermal Standards for Zion and Waukegan Generating Stations*. In that order, the Board granted the preceding owner of the Facility, Commonwealth Edison Company ("Com Ed"), a thermal variance framed as an "alternative standard" for thermal discharges from the Facility to Lake Michigan.

20. Thermal variances issued pursuant to Clean Water Act § 316(a) expire upon expiration of the NPDES permit with which they are associated. 40 C.F.R. § 125.72. The NPDES permit associated with the Facility's 1978 thermal variance expired in 2000 upon IEPA's issuance of a renewed NPDES permit.

21. Neither the Board nor the U.S. Environmental Protection Agency acted to renew the thermal variance in conjunction with the 2000 NPDES permit renewal.

22. Although IEPA purported to renew the variance in conjunction with issuance of the 2000 NPDES permit, it had no authority to do so under the Illinois Environmental Protection Act, which gives the Board (and not IEPA) the authority to "grant individual variances beyond the limitations prescribed in [the] Act, whenever it is found, upon presentation of adequate proof, that compliance with any rule or regulation, requirements or order of the Board would impose an arbitrary or unreasonable hardship." 415 ILCS 5/35(a). It also had no authority under the then-existing applicable regulations at 35 Ill. Adm. Code § 304.141(c), which provided that only the Board had authority to renew thermal variances granted pursuant to § 316(a).

23. In 2014, the Board issued revised regulations governing thermal variances, which were in place at the time the Final Permit was issued. Those regulations state,

> The standards of this Chapter shall apply to thermal discharges unless, after public notice and opportunity for public hearing, in accordance with section 316 of the CWA, applicable federal regulations, and procedures in 35 Ill. Adm. Code 106. Subpart K, the Board has determined that different standards shall apply to a particular thermal discharge.

35 Ill. Admin. Code § 304.141(c).

24. 35 Ill. Adm. Code 106, Subpart K, also issued in 2014, sets forth the procedural rules that the Board must follow in order to grant a thermal variance in Illinois. Those procedures require, *inter alia,* that the applicant conduct a detailed plan of study and initiate a proceeding with the Board to evaluate the appropriateness of a thermal variance, and that the Board conduct a public hearing. 35 Ill. Adm. Code §§ 106.1100-1175.

25. Subpart K also sets forth separate procedures IEPA must follow to renew a thermal variance after a variance has been initially granted by the Board. Those procedures establish that IEPA

has no authority to renew a thermal variance until and unless the Board has initially granted a variance pursuant to the 2014 Subpart K procedures. 35 Ill. Adm. Code § 106.1180.

26. The renewal sections also impose significant conditions on permit renewals: IEPA "may include the alternative thermal effluent limitation [previously established by the Board] in the permitee's renewed NPDES permit," but only after certain demonstrations are made. 35 Ill. Adm. Code § 106.1180. In short, a permittee must "demonstrate[] that the nature of the thermal discharge has not changed and the alternative thermal effluent limitation granted has not caused appreciable harm" before IEPA may renew a Board-granted variance. *Id.*

27. In 2011, IEPA put a draft NPDES permit on public notice for the Waukegan Generating Station that included thermal effluent limits that tracked statewide thermal emission limits calculated to protect Lake Michigan water quality standards. Those effluent limits were included in Special Condition 4 of the December 2, 2011 draft NPDES permit ("2011 Draft Permit")**.** The 2011 draft permit did not purport to renew the 1978 thermal variance.

28. Midwest Generation subsequently asserted that it should not be subject to thermal effluent limits, referencing the thermal relief the Board had granted in 1978. However, Midwest Generation did not submit any detailed plan of study nor request to initiate a Board proceeding required pursuant to Subpart K.

29. In response, IEPA removed the thermal effluent limits in a draft permit put on public notice on February 8, 2013 and in the Final NPDES Permit issued on March 25, 2015. In so doing, IEPA referenced an opinion in IPCB 72-73 Consolidated, dated September 21, 1978. The opinion in that case does not purport to grant a variance to the Waukegan Generating Station, and was not issued on the date referenced. It does not mention the Facility at all, as the referenced proceeding deals with a different facility altogether.

30. Elsewhere, IEPA has referenced relief granted in IPCB 78-72 and 78-73 (Consolidated). This opinion was in fact issued on September 21, 1978. It deals with the Waukegan Generating Station, however it does not purport to be a thermal variance under Section 316 (a) of the Clean Water Act.

31. To the extent IEPA meant to refer to the thermal demonstration under 316(a) that was approved by IEPA in IPCB 77-82 on August 3, 1978, IEPA did not have the authority to renew that variance.

32. In issuing the Final Permit, IEPA did not reference Subpart K, nor purport to have complied with its requirements. IEPA did not require submission of any of the information required for either issuance or renewal of a § 316(a) variance pursuant to Subpart K. Moreover, Special Condition 4 of the Final Permit allows Midwest Generation to postpone any thermal demonstration until it next seeks to renew its permit (on or about October 19, 2019).

33. Accordingly, because IEPA had no authority to renew the 1978 variance in 2000, there is no valid variance for IEPA to renew under 35 Ill. Adm. Code § 106.1180. The purported renewal in 2015 is therefore void.

34. In the alternative, irrespective of the validity of IEPA's purported continuance of the variance in the 2000 NPDES permit, the variance is not eligible for renewal under 35 Ill. Adm. Code § 106.1180 because neither the 1978 variance nor the condition in the 2000 NPDES permit were adopted pursuant to Subpart K. The purported renewal in 2015 is therefore void.

35. Still further in the alternative, to the extent the 1978 thermal variance may be eligible for renewal by IEPA in 2015 pursuant to Subpart K, Midwest Generation has not submitted the data required by 35 Ill. Adm. Code § 106.1180(b) or made the demonstration required by 35 Ill. Adm. Code § 106.1180 (c).

36. Accordingly, IEPA's decision to issue this permit violates state and federal law, including 415 ILCS 5/39 (a); 35 Ill. Admin. Code §§ 309.141 (a) and 309.105; and 33 U.S.C. § 1326.

37. Petitioners therefore ask the Board to remand the permit to IEPA with instructions to establish thermal effluent limits based on Lake Michigan water quality standards contained in 35 Ill. Adm. Code § 302.507.

COUNT TWO: IEPA Has Not Made a Proper Best Professional Judgment Determination with Regard to Impingement and Entrainment

38. Petitioners hereby repeat, reallege, adopt, and incorporate by reference paragraphs 1 through 37 above as if fully set out in this Cause of Action.

39. The Facility operates a once-through water cooling system that draws water from Lake Michigan through screens, runs the water through its systems to cool reactors, and then discharges the water back into the lake.

40. In doing so, it crushes larger fish and other animals against the system intake screens ("impingement") and pulls eggs, larvae, and smaller organisms through the system subjecting them to severe physical and temperature disruptions ("entrainment"). This antiquated cooling system thereby destroys hundreds of millions of organisms per year, including tens of millions of fish from dozens of species.

41. Under Clean Water Act Section 316(b), the US EPA or relevant state implementing agency (here, the IEPA) must include in any NPDES permits sufficient entrainment and impingement controls. Specifically, the US EPA or IEPA must use its Best Professional Judgment ("BPJ") to ensure that the permitted cooling water intake structures meet the "Best Technology Available [BTA] for minimizing adverse environmental impact" from impingement and entrainment. 33 U.S.C. § 1326(b).

42. In August 2014, the US EPA passed national standards establishing a process by which BTA should be determined for certain facilities on a facility-specific basis. *See* 40 C.F.R. §§ 125, Subpart J. The Facility is covered under these regulations. 40 C.F.R. § 125.91.

43. In these regulations, a facility owner seeking a new or updated NPDES permit must submit to the relevant state agency (here, IEPA) numerous studies and data relating to the physical environs, and structure and operation of the cooling water system, along with a detailed plan explaining what impingement and entrainment reduction technologies the facility believes are justified. 40 C.F.R. §§ 125.95, 122.21(r).

44. Upon receiving this application, the IEPA "must review materials submitted by the applicant under 40 C.F.R. 122.21(r) and § 125.95 *before* each permit renewal or reissuance." 40 C.F.R. § 125.98(a) (emphasis added).

45. Illinois law requires that IEPA comply with federal law (including the provisions referenced above) when issuing NPDES permits. 35 Ill. Admin. Code § 309.141.

46. The final NPDES permit application submitted by the Facility does not contain the set of studies and technical assessments required by US EPA's new regulations, and so the application was therefore invalid.

47. In fact, IEPA lacks any current studies on impingement and entrainment on which to support any sort of BTA determination.

48. As a result, IEPA did not (indeed could not) review all of these studies and assessments before issuing the Final NPDES permit to the Facility. Instead of requiring Midwest Generation to produce such studies in order to receive its permit renewal, IEPA has given Midwest Generation five more years of delay.

49. This means that IEPA will wait at least five years to make a determination regarding the BTA for the facility to protect Lake Michigan's aquatic life.

50. IEPA's decision to issue this permit without basing this issuance on the required studies therefore violates state and federal law, including 33 U.S.C. 1326; 40 C.F.R. §§ 122, 125; and 35 Ill. Admin. Code § 309.141.

51. Petitioners, therefore, ask the Board to remand the permit for IEPA to make a proper determination regarding the Best Technology Available for minimizing adverse environmental impact, consistent with the applicable federal regulations.

WHEREFORE, Petitioners ask that the Pollution Control Board review the NPDES permit (No IL0002259) issued to Midwest Generation, LLC for operation of its Waukegan Generating Station and direct the Illinois Environmental Protection Agency to revoke its decision to issue the Final Permit. Petitioners ask the Board to remand the Final Permit in order to establish conditions and limits necessary to protect Illinois waters, assure protection of Illinois water quality standards, and comply with the Clean Water Act, 33 U.S.C. § 1251 et seq., and Illinois law.

Respectfully,

4/29/2015

Jessica Dexter
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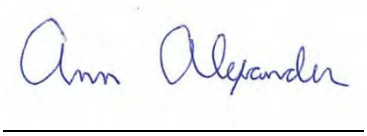
Counsel for Sierra Club, Prairie Rivers Network, and Environmental Law & Policy Center



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(312) 663-9900

Counsel for Natural Resources Defense Counsel

Exhibit 1

NPDES Permit No. IL0002259

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-2829

BRUCE RAUNER, GOVERNOR LISA BONNETT, DIRECTOR

217/782-0610

March 25, 2015

Midwest Generation, LLC
401 East Greenwood Ave.
Waukegan, IL 60087

Re: Midwest Generation, LLC
Waukegan Generating Station
NPDES Permit No. IL0002259
Final Permit

Ladies and Gentlemen:

We have reviewed your comments to the public noticed permit and offer the following responses:

The comments on pages 1 to 2 of your letter concerning the Fact Sheet were reviewed and addressed in the permit record. However the Fact Sheet is prepared for the public notice which has been completed, thus a revised Fact Sheet will not be issued.

1. Outfall 001 will be monitored from the zebra mussel gate.

2. The compliance schedule for pH in Special Condition 2 was revised as requested.

3. Outfall 001 discharges to the Open Waters of Lake Michigan defined at 35 Ill. Adm. Code 302.501(b) thus the pH limits of 7.0 to 9.0 standard units will remain in the permit to ensure compliance with 35 Ill. Adm. Code 302.503.

4. The sampling frequency for pH at outfall 001 was changed to weekly as requested.

5. A01 is the internal monitoring point for boiler blowdown and B01 is the internal monitoring point for demineralizer regenerate waste which both meet the definition of low volume wastestreams per 40 CFR 423.11(b) and thus are required to meet TSS and oil and grease limits per 40 CFR 423.12(b)(3).

6. Sampling for TSS and oil and grease at A01 and B01 will be changed to 2/month as requested.

7. 40 CFR 423.11(d) defines metal cleaning wastes as with or without chemical cleaning compounds. 40 CFR 423.12(b)(5) regulates the discharge of metal cleaning wastes. Thus non-chemical metal cleaning wastes discharged from outfall G01 must meet limits before mixture with other waste streams. Compliance schedules under 40 CFR 122.47 are not allowed for technology based effluent limits because CWA compliance deadlines have passed for existing sources.

8. Special Condition 10 was revised to require that only changes in the use of water treatment additives be approved of by the Agency.

9. The dissolved oxygen monitoring requirements of Special Condition 11 are necessary to demonstrate the discharge is not causing or contributing to violations of dissolved oxygen water quality standards in the receiving water. The condition has been revised to specify that a reduction in monitoring may be requested after two years.

10. The reference to mercury monitoring at C01 on page 5 was in error and was removed. Mercury monitoring requirements for outfall 001 were consolidated into Special Condition 16 and Special Condition 15 was removed.

11. The semi-annual metals monitoring requirement listed as Special Condition 16 is necessary to provide sufficient data on effluent quality. A minimum of 10 samples are necessary to conduct a reasonable potential analysis thus the requirement will remain.

12. Non-chemical metal cleaning waste are tributary to C01 and will remain listed as a sub-wastestream on page 5 of the permit.

13. Fly ash sluice water was removed from the permit as requested.

14. Condenser cooling water flow on page 2 was reduced to 589 MGD to reflect the removal of unit 6 from service on December 21, 2007. The outfall 001 flow was also reduced to 739 MGD.

15. The discharger address was changed as requested.

Due to the comments from USEPA an equation was added to Special Condition 4 to determine and report the heat rejection rate.

Special Condition 7 was revised to require compliance with the new cooling water intake structure existing facilities rule.

Attached is the final NPDES Permit for your discharge. The Permit as issued covers discharge limitations, monitoring, and reporting requirements. Failure to meet any portion of the Permit could result in civil and/or criminal penalties. The Illinois Environmental Protection Agency is ready and willing to assist you in interpreting any of the conditions of the Permit as they relate specifically to your discharge.

The Agency has begun a program allowing the submittal of electronic Discharge Monitoring Reports (NetDMR) instead of paper Discharge Monitoring Reports (DMRs). If you are interested in NetDMR, more information can be found on the Agency website, http://www.epa.state.il.us/water/net-dmr/index.html. If your facility is not registered in the NetDMR program, a supply of preprinted paper DMR Forms for your facility will be sent to you prior to the initiation of DMR reporting under the New permit. Additional information and instructions will accompany the preprinted DMRs upon their arrival.

The attached Permit is effective as of the date indicated on the first page of the Permit. Until the effective date of any re-issued Permit, the limitations and conditions of the previously-issued Permit remain in full effect. You have the right to appeal any condition of the Permit to the Illinois Pollution Control Board within a 35 day period following the issuance date.

Should you have questions concerning the Permit, please contact Jaime Rabins at 217/782-0610.

Sincerely,

Alan Keller

Alan Keller, P.E.
Manager, Permit Section
Division of Water Pollution Control

SAK:JAR:11111401.jar

Attachment: Final Permit

cc: Records
Compliance Assurance Section
Des Plaines Region
Billing
CMAP

NPDES Permit No. IL0002259

Illinois Environmental Protection Agency

Division of Water Pollution Control

1021 North Grand Avenue East

Post Office Box 19276

Springfield, Illinois 62794-9276

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Reissued (NPDES) Permit

Expiration Date: March 31, 2020

Issue Date: March 25, 2015
Effective Date: April 1, 2015

Name and Address of Permittee:

Midwest Generation, LLC
401 East Greenwood Ave.
Waukegan, IL 60087

Facility Name and Address:

Midwest Generation, LLC
Waukegan Generating Station
401 East Greenwood Ave.
Waukegan, Illinois 60087
(Lake County)

Discharge Number and Name:

001 Condenser Cooling Water and House Service Water
A01 Boiler Blowdown
B01 Demineralizer Regenerant Wastes
C01 Wastewater Treatment System
D01 East Yard Collection Basin Overflow
F01 Unit 7 Demineralized Water Storage Tank Drain
G01 Non-Chemical Metal Cleaning Wastes

Receiving Waters:

Lake Michigan

In compliance with the provisions of the Illinois Environmental Protection Act, Title 35 of Ill. Adm. Code, Subtitle C and/or Subtitle D, Chapter 1, and the Clean Water Act (CWA), the above-named permittee is hereby authorized to discharge at the above location to the above-named receiving stream in accordance with the standard conditions and attachments herein.

Permittee is not authorized to discharge after the above expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit the proper application as required by the Illinois Environmental Protection Agency (IEPA) not later than 180 days prior to the expiration date.

Alan Keller, P.E.
Manager, Permit Section
Division of Water Pollution Control

SAK:JAR:11111401.jar

NPDES Permit No. IL0002259

Effluent Limitations and Monitoring

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

PARAMETER	LOAD LIMITS lbs/day DAF (DMF) 30 DAY AVERAGE	LOAD LIMITS lbs/day DAF (DMF) DAILY MAXIMUM	CONCENTRATION LIMITS mg/l 30 DAY AVERAGE	CONCENTRATION LIMITS mg/l DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
Outfall 001: Condenser Cooling Water and House Service Water (DAF = 739 MGD)						
This discharge consists of:						
1. Condenser cooling water				589 MGD		
2. House service water				29.7 MGD		
3. Boiler blowdown				Intermittent		
4. Demineralizer regenerant wastes				0.151 MGD		
5. Wastewater treatment system effluent				8.13 MGD		
6. East yard runoff basin overflow/discharge				0.676 MGD		
7. Demineralized water (storage tank drainage and steam relief)				Intermittent		
8. Intake screen backwash				0.172 MGD		
Flow (MGD)	See Special Condition 1				Daily	Continuous
pH	See Special Condition 2				Weekly	Grab
Total Residual Chlorine	See Special Condition 3			0.05	*	Grab
Temperature	See Special Condition 4				Daily	Continuous
Heat Rejection Rate				5301 million BTU's per hour	Daily	Continuous

The monthly maximum temperature and the monthly maximum BTU's per hour shall be reported on the DMR under temperature and heat rejection rate, respectively.

*Total Residual Chlorine shall be sampled whenever chlorination or biocide addition is being performed or residuals are likely to be present in the discharge. If chlorination and biocide addition are not used during the month it shall be so indicated on the DMR.

NPDES Permit No. IL0002259

Effluent Limitations and Monitoring

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

PARAMETER	LOAD LIMITS lbs/day DAF (DMF) 30 DAY AVERAGE	LOAD LIMITS lbs/day DAF (DMF) DAILY MAXIMUM	CONCENTRATION LIMITS mg/l 30 DAY AVERAGE	CONCENTRATION LIMITS mg/l DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
Outfall A01: Boiler Blowdown (Intermittent Discharge)						
The discharge consists of:				Approximate Flow		
1. Boiler blowdown				0.018 MGD		
2. Boiler drains				0.018 MGD		
Flow (MGD)	See Special Condition 1				2/Month When Discharging	Calculated 24-Hour Total
Total Suspended Solids			15	30	2/Month When Discharging	8-Hour Composite
Oil and Grease			15	20	2/Month When Discharging	Grab

NPDES Permit No. IL0002259

Effluent Limitations and Monitoring

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

PARAMETER	LOAD LIMITS lbs/day DAF (DMF) 30 DAY AVERAGE	LOAD LIMITS lbs/day DAF (DMF) DAILY MAXIMUM	CONCENTRATION LIMITS mg/l 30 DAY AVERAGE	CONCENTRATION LIMITS mg/l DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
Outfall B01: Demineralizer Regenerant Wastes (DAF = 0.151 MGD)						
The discharge consists of:				Approximate Flow		
1. Demineralizer regenerant wastes				0.151 MGD		
2. Demineralized water (off specification bypass)				Intermittent		
Flow (MGD)	See Special Condition 1				2/Month	24-Hour Total
Total Suspended Solids			15	30	2/Month	8-Hour Composite
Oil and Grease			15	20	2/Month	Grab

Total Suspended Solids and Oil and Grease sampling may obtained using a Grab Sample if the equalization tank is in service.

NPDES Permit No. IL0002259

Effluent Limitations and Monitoring

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

PARAMETER	LOAD LIMITS lbs/day DAF (DMF) 30 DAY AVERAGE	LOAD LIMITS lbs/day DAF (DMF) DAILY MAXIMUM	CONCENTRATION LIMITS mg/l 30 DAY AVERAGE	CONCENTRATION LIMITS mg/l DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
Outfall C01: Wastewater Treatment System (DAF = 8.13 MGD)						
This Discharge consists of:				Approximate Flow		
1. Bottom Ash Sluice				1.6 MGD		
2. Ash hopper overflow				Intermittent		
3. Coal pile runoff collection basin discharge				1.0 MGD		
a. Coal pile area runoff				0.5 MGD		
b. West yard area runoff				0.5 MGD		
i. West yard area runoff						
ii. Car dumper area runoff						
iii. Main switch yard area runoff						
iv. West yard polymer building drains						
v. Peaker sump discharges						
vi. West turbine area roof drains						
4. Non-chemical metal cleaning waste				Intermittent		
5. Supernatant from dredge spoil lagoons				Intermittent		
6. Main collection tank discharge				2.0 MGD		
a. Unit 8 low point sump (roof, floor, & equipment drains)				Intermittent		
b. Ash sluice head tank overflow				Intermittent		
c. Slag drain line				Intermittent		
d. Slag tank overflows				Intermittent		
e. Demineralizer filter backwash (alternate route)				Intermittent		
f. Floor drains (alternate route)				Intermittent		
Flow (MGD)	See Special Condition 1				Daily	Continuous
Total Suspended Solids			15	30	2/Month	24-Hour Composite
Oil and Grease			15	20	2/Month	Grab

NPDES Permit No. IL0002259

Effluent Limitations and Monitoring

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

PARAMETER	LOAD LIMITS lbs/day DAF (DMF) 30 DAY AVERAGE	LOAD LIMITS lbs/day DAF (DMF) DAILY MAXIMUM	CONCENTRATION LIMITS mg/l 30 DAY AVERAGE	CONCENTRATION LIMITS mg/l DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
Outfall D01: East Yard Collection Basin Overflow (DAF = 0.676 MGD)						
This discharge consists of:				Approximate Flow		
1. East yard area runoff				Intermittent		
2. Units 1-4 roof and floor drainage				Intermittent		
3. East yard polymer building drains				Intermittent		
4. Demineralizer filter backwash				0.078 MGD		
5. Laboratory sink drains				Intermittent		
6. Units 5-8 roof and floor drains				Intermittent		
Flow (MGD)	See Special Condition 1				1/Week	24-Hour Total
Total Suspended Solids			15	30	2/Month	24-Hour Composite
Oil and Grease			15	20	2/Month	Grab

NPDES Permit No. IL0002259

Effluent Limitations and Monitoring

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PARAMETER	LOAD LIMITS lbs/day DAF (DMF) 30 DAY AVERAGE	LOAD LIMITS lbs/day DAF (DMF) DAILY MAXIMUM	CONCENTRATION LIMITS mg/l 30 DAY AVERAGE	CONCENTRATION LIMITS mg/l DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
Outfall F01: Unit 7 Demineralized Water Storage Tank Drain(Intermittent Discharge)						
Flow (MGD)	See Special Condition 1				1/Week When Discharging	Estimate
Total Suspended Solids			15	30	1/Week When Discharging	Grab
Oil and Grease			15	20	1/Week When Discharging	Grab

NPDES Permit No. IL0002259

Effluent Limitations and Monitoring

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

PARAMETER	LOAD LIMITS lbs/day DAF (DMF) 30 DAY AVERAGE	LOAD LIMITS lbs/day DAF (DMF) DAILY MAXIMUM	CONCENTRATION LIMITS mg/l 30 DAY AVERAGE	CONCENTRATION LIMITS mg/l DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
Outfall G01: Non-Chemical Metal Cleaning Wastes (DAF = Intermittent Discharge)						
Flow (MGD)	See Special Condition 1				Daily When Discharging	Continuous
Total Suspended Solids			30	100	Daily When Discharging	24-Hour Composite
Oil and Grease			15	20	Daily When Discharging	Grab
Iron			1.0	1.0	Daily When Discharging	24-Hour Composite
Copper			1.0	1.0	Daily When Discharging	24-Hour Composite

NPDES Permit No. IL0002259

Special Conditions

SPECIAL CONDITION 1. Flow shall be measured in units of Million Gallons per Day (MGD) and reported as a monthly average and a daily maximum value on the monthly Discharge Monitoring Report.

SPECIAL CONDITION 2. The pH shall be in the range 7.0 to 9.0. The monthly minimum and monthly maximum values shall be reported on the DMR form.

The permittee shall achieve compliance with the above pH limitation at outfall 001 as soon as possible but not later than 18 months from the effective date of this permit in accordance with the following schedule:

	ITEM	COMPLETION DATE
1.	Initial Report	6 Months from the Effective Date
2.	Interim Report	12 Months from the Effective Date
3.	Final Report and Compliance	18 Months from the Effective Date

From the effective date of the permit, pH shall be monitored at outfall 001 weekly as specified on page 2 of the permit. The initial report shall include a summary of this data and a determination of whether or not additional treatment is necessary to achieve and maintain compliance with the applicable pH limit. If additional treatment is determined not to be necessary, compliance with the applicable pH limit is required 6 months from the effective date of this permit. All reports shall be submitted to the IEPA at the address in special condition 6.

SPECIAL CONDITION 3. All samples for total residual chlorine (TRC) shall be analyzed by an applicable method contained in 40 CFR 136, equivalent in accuracy to low-level amperometric titration. Any analytical variability of the method used shall be considered when determining the accuracy and precision of the results obtained.

SPECIAL CONDITION 4. Pursuant to Illinois Pollution Control Board Order 77-82, dated August 3, 1978 the discharge is limited to a heat rejection rate of 5301 million BTU's per hour in lieu of the standards of 35 Ill. Adm. Code 302.507. The Permittee's demonstration for the Waukegan Generating Station in accordance with Section 316(a) of the CWA was approved by the Illinois Pollution Control Board in Order PCB 78-72, -73 Consolidated dated September 21, 1978.

Compliance with this part shall be determined on a continuous basis by the following equation:

$$H = 0.0005 Q_{CW} (T_{CW} - T_{US})$$

H Heat Rejection Rate in million BTU's per hour.

T_{CW} Actual condenser cooling water discharge temperature in degrees Fahrenheit from continuous temperature monitor located at the condenser outlet waterbox.

Q_{CW} Condenser cooling water flow in gallons per minute based on the number of circulating water pumps on at the time in question. Each of Unit 7's four circulating water pumps is rated at 64,000 gpm and each of Unit 8's two circulating water pumps is rated at 110,000 gpm.

T_{US} Intake cooling water temperature in degrees Fahrenheit from the continuous temperature monitor located at the condenser inlet waterbox.

As a condition of the continuation of the facility's 316(a) thermal variance (PCB 72-73 Consolidated, dated September 21, 1978), the permittee shall conduct the following activities and studies:

1. Within six months of the permit issuance date:

   a. Complete a literature search for biological studies conducted in Lake Michigan in the general vicinity of the facility, including but not limited to, relevant biological monitoring data from state or federal agencies.
   b. Prepare a Representative Important Species (RIS) List, including an explanation of the rationale for selection of each species on the list; and
   c. Based on the results of the biological studies literature search and the RIS List, prepare a study plan for biological sampling and thermal monitoring, including as appropriate thermal modeling. The study plan shall be submitted to the Agency for approval prior to initiation. The study plan shall include the RIS List. The permittee shall also send a copy of the study plan and RIS List to the U.S. EPA Region 5 to provide it with an opportunity to review and comment on the study plan prior to commencement of the study.

2. Upon the Agency's approval of the study plan for biological and thermal monitoring, perform thermal plume surveys on the facility's discharge and any appropriate thermal model development and field verification within eighteen months of the receipt of the Agency's approval. In the event that the Agency's approval of the study plan is not received within nine months of the permit issuance date, the permittee may proceed to implement the study plan pending receipt of the Agency's approval.

3. Based on the information obtained from thermal plume surveys, the permittee shall finalize the specific sampling locations for, and conduct, the biological monitoring study plan.

Special Conditions

If the permittee intends to request the continuation of the 316(a) thermal variance in its renewed NPDES permit, the permittee shall submit to the Agency a report containing the results of the biological and thermal monitoring, including any applicable thermal modeling, and any other information necessary to comply with 35 Ill. Adm. Code 106.1180 concurrent with its next NPDES permit renewal application.

Alternately, the Permittee may demonstrate to the Agency that alternate thermal standards of PCB 77-82, or other site specific water quality standards for temperature approved by the Illinois Pollution Control Board, and USEPA, meets the requirements of 40 CFR 131 and the Illinois Environmental Protection Act.

SPECIAL CONDITION 5. Samples taken in compliance with the effluent monitoring requirements shall be taken at a point representative of the discharge, but prior to entry into the receiving stream.

SPECIAL CONDITION 6. The Permittee shall record monitoring results on Discharge Monitoring Report (DMR) Forms using one such form for each outfall each month.

In the event that an outfall does not discharge during a monthly reporting period, the DMR Form shall be submitted with no discharge indicated.

The Permittee may choose to submit electronic DMRs (NetDMR) instead of mailing paper DMRs to the IEPA. More information, including registration information for the NetDMR program, can be obtained on the IEPA website, http://www.epa.state.il.us/water/net-dmr/index.html.

The completed Discharge Monitoring Report forms shall be submitted to IEPA no later than the 28th day of the following month, unless otherwise specified by the permitting authority.

Permittees not using NetDMR shall mail Discharge Monitoring Reports with an original signature to the IEPA at the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

Attention: Compliance Assurance Section, Mail Code # 19

SPECIAL CONDITION 7. Cooling Water Intake Structure. Based on available information, the Agency has determined that the operation of the cooling water intake structure meets the equivalent of Best Technology Available (BTA) in accordance with the Best Professional Judgment provisions of 40 CFR 125.3 and 40 CFR 125.90(b), based on information available at the time of permit reissuance.

However, the Permittee shall comply with the requirements of the Cooling Water Intake Structure Existing Facilities Rule as found at 40 CFR 122 and 125. Any application materials and submissions required for compliance with the Existing Facilities Rule, shall be submitted to the Agency no later than 4 years from the effective date of this permit.

If for any reason, the Cooling Water Intake Structure Existing Facilities Rule is stayed or remanded by the courts, the Permittee shall comply with the requirements below. The information required below is necessary to further evaluate cooling water intake structure operations based on the most up to date information, in accordance with the Best Professional Judgment provisions of 40 CFR 125.3 and 40 CFR 125.90(b), in existence prior to the effective date of the new Existing Facilities Rule:

A. The permittee shall submit the following information/studies within 4 years of the effective date of the permit:

1. Source Water Physical Data to include:

   a. A narrative description and scaled drawings showing the physical configuration of all source water bodies used by the facility including aerial dimensions, depths, salinity and temperature regimes;

   b. Identification and characterization of the source waterbody's hydrological and geomorphological features, as well as the methods used to conduct any physical studies to determine the intake's area of influence and the results of such studies; and

   c. Location maps.

2. Source Waterbody Flow Information

   The permittee shall provide the annual mean flow of the waterbody, any supporting documentation and engineering calculations to support the analysis of whether the design intake flow is greater than five percent of the mean annual flow of the river or stream

for purposes of determining applicable performance standards. Representative historical data (from a period of time up to 10 years) shall be used, if available.

3. Impingement Mortality and Entrainment Characterization Study

The permittee shall submit an Impingement Mortality and Entrainment Characterization Study whose purpose is to provide information to support the development of a calculation baseline for evaluating impingement mortality and entrainment and to characterize current impingement mortality and entrainment. The Study shall include the following in sufficient detail to support establishment of baseline conditions:

a. Taxonomic identification of all life stages of fish and shellfish and any species protected under Federal, State, or Tribal law (including threatened or endangered species) that are in the vicinity of the cooling water intake structure(s) and are susceptible to impingement and entrainment;

b. A characterization of all life stages of fish and shellfish, and any species protected under Federal, or State law, including a description of the abundance and temporal and spatial characteristics in the vicinity of the cooling water intake structure(s). These may include historical data that are representative of the current operation of the facility and of biological conditions at the site; and

c. Documentation of the current impingement mortality and entrainment of all life stages of fish, shellfish, and any species protected under Federal , State, or Tribal Law (including threatened or endangered species) and an estimate of impingement mortality and entrainment to be used as the calculation baseline. The documentation may include historical data that are representative of the current operation of the facility and of biological conditions at the site. Impingement mortality and entrainment samples to support the calculations required must be collected during periods of representative operational flows for the cooling water intake structure and the flows associated with the samples must be documented.

B. The permittee shall comply with the following requirements:

1. At all times properly operate and maintain the intake equipment as demonstrated in the application material supporting the BTA determination.

2. Inform IEPA of any proposed changes to the cooling water intake structure or proposed changes to operations at the facility that affect impingement mortality and/or entrainment.

3. Debris collected on intake screens is prohibited from being discharged back to the canal. Debris does not include living fish or other living aquatic organisms.

4. Compliance Alternatives. The permittee must evaluate each of the following alternatives for establishing best available technology for minimizing adverse environmental impacts at the facility due to operation of the intake structure:

a. Evaluate operational procedures and/or propose facility modifications to reduce the intake through-screen velocity to less than 0.5 ft/sec. The operational evaluation may consider modified circulating water pump operation; reduced flow associated with capacity utilization, recalculation or determination of actual total water withdrawal capacity. The evaluation report and any implementation plan for the operational changes and/ or facility modification shall be submitted to the Agency with the renewal application for this permit.

b. Complete a fish impingement and entrainment mortality minimization alternatives evaluation. The evaluation may include an assessment of modification of the traveling screens, consideration of a separate fish and debris return system and include time frames and cost analysis to implement these measures. The evaluation report and implementation plan for any operational changes and/ or facility modifications shall be submitted to the Agency with the renewal application for this permit.

C. All required reports shall be submitted to the Industrial Unit, Permit Section and Compliance Assurance Section at the address in special condition 6.

This special condition does not relieve the permittee of the responsibility of complying with any other laws, regulations, or judicial orders issued pursuant to Section 316(b) of the Clean Water Act.

SPECIAL CONDITION 8. If an applicable effluent standard or limitation is promulgated under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act and that effluent standard or limitation is more stringent than any effluent limitation in the permit or controls a pollutant not limited in the NPDES Permit, the Agency shall revise or modify the permit in accordance with the more stringent standard or prohibition and shall so notify the permittee.

SPECIAL CONDITION 9. The use or operation of this facility shall be by or under the supervision of a Certified Class K operator.

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Special Conditions

SPECIAL CONDITION 10. In the event that the permittee shall require changes in the use of water treatment additives, the permittee must request a change in this permit in accordance with the Standard Conditions -- Attachment H.

SPECIAL CONDITION 11. The cooling water prior to entering the intake structure and at outfall 001 shall be sampled once per week as a grab sample at the same time of day within ½ hour of each other between 9:00 a.m. and 3:00 p.m. in a random fashion for dissolved oxygen. The results in mg/l and the time of day the influent and effluent sample was taken shall be reported to the Agency as an attachment to the DMR. After 2 years of data has been submitted to the Agency, the permittee may apply to Agency to have the monitoring reduced or eliminated.

SPECIAL CONDITION 12. There shall be no discharge of polychlorinated biphenyl compounds.

SPECIAL CONDITION 13. The bypass provisions of 40 CFR 122.41(m) and upset provisions of 40 CFR 122.41(n) are hereby incorporated by reference.

SPECIAL CONDITION 14. The Agency has determined that the effluent limitations for outfall 001 constitute BAT/BCT for storm water which is treated in the existing treatment facilities for purposes of this permit reissuance, and no pollution prevention plan will be required for such storm water. In addition to the chemical specific monitoring required elsewhere in this permit, the permittee shall conduct an annual inspection of the facility site to identify areas contributing to a storm water discharge associated with industrial activity, and determine whether any facility modifications have occurred which result in previously-treated storm water discharges no longer receiving treatment. If any such discharges are identified the permittee shall request a modification of this permit within 30 days after the inspection. Records of the annual inspection shall be retained by the permittee for the term of this permit and be made available to the Agency on request.

SPECIAL CONDITION 15. There shall be no discharge of complexed metal bearing wastestreams and associated rinses from chemical metal cleaning unless this permit has been modified to include the new discharge.

SPECIAL CONDITION 16. The Permittee shall monitor the effluent from outfall 001 for the following parameters on a semi-annual basis. This Permit may be modified with public notice to establish effluent limitations if appropriate, based on information obtained through sampling. The sample shall be a 24-hour effluent composite except as otherwise specifically provided below and the results shall be submitted to the address in special condition 6 in June and December. The parameters to be sampled and the minimum reporting limits to be attained are as follows:

STORET CODE	PARAMETER	Minimum reporting limit
01002	Arsenic	0.05 mg/L
01007	Barium	0.5 mg/L
01022	Boron	0.1 mg/L
01027	Cadmium	0.001 mg/L
00940	Chloride	0.1 mg/L
01032	Chromium (hexavalent) (grab)	0.01 mg/L
01034	Chromium (total)	0.05 mg/L
01042	Copper	0.005 mg/L
00718	Cyanide (grab) (available *** or amendable to chlorination))	5.0 ug/L
00720	Cyanide (grab not to exceed 24 hours) (total)	5.0 ug/L
00951	Fluoride	0.1 mg/L
01045	Iron (total)	0.5 mg/L
01046	Iron (Dissolved)	0.5 mg/L
01051	Lead	0.05 mg/L
01055	Manganese	0.5 mg/L
71900	Mercury (grab)**	1.0 ng/L*
01067	Nickel	0.005 mg/L
00556	Oil (hexane soluble or equivalent) (Grab Sample only)	5.0 mg/L
32730	Phenols (grab)	0.005 mg/L
01147	Selenium	0.005 mg/L
00945	Sulfate	0.1 mg/L
01077	Silver (total)	0.003 mg/L
01092	Zinc	0.025 mg/L

Unless otherwise indicated, concentrations refer to the total amount of the constituent present in all phases, whether solid, suspended or dissolved, elemental or combined, including all oxidation states.

*1.0 ng/L = 1 part per trillion.
**Utilize USEPA Method 1631E and the digestion procedure described in Section 11.1.1.2 of 1631E. Mercury shall be monitored

monthly for the first two years and quarterly thereafter. This Permit may be modified with public notice to establish effluent limitations if appropriate, based on information obtained through sampling. The quarterly monitoring results shall be submitted on the March, June, September and December DMRs.
***USEPA Method OIA-1677

SPECIAL CONDITION 17. The effluent, alone or in combination with other sources, shall not cause a violation of any applicable water quality standard outlined in 35 Ill. Adm. Code 302.

Attachment H

Standard Conditions

Definitions

Act means the Illinois Environmental Protection Act, 415 ILCS 5 as Amended.

Agency means the Illinois Environmental Protection Agency.

Board means the Illinois Pollution Control Board.

Clean Water Act (formerly referred to as the Federal Water Pollution Control Act) means Pub. L 92-500, as amended. 33 U.S.C. 1251 et seq.

NPDES (National Pollutant Discharge Elimination System) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318 and 405 of the Clean Water Act.

USEPA means the United States Environmental Protection Agency.

Daily Discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Maximum Daily Discharge Limitation (daily maximum) means the highest allowable daily discharge.

Average Monthly Discharge Limitation (30 day average) means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Discharge Limitation (7 day average) means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Aliquot means a sample of specified volume used to make up a total composite sample.

Grab Sample means an individual sample of at least 100 milliliters collected at a randomly-selected time over a period not exceeding 15 minutes.

24-Hour Composite Sample means a combination of at least 8 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period.

8-Hour Composite Sample means a combination of at least 3 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over an 8-hour period.

Flow Proportional Composite Sample means a combination of sample aliquots of at least 100 milliliters collected at periodic intervals such that either the time interval between each aliquot or the volume of each aliquot is proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot.

(1) **Duty to comply**. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirements.

(2) **Duty to reapply**. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. If the permittee submits a proper application as required by the Agency no later than 180 days prior to the expiration date, this permit shall continue in full force and effect until the final Agency decision on the application has been made.

(3) **Need to halt or reduce activity not a defense**. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(4) **Duty to mitigate**. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

(5) **Proper operation and maintenance**. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up, or auxiliary facilities, or similar systems only when necessary to achieve compliance with the conditions of the permit.

(6) **Permit actions**. This permit may be modified, revoked and reissued, or terminated for cause by the Agency pursuant to 40 CFR 122.62 and 40 CFR 122.63. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

(7) **Property rights**. This permit does not convey any property rights of any sort, or any exclusive privilege.

(8) **Duty to provide information**. The permittee shall furnish to the Agency within a reasonable time, any information which the Agency may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also furnish to the Agency upon request, copies of records required to be kept by this permit.

(9) **Inspection and entry**. The permittee shall allow an authorized representative of the Agency or USEPA (including an authorized contractor acting as a representative of the Agency or USEPA), upon the presentation of credentials and other documents as may be required by law, to:
(a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
(d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance, or as otherwise authorized by the Act, any substances or parameters at any location.

(10) **Monitoring and records**.
(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
(b) The permittee shall retain records of all monitoring information, including all calibration and maintenance records, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of this permit, measurement, report or application. Records related to the permittee's sewage sludge use and disposal activities shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503). This period may be extended by request of the Agency or USEPA at any time.
(c) Records of monitoring information shall include:
(1) The date, exact place, and time of sampling or measurements;
(2) The individual(s) who performed the sampling or measurements;
(3) The date(s) analyses were performed;
(4) The individual(s) who performed the analyses;
(5) The analytical techniques or methods used; and
(6) The results of such analyses.
(d) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit. Where no test procedure under 40 CFR Part 136 has been approved, the permittee must submit to the Agency a test method for approval. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals to ensure accuracy of measurements.

(11) **Signatory requirement**. All applications, reports or information submitted to the Agency shall be signed and certified.
(a) **Application**. All permit applications shall be signed as follows:
(1) For a corporation: by a principal executive officer of at least the level of vice president or a person or position having overall responsibility for environmental matters for the corporation:
(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
(3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.
(b) **Reports**. All reports required by permits, or other information requested by the Agency shall be signed by a person described in paragraph (a) or by a duly authorized representative of that person. A person is a duly authorized representative only if:
(1) The authorization is made in writing by a person described in paragraph (a); and
(2) The authorization specifies either an individual or a position responsible for the overall operation of the facility, from which the discharge originates, such as a plant manager, superintendent or person of equivalent responsibility; and
(3) The written authorization is submitted to the Agency.
(c) **Changes of Authorization**. If an authorization under (b) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of (b) must be submitted to the Agency prior to or together with any reports, information, or applications to be signed by an authorized representative.
(d) **Certification**. Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

(12) **Reporting requirements**.
(a) **Planned changes**. The permittee shall give notice to the Agency as soon as possible of any planned physical alterations or additions to the permitted facility.
Notice is required when:
(1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source pursuant to 40 CFR 122.29 (b); or
(2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements pursuant to 40 CFR 122.42 (a)(1).
(3) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
(b) **Anticipated noncompliance**. The permittee shall give advance notice to the Agency of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
(c) **Transfers**. This permit is not transferable to any person except after notice to the Agency.
(d) **Compliance schedules**. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
(e) **Monitoring reports**. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(1) Monitoring results must be reported on a Discharge Monitoring Report (DMR).
(2) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
(3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Agency in the permit.

(f) **Twenty-four hour reporting**. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24-hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and time; and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The following shall be included as information which must be reported within 24-hours:
(1) Any unanticipated bypass which exceeds any effluent limitation in the permit.
(2) Any upset which exceeds any effluent limitation in the permit.
(3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Agency in the permit or any pollutant which may endanger health or the environment.
The Agency may waive the written report on a case-by-case basis if the oral report has been received within 24-hours.

(g) **Other noncompliance**. The permittee shall report all instances of noncompliance not reported under paragraphs (12) (d), (e), or (f), at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (12) (f).

(h) **Other information**. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the Agency, it shall promptly submit such facts or information.

(13) **Bypass**.
(a) Definitions.
(1) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.
(2) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
(b) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (13)(c) and (13)(d).
(c) Notice.
(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
(2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph (12)(f) (24-hour notice).
(d) Prohibition of bypass.
(1) Bypass is prohibited, and the Agency may take enforcement action against a permittee for bypass, unless:
(i) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
(ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
(iii) The permittee submitted notices as required under paragraph (13)(c).
(2) The Agency may approve an anticipated bypass, after considering its adverse effects, if the Agency determines that it will meet the three conditions listed above in paragraph (13)(d)(1).

(14) **Upset**.
(a) Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
(b) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (14)(c) are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
(c) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
(1) An upset occurred and that the permittee can identify the cause(s) of the upset;
(2) The permitted facility was at the time being properly operated; and
(3) The permittee submitted notice of the upset as required in paragraph (12)(f)(2) (24-hour notice).
(4) The permittee complied with any remedial measures required under paragraph (4).
(d) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

(15) **Transfer of permits**. Permits may be transferred by modification or automatic transfer as described below:
  (a) Transfers by modification. Except as provided in paragraph (b), a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued pursuant to 40 CFR 122.62 (b) (2), or a minor modification made pursuant to 40 CFR 122.63 (d), to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act.
  (b) Automatic transfers. As an alternative to transfers under paragraph (a), any NPDES permit may be automatically transferred to a new permittee if:
    (1) The current permittee notifies the Agency at least 30 days in advance of the proposed transfer date;
    (2) The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage and liability between the existing and new permittees; and
    (3) The Agency does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement.

(16) All manufacturing, commercial, mining, and silvicultural dischargers must notify the Agency as soon as they know or have reason to believe:
  (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant identified under Section 307 of the Clean Water Act which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
    (1) One hundred micrograms per liter (100 ug/l);
    (2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6 dinitrophenol; and one milligram per liter (1 mg/l) for antimony.
    (3) Five (5) times the maximum concentration value reported for that pollutant in the NPDES permit application; or
    (4) The level established by the Agency in this permit.
  (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the NPDES permit application.

(17) All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Agency of the following:
  (a) Any new introduction of pollutants into that POTW from an indirect discharge which would be subject to Sections 301 or 306 of the Clean Water Act if it were directly discharging those pollutants; and
  (b) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
  (c) For purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

(18) If the permit is issued to a publicly owned or publicly regulated treatment works, the permittee shall require any industrial user of such treatment works to comply with federal requirements concerning:
  (a) User charges pursuant to Section 204 (b) of the Clean Water Act, and applicable regulations appearing in 40 CFR 35;
  (b) Toxic pollutant effluent standards and pretreatment standards pursuant to Section 307 of the Clean Water Act; and
  (c) Inspection, monitoring and entry pursuant to Section 308 of the Clean Water Act.

(19) If an applicable standard or limitation is promulgated under Section 301(b)(2)(C) and (D), 304(b)(2), or 307(a)(2) and that effluent standard or limitation is more stringent than any effluent limitation in the permit, or controls a pollutant not limited in the permit, the permit shall be promptly modified or revoked, and reissued to conform to that effluent standard or limitation.

(20) Any authorization to construct issued to the permittee pursuant to 35 Ill. Adm. Code 309.154 is hereby incorporated by reference as a condition of this permit.

(21) The permittee shall not make any false statement, representation or certification in any application, record, report, plan or other document submitted to the Agency or the USEPA, or required to be maintained under this permit.

(22) The Clean Water Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act is subject to a civil penalty not to exceed $25,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both.
Additional penalties for violating these sections of the Clean Water Act are identified in 40 CFR 122.41 (a)(2) and (3).

(23) The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

(24) The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

(25) Collected screening, slurries, sludges, and other solids shall be disposed of in such a manner as to prevent entry of those wastes (or runoff from the wastes) into waters of the State. The proper authorization for such disposal shall be obtained from the Agency and is incorporated as part hereof by reference.

(26) In case of conflict between these standard conditions and any other condition(s) included in this permit, the other condition(s) shall govern.

(27) The permittee shall comply with, in addition to the requirements of the permit, all applicable provisions of 35 Ill. Adm. Code, Subtitle C, Subtitle D, Subtitle E, and all applicable orders of the Board or any court with jurisdiction.

(28) The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit is held invalid, the remaining provisions of this permit shall continue in full force and effect.

Exhibit 2

Midwest Generation LLC Waukegan Generating Station NPDES Permit Responsiveness Summary

Midwest Generation L.L.C
Waukegan Generation Station

National Pollutant Discharge Elimination System (NPDES) Permit

Responsiveness Summary

Regarding

July 31, 2013 Public Hearing

Illinois Environmental Protection Agency
Office of Community Relations
March 25, 2015

Midwest Generation L.L.C.
Waukegan Generating Station

National Pollutant Discharge Elimination System (NPDES) Permit Responsiveness Summary

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Final March 25, 2015

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Midwest Generation L.L.C
Waukegan Generating Station
Renewed Permit
Permit Number IL0002259

ILLINOIS EPA PERMIT DECISION

On March 25, 2015, the Illinois Environmental Protection Agency approved a NPDES permit for Midwest Generation, L.LC.

The following changes were made to the public noticed permit:

1. The compliance schedule for pH in Special Condition 2 was revised to allow for a 6 month monitoring period followed by 12 additional months, if necessary, to design and construct a treatment system.

2. The mercury monitoring requirements for outfall 001 were consolidated into Special Condition 16 and Special Condition 15 was removed.

3. Special Condition 10 was modified to require that changes in the use of water treatment additives be approved by the Illinois EPA.

4. Special Condition 11 clarifies that the discharger may request a reduction or elimination in dissolved oxygen monitoring after two years.

5. The sampling frequency for pH at outfall 001 was changed to 2/month which will provide two samples on the monthly DMR.

6. The sampling frequency at A01 and B01 for TSS and oil and grease was changed to 2/month which will provide two samples on the monthly DMR.

7. Special Condition 7 was revised to require compliance with the new cooling water intake structure existing facilities rule.

8. Special Condition 17 was removed and the language is included in Special Condition 7(B)(3). The remaining special conditions were renumbered.

9. Fly ash sluice water was removed from the permit.

10. The permitted flow and condenser cooling water flow was reduced to 739 MGD and 589 MGD respectively, to reflect the removal of Unit 6 from service on December 21, 2007.

11. The discharger address was changed as requested.

12. An equation was added to Special Condition 4 to determine and report the heat rejection rate.

PRE-HEARING PUBLIC OUTREACH

The notice of the NPDES permit public hearing was published in the *Waukegan Lake County Sun* on June 11, 18, and 25, 2013.

The hearing notice was mailed or e-mailed to:

a) Lake County officials;
b) Municipal officials in: Waukegan as well as State and federal representatives;
c) Parties that filed comments or requested a hearing on the public-noticed draft permit; and,
d) Those who have requested to be notified of water hearings.

The hearing notice was posted on the Illinois EPA website:
http://www.epa.state.il.us/public-notices/2013/midwest-generation-waukegan/hearing-notice.pdf

Hearing notices were posted at the Illinois EPA headquarters in Springfield.

July 31, 2013 PUBLIC HEARING

Hearing Officer, Dean Studer, opened the hearing July 31, 2013, at 6.30 p.m. at the Jane Addams Center-Bowen Park, 95 Jack Benny Drive, Waukegan, Illinois.

Midwest Generation, L.L.C. Hearing Participants:

Mark Nagel

Illinois EPA Hearing Participants:

Deborah Williams, Assistant Counsel, Bureau of Water
Scott Twait, Standards Section, Bureau of Water
Lynn Dunaway, Groundwater Section, Bureau of Water
Jaime Rabins, Industrial Unit, Permits Section, Bureau of Water
Darrin LeCrone, Industrial Unit, Permits Section, Bureau of Water

Illinois EPA Permit Engineer, Jaime Rabins, gave a brief overview of the draft permit.

Comments and questions were received from the audience.

Hearing Officer, Dean Studer, closed the hearing at 9:40 p.m. on July 31, 2013.

Illinois EPA personnel were available before, during and after the hearing to meet with elected officials, news media and concerned citizens.

Approximately 80 persons representing neighbors, local government, businesses, elected officials, environmental groups, interested citizens, and Midwest Generation participated in and/or attended the hearing. A court reporter prepared a transcript of the public hearing which was posted on the Illinois EPA website at:
http://www.epa.state.il.us/public-notices/2013/midwest-generation-waukegan/hearing-transcript.pdf

The hearing record remained open through August 30, 2013.

BACKGROUND of Midwest Generation L.L.C.
Waukegan Generating Station

The Illinois EPA Bureau of Water has prepared a final reissued NPDES permit for Waukegan Generating Station. The address of the discharger is Midwest Generation L.L.C., 401 East Greenwood Ave., Waukegan, Illinois 60087.

The applicant is engaged in operation of a steam electric generating station (SIC 4911). The station operates two coal fired boilers to supply steam to two generating units, designated units 7 and 8, with a combined nominal capacity of 742 megawatts (MW). The station withdraws water from Lake Michigan for condenser cooling, house service water, and boiler feed water. Wastewater is generated from once-through condenser cooling, conditioning boiler feed water, backwashing the condenser cooling water intake screens, non-chemical cleaning of plant equipment, ash handling, and precipitation which contacts the site.

Plant operation results in:

- an average discharge of 739 million gallons per day (MGD) of condenser cooling water and house service water from outfall 001;
- an intermittent discharge of boiler blowdown from outfall A01;
- 0.151 MGD of demineralizer regenerant wastes from outfall B01,
- 8.13 MGD of wastewater treatment system effluent from outfall C01,
- 0.676 MGD of east yard basin overflow from outfall D01;
- an intermittent discharge of unit 7 demineralized water storage tank drain from outfall F03; and,
- an intermittent discharge of non-chemical metal cleaning wastes from outfall G01.

Responses to Comments, Questions and Concerns

Comments, Questions and Concerns in regular text
Illinois EPA responses in bold text

NPDES PERMIT

1. I'm here tonight to urge you to strengthen the draft water pollution permit for the coal plant so that there are proper paths or impacts that can't harm me, my family, my community and our environment. I am a resident of Lake Forest where we draw our drinking water from two intake pipes that are approximately eight miles south of the coal plant. Specifically, I request tonight for the Illinois EPA to strengthen this permit in four ways: Number one, strengthen the coal ash pollution limits that the U.S. EPA has already determined are inadequate. Number two; please include measures to address the ground water contamination that exists near the plant. Number three; please review the Lake Michigan Thermal Water Quality Standards to insure the coal plant is not harming water quality and aquatic life. And number four, please take steps to minimize the fish kills from the plant's intake pipes.

   The permit contains a new monitoring requirement for metals and other pollutants for outfall 001 which includes coal-related discharges.

   The permit does not contain groundwater monitoring requirements because groundwater monitoring is being administered through the compliance commitment agreement (CCA) submitted by Midwest Generation in response to violation notice W-2012-00056. The CCA also requires the installation and monitoring of two additional monitoring wells at the site to further assess groundwater flow and quality.

   The permit controls thermal discharges in accordance with PCB 78-72, -73 Consolidated dated September 21, 1978. Unit 6, rated at 100 MW, was retired on December 21, 2007, eliminating any discharge from the unit and further reducing the thermal load to Lake Michigan. To ensure the nature of the thermal discharge has not changed and the alternative thermal effluent limitation granted by the Board has not caused appreciable harm to a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of water into which the discharge is made, the reissued permit requires specific activities and studies discussed in response to Question #59.

   To determine if additional controls are necessary to minimize impingement and entrainment of fish, the reissued permit requires the submittal of an impingement mortality and entrainment characterization study and an alternatives analysis for the water intake structure.

2. The gentleman from Midwest Generation said that the ponds are not leaking. They may not be leaking, but there are monitoring wells around the perimeter that are coming up with arsenic, and I won't go through all of them. I don't remember all of them, but they are the very types of heavy metals that we have concerns about. The idea that you would find those things in the area around it would imply that the supernatant water above the solids that are in the pond is leaching metals, and it is an item of concern. We would ask that you take a look at those 2010 U.S. EPA Guidelines, which asks people not to monitor alone, but to put BAT technology in place so that these sorts of things can be controlled.

   The permit contains a new monitoring requirement, Special Condition 16, which requires semi-annual monitoring for metals and other pollutants to ensure effluent and water quality limits are being met upon discharge. If data indicates limits are necessary, the permit may be reopened, and additional limitations and provisions will be added to the permit. Based on currently available data, it does not appear that the active ash ponds are the source of contamination. There appears to be some other source. Midwest Generation has engaged their consultants and is evaluating the site. With the removal of Unit 6, fly ash is no longer wet sluiced which will reduce the potential leaching of metals. The facility has installed technology to minimize, if not eliminate, ash pond leaks/seeps. The east pond was relined in 2003 and the west pond was relined in 2005 with a 60 mil HDPE liner, 12 inches of sand, and 6 inches of limestone screenings and the liner is inspected on an annual basis.

3. Is your role to allow a discharge that might further impair the waters of Lake Michigan, which are already impaired from mercury, and then see whether they do; or is it to limit the discharges, to insure that Lake Michigan water is not impaired in the future, and then check to make sure that that goal is achieved? Are you prospective or precautionary? I would like an answer. Is that fair?

   The receiving water, segment QLM-01 of Lake Michigan, is impaired for mercury, but the Illinois EPA does not have any low-level mercury data for the Waukegan Generating Station facility which is necessary to determine if a mercury limit is required. Therefore, the reissued permit contains a new low level mercury monitoring requirement at outfall 001. The discharges at outfall 001 are required to be monitored for mercury monthly for the first two years and quarterly thereafter utilizing USEPA method 1631E. The data will be reviewed during the next permit cycle to perform a reasonable potential analysis to determine if limits are necessary.

4. I understand the USEPA is currently revising their rules as far as coal ash pollution, the pollutant runoff from the ash ponds. Is that correct? Have they asked the Illinois EPA to try to look at changing their standards?

The USEPA Administrator, Gina McCarthy, signed the Disposal of Coal Combustion Residuals from Electric Utilities final rule on December 19, 2014, and it was submitted for publication in the *Federal Register*. The rule will become effective six months after publication in the Federal Register.

5. Is there any change in this permit from the previous permitting to address that there should be a change in the standards?

   This permit requires additional monitoring and is more stringent than the previous permit in the following ways: (1) metals monitoring, (2) dissolved oxygen monitoring, (3) impingement mortality and entrainment characterization study, and an alternatives analysis submittal requirement, (4) biological sampling and thermal modeling, (5) reduction in condenser cooling water discharged due to the retirement of Unit 6 (100 MW), and (6) elimination of fly ash sluice as an authorized discharge. There have not been any changes to the permit based on the proposed steam electric power generating point source category regulations, as they are not currently applicable.

6. Can you guarantee that the coal ash flowing through Lake Michigan will still be safe in the next five to ten years? Can you guarantee that your data in the permit is accurate?

   The permit authorizes the discharge of water which comes into contact with coal ash, not the discharge of untreated coal ash. The Illinois EPA has reviewed the effluent data for this facility and determined that a reasonable potential to exceed water quality standards does not exist nor do any of the reported pollutants exceed effluent standards. To ensure continued compliance with water quality and effluent standards, the permit requires semi-annual monitoring for metals and other pollutants and more frequent monitoring for mercury.

7. When Midwest Generation sells this plant, will the permit automatically transfer to the next owner, with the possibility of more delays in meeting standards, or will the new owner have to reapply for a permit?

   NRG Energy, Inc. acquired Midwest Generation LLC on April 1, 2014. The permits are not being transferred because the plant will continue to be operated by Midwest Generation, L.L.C. However, in the future, if another owner wants to own and operate this plant, they must follow the permit transfer requirements of 40 CFR 122.61.

8. Although the draft permit fact sheet states that two boilers are operating instead of three, the average discharge flows from the asphalt have not changed from earlier permit drafts, as we've seen. Should they be corrected to flows as stated by Midwest Generation in some of their earlier comment letters that were referenced in the

comments we submitted earlier? Does it have any impact on effluent limits that are in the draft permit?

The flow of 768.62 MGD at outfall 001 in the public noticed permit was in error and was reduced to 739 MGD to reflect that Unit 6 was retired on December 21, 2007.

9. Did IEPA change the identified receiving water between the December 2, 2011, draft, and the February 8th, 2013 draft?

No. The receiving water was listed as Lake Michigan in the previous permit and is listed as Lake Michigan in this reissued permit.

10. The receiving water is still considered an open water of Lake Michigan then?

Yes, pursuant to 35 Ill. Adm. Code 302.501; the Illinois EPA has determined that the receiving water for outfall 001 is an "Open Waters of Lake Michigan".

11. The draft permit put on public notice in 2011 included thermal limits. Why did IEPA include those thermal limits in that draft permit?

The previous permit included thermal relief in accordance with Section 316(a) of the Clean Water Act 33 U.S.C. 1326(a). The 2011 public noticed permit omitted thermal relief in error and instead limited the discharges to the State Water Quality Standards of 35 Ill. Adm. Code 302.507. Comments were received from the discharger requesting that the permit reincorporate the thermal relief granted by the Illinois Pollution Control Board Order 77-82, dated August 3, 1978. The Illinois EPA reviewed the matter and agreed to reincorporate the thermal relief in the permit. To ensure the nature of the thermal discharge has not changed and the alternative thermal effluent limitation granted by the Board has not caused appreciable harm to a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of water into which the discharge is made, the reissued permit requires specific activities and studies discussed in response to Question #59.

12. Did anything change between 2011 and 2013, other than finding this variance in the Pollution Control Board that caused IEPA to remove those thermal standards from the permit?

Subsequent to discovering the omission, the permit was corrected and re-public noticed on October 16, 2012 to recognize the thermal relief granted by the Illinois Pollution Control Board Order 77-82, dated August 3, 1978.

13. In preparation of this draft permit, did IEPA review the documentation presented for the 1978 variance that we're talking about?

The Illinois EPA reviewed the thermal studies from 1975 and 1976 conducted in accordance with 316(a) of the Clean Water Act 33 U.S.C. 1326(a) and determined that there have not been any changes at the facility which would result in additional heat being discharged into the lake. Furthermore, Unit 6, rated at 100 MW, was removed from service on December 21, 2007 thus, decreasing the heat load.

14. Did the 1978 variance delineate the extent of the thermal plume from the Waukegan plant?

Although, the extent of the thermal plume was not delineated in the 1978 Variance, based on the full operation of four generating units, "the predicted area of the plume is 126 acres for the 3 °F isotherm with no cross-current in the lake for the discharge structure" (Page 1, PCB 78-72, -73 (Consolidated)). Currently, there are only two generating units operating, Unit 7 and Unit 8.

15. Can you explain what cooling water intake structures are operated at this facility?

The cooling system for each unit is designed as a once-through system. Cooling water from the lake is withdrawn from an on-shore location, and passes through the intake canal into a constructed embayment prior to entering the plant through two intakes, one for Unit 7 and one for Unit 8. Bar racks are located in front of the traveling screens at each intake. Each screenhouse is equipped with fixed trash bars, through-flow traveling screens, and a high pressure wash-water system. All screens are made with #12 gauge wire with ⅜-inch openings. The traveling screens are oriented parallel to the face of the screenhouse. The intake withdraws water from the entire water column.

Two pumps provide cooling water to Unit 8, whereas four pumps provide cooling water to Unit 7, for a total of six pumps. Unit 7 has one traveling screen and pump bay for each pump, whereas, Unit 8 has two bays each containing one pump and protected by two traveling screens. Screen wash water from the traveling screens for each unit flows into separate trash baskets. The design through screen velocity at critical low water level is 2.0, and 1.8 feet per second for Units 7, and 8, respectively.

16. What current and historical data did IEPA have regarding impingement and/or entrainment at this facility?

The Illinois EPA used the data provided in the 1975/1976 study conducted in accordance with Section 316(b) of the Clean Water Act 33 U.S.C. 1326(b). Specifically the study provides:

Twenty-four hour impingement samples were collected every fourth day from May 12, 1975 through April 1976 at the Waukegan station. An estimated 898,457 fish comprised of 30 species were impinged during the study.

Weekly entrainment samples were collected from April 2, 1975 through March 1976. An estimated 19.8 million identifiable fish larvae were collected, comprised of only three species: common carp, alewife, and rainbow smelt. An estimated 855.2 million identifiable fish eggs were collected during this study. Consistent with the fish larvae, only three species were identified among the fish eggs: alewife, rainbow smelt, and common carp.

17. Special Condition 15 describes the mercury monitoring method that is to be used. Can you clarify for me that that applies to both outfall 001 and internal outfall C01; and then my question is, this is how I read it, and you can tell me if I'm wrong: Why is there a monthly monitoring required for a year at outfall 001 and then quarterly thereafter, while only quarterly monitoring is required at outfall C01?

    The reference to mercury monitoring at C01 on page 5 was in error and hence was removed from the permit. Mercury monitoring requirements for outfall 001 were consolidated into Special Condition 18 and to eliminate redundancy Special Condition 15 was removed. Mercury monitoring will be monthly at outfall 001 for 24 months and then quarterly thereafter.

18. Has Midwest Gen[eration] provided any mercury monitoring using the method that is described in Special Condition 15? Have they already provided any data using that method to you?

    The Illinois EPA does not have any low-level mercury data for the Waukegan Generating Station facility nor was the discharger required to provide any. However, in the reissued permit, mercury is required to be sampled monthly at outfall 001 for 24 months and quarterly thereafter in the reissued permit.

19. First, in the December 2011 draft permit, there was a requirement that dissolved oxygen not be less than 90-percent saturation. Why was that removed from the most current version of the permit?

    The limit has been removed and replaced with a requirement to monitor the intake and discharge. The Illinois EPA would need this data to determine if a reasonable potential exists to exceed dissolved oxygen standards and if a limit is necessary.

20. Are both fly ash and bottom ash directed to the coal basins, coal ash basins? There appears to be some inconsistency between the draft permit, which identifies fly ash and bottom ash as waste streams to outfall C01.

Fly ash was previously generated from Unit 6 which was retired on December 21, 2007. Currently, only bottom ash is directed to the coal ash basins. The reference to fly ash sluice water for outfall 001 on page 5 of the permit was in error and thus removed.

21. So, will the permit be changed to reflect that? If it's going to allow them to put out fly ash that has more mercury in it than it used to, then you need to do an anti-degradation assessment.

    Since, the permit does not authorize the discharge of fly ash sluice water an antidegredation assessment is not necessary. See response #20.

22. Is there a reason why I guess from the studies, it looks like it was from the permit one of the conditions is to study the impact of the plume and do surveys on that, is there a reason why that was not done before this permit?

    The thermal relief was granted back in the 1970s. The thermal relief provisions have been incorporated in all previous permits since approval was granted. In order to re-justify or renew that type of relief, the Illinois EPA is requiring the applicant to study the fish species, the health of the lake, mixing for temperature, so that the information can be reviewed during the next permit cycle. See response #59.

23. My question is at what point do you determine that you don't have enough data, and you're going to request more?

    The Illinois EPA has reviewed the application and determined that it has adequate data to reissue the permit. In order to make any future permitting decisions during the next permit cycle, the reissued permit requires the following new monitoring requirements/submittals: (1) metals monitoring, (2) dissolved oxygen monitoring, (3) impingement mortality and entrainment characterization study and an alternatives analysis submittal requirement, and (4) biological sampling, and thermal modeling.

24. How often do you perform audits of their data? How do you know how accurate that is, and how often do you do a double check and just audit their information, to make sure that you are getting the correct information?

    The information received from applicants is considered to be accurate unless it is known or appears to be in error. Furthermore, applicants must certify under penalty of law that the information submitted is, to the best of their knowledge and belief, is true, accurate, and complete and that they are aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

25. When looking through the Special Condition Number 16, it says, "There shall be no discharge of complex metal-bearing waste streams and associated rinses from chemical metal cleaning, unless this permit has been modified to include the new discharge. Just a point of order, I'm just trying to figure out what the complex metal bearing waste streams are. If it's complex metal, does that mean hexavalent chrome and waste streams? What I'm trying to relate is whether these waste streams are the same as I used to encounter many years ago.

    There are two types of metal cleaning wastes, chemical metal cleaning wastes and non-chemical metal cleaning wastes. Complexed metal cleaning wastes means chemical metal cleaning wastes. Currently only non-chemical metal cleaning wastes are authorized to be discharged.

26. Where does the water that services the plant come from? Does it come from Lake Michigan, or does it come from bottled water or something like that?

    The water to service the plant comes from Lake Michigan.

27. What type of waste water treatment is applied to the effluent from the ash ponds before discharge?

    Sedimentation is the primary treatment method. There is also an oil containment ring located on the outer circumference of the clarifier.

28. In the draft permit released in December 2011, mercury monitoring put a limit on total suspended solids was placed on the one million gallon per day coal pile runoff. Why was that condition removed from the latest draft permit? One million gallons per day is a lot of water. Are there dry weather discharges coming off of the coal pile?

    The coal pile runoff collection basin which receives drainage from the coal pile area, west yard area, car dumper area, main switch yard area, west yard area polymer building drains, peaker sump, and west turbine area roof drains has an approximate discharge of 1.0 MGD. Coal pile runoff only has an approximate flow of 0.5 MGD. Because the coal pile runoff discharges to the wastewater treatment plant, which is limited for TSS, it is not necessary to limit TSS discharges from the coal pile prior to treatment and then have another TSS limit after treatment.

    There are no dry weather discharges from the coal pile.

29. How close are the coal piles to Lake Michigan, or the canal that is hydrologically connected to Lake Michigan?

    The closest proximity of the coal pile is to the station intake canal along the northern (NNE) edge of the pile. It is approximately 125 feet from the

Waukegan Generating Station intake canal. It is important to note that there is a coal pile runoff ditch located between the pile and the canal that will intercept water/coal mixtures. The ditch, which surrounds the pile, directs the coal pile run-off water to the coal pile runoff collection basin.

30. Is it possible for coal to bypass the permitted outfall and discharge coal directly into the lake or the canal?

All runoff from the coal pile and associated areas is designed to be routed to the existing coal pile runoff collection basin, which is then sent to the station's wastewater treatment system prior to discharge.

31. Are there transformers containing PCBs on the site; and if so, do you know how they are stored?

There are four PCBs transformers at the facility, each located inside a secured and covered building constructed with its own secondary containment system and located at least 1,000 feet from the nearest outdoor open water basin.

32. Can you explain why the monthly average effluent limitation for copper on outfall G1 changed from 0.5 milligrams per liter in the 2011 permit, to 1 milligram per liter the 2013 draft permit? Which is the monthly average under the federal guidelines, is it the 0.5 or 1?

Copper was previously limited at outfall C01 pursuant to state effluent standards of 0.5 mg/L monthly average, 1.0 mg/L daily maximum (35 Ill. Adm. Code 304.124). Since the source of copper is the non-chemical metal cleaning wastes, a new internal monitoring point G01 was added to the permit for the existing discharge of non-chemical metal cleaning wastes per 40 CFR 423.12(b)(5). Consistent with 40 CFR 423.12(b)(5) the discharge is limited to a monthly average and daily maximum copper limitation of 1.0 mg/L prior to mixing with other wastestreams.

33. Has Midwest Generation indicated that it's unable to meet pH limits in outfall 1?

The discharges from outfall 001 have not been previously subject to pH limits. Thus, the reissued permit requires pH to be monitored for six months. The data will be used to determine whether treatment is necessary to meet the pH limits.

34. How does one normally treat for pH, what's the process? Is it a particularly difficult chemical to treat for?

pH can be adjusted by adding either an acid (to lower pH) or a base (to raise pH). Carbon dioxide may also be used to reduce pH in alkaline water. If treatment is required to meet the pH limits at outfall 001, the facility will need

time to design, construct, and comply with the pH limits which were not in the previous permit.

35. What is the basis of IEPA's determination as stated in Special Condition 14 that the effluent limits on outfall 001 constitute BAT/BCT for storm water?

Stormwater is treated and subject to effluent limits which are more stringent than requiring only best management practices through a stormwater pollution prevention plan.

36. So, all storm water on site is treated at the wastewater treatment plant? Do you know what treatment those discharges receive?

All runoff is collected in the station's collection system and treated using sedimentation and oil removal prior to discharge.

37. Can you explain why the proposed internal outfall H01 for coal panel discharges was eliminated in this version of the draft permit?

Since coal pile runoff is routed to the wastewater treatment system, which has effluent limitations for total suspended solids, limiting total suspended solids prior to treatment is unnecessary.

38. Given the fact that they are doing dry processing of fly ash and mercury residual, can we presume there is a permit for that?

The permit does not authorize the discharge of fly ash sluice water. See response #20.

Antidegradation Assessment/Water Quality Standards

39. I am concerned how these standards decide upon, how this was considered to be safe. Sometimes we find things later on that science changes and we find some of the things, for example, we had many problems with mercury, nitrogen, asbestos in this area, how the science as to this is supposed to be safe. In addition to this, saying that this is the existing science, and I'm not sure how this will be determined, when I hear that Congress intends to cut fund to get EPA, how do you intend to monitor and enforce these standards, if your budget is reduced?

    Illinois EPA develops water quality standards to protect aquatic life and human health. To keep these water quality standards up to date based on new science or research the Illinois EPA is required to perform a triennial review (every three years) of its standards 33 U.S.C. 1313(c). Illinois EPA uses the USEPA national criteria documents as well as more recent toxicity data to develop water quality standards.

    If funding to the federal EPA is decreased, Illinois water quality standards will remain in force and Illinois EPA will continue to enforce and update these standards as state funding allows.

40. What's involved in the antidegradation study?

    Under the Illinois Pollution Control Board rules at 35 Ill. Adm. Code 302.105, an antidegradation assessment has to be completed when there is a new or expanding facility that is increasing the loading of a parameter to the receiving water. In this case, the Waukegan Generating Station facility is not increasing the loading to the receiving water, therefore, no antidegradation assessment has been completed.

    An antidegradation assessment must comply with the requirements of 35 Ill. Adm. Code 302.105 and must include: identification and characterization of the water body, identification and quantification of the proposed load, purpose and anticipated benefits, assessments of alternatives, any additional information the Illinois EPA requests, and proof that a copy of the application has been provided to IDNR.

41. The idea that they have not increased the load, the bottom line is you don't know what the load is. They haven't been busy measuring it and monitoring it. The new permit asks for all of those sorts of parameters to be incorporated, and what we would ask of you is that you do an antidegradation analysis of this particular plant in regards to that.

    The Waukegan Generating Station facility is not increasing the output of the plant nor are they changing plant processes, therefore, effluent loading to the

receiving water will not increase. Consistent with 35 Ill. Adm. Code 302.105, an antidegradation assessment is not required.

42. Were the limits in the 2011 draft permit based on Lake Michigan Water Quality Standards?

With the exception of one parameter, temperature, the Waukegan Generating Station facility must comply with the Water Quality Standards for Lake Michigan. Temperature limits were based on a study conducted in accordance with Section 316(a) of the Clean Water Act 33 U.S.C. 1326(a) and approved of by the Illinois Pollution Control Board in Order 77-82, dated August 3, 1978.

43. Do you know whether the aquatic community in Lake Michigan as a whole experienced any changes since 1978; for example, have species recovered or declined, has the composition of the aquatic community changed over time?

There have been significant changes in the aquatic community over the past three decades. Most of the large-scale changes are the result of changes in lake productivity. As productivity declines, there is less available nutrients/energy to move through the food web. Declines in productivity are likely the contributing factor to declines in the yellow perch and alewife populations. Declines in alewife abundance consequently affect salmon and trout populations. These changes in productivity and lower trophic level species composition (i.e., zooplankton and benthic invertebrates) have been largely attributed to effects of invasive species (e.g., zebra and quagga mussels, and spiny and fish hook water fleas).

44. Has any equivalent of the monitoring required by Special Condition 18, that's the last condition in the permit, or second to the last, been required in the past? If so, have reasonable potential analyses been conducted based on that data?

Metals monitoring was not required in prior or the currently-effective NPDES permits. However, as part of the application, Midwest Generation has provided one sample result. The Illinois EPA performed a reasonable potential analysis for the Waukegan Generating Station facility. There is no reasonable potential to exceed the water quality standards in the effluent or outside of allowed mixing.

45. Now, we have some information from the files of what Midwest Gen[eration] had submitted to IEPA, and they had their own analysis of their own data that they found that there was a reasonable potential to exceed Water Quality Standards at outfall 001 for iron, lead, mercury and phenols. Why are there no limits on those pollutants in the permit?

Midwest Generation was using the reasonable potential analysis to convince the Illinois EPA that there was no reason to monitor the large majority of

metals. According to the Midwest Generation analysis, the data did not indicate that iron, lead, mercury, and phenols had no reasonable potential to exceed the water quality standards. Therefore, Midwest Generation was willing to accept monitoring of those parameters. The projected effluent quality (PEQ) was above the water quality standards. However, there were no detections of lead, mercury, or phenol in the three samples. Midwest Generation only collected Iron (total) samples and did not collect Iron (dissolved) samples. Lake Michigan has an Iron (dissolved) water quality standard. Therefore, Midwest Generation's data collection cannot be used to determine a reasonable potential to exceed the Iron (dissolved) water quality standard. Based on this information, the Illinois EPA determined that regulation of iron, lead, mercury, and phenols are not necessary but monitoring is required for future analysis.

46. They did not perform their only reasonable potential analysis on other metals that are often found in coal ash. Those include things like aluminum, thallium, silver, arsenic and antimony. Arsenic and antimony both of those have been detected in the ground water near the coal ash compound. So, that raises a concern for me. Selenium, they reported a value of 0.21 milligrams per liter selenium in the effluent from the plant's wastewater treatment system, while the Lake Michigan standard is 5 micrograms per liter. So, my question is: Has IEPA looked at those pollutants and the need for a limit in the permit?

    The Illinois EPA performed a reasonable potential for the Waukegan Generating Station for outfall 001. Any samples taken at an internal outfall, has a large amount of dilution from the condenser cooling water. There is no reasonable potential to exceed the Water Quality Standards in the effluent or outside of allowed mixing.

47. Are facilities allowed to use dilution to meet Water Quality Standards?

    Facilities are allowed to use dilution to meet water quality standards as long as they comply with the mixing regulations at 35 Ill. Adm. Code 302.102.

48. Will the Illinois EPA use the 3.1 nanograms per liter human health standard, or the 1.3 nanograms per liter for wildlife standard for mercury for Lake Michigan in its reasonable potential analysis?

    The Illinois EPA will ensure that the effluent complies with all applicable water quality standards. In this case, as the wildlife standard for mercury of 1.3 nanograms per liter is the most stringent water quality standard applicable, the Waukegan Generating Station facility would be required to comply with 1.3 nanograms per liter standard.

49. Can you determine whether mercury has a reasonable potential to exceed the lake, that very low Lake Michigan water quality standard, if you only have mercury data reported at less than 0.2 milligrams per liter?

The previous permit did not require mercury analysis based on a low level detection method. The one sample that was collected used a method that does not give sufficient information to say whether or not the water quality standard is met. The reissued NPDES permit requires sampling using the low-level mercury monthly for two years and quarterly thereafter.

50. My question is about that monitoring condition, which is in Special Condition 11, why is it requiring that dissolved oxygen be monitored during the daytime? You've set hours that it's supposed to be collected during the daytime, instead of at night, or right before dawn, when we would expect DO to be at its lowest point in the dire one-sentence swing.

The data from Special Condition 11, which requires dissolved oxygen data to be collected in the influent and effluent, will allow the Illinois EPA to determine what impact the facility is having on dissolved oxygen. The Illinois EPA is requiring this data to be monitored during the daytime so that we can compare the results to ambient data that the Illinois EPA collects, which is also monitored during the daytime.

51. Are you allowed, based on science and health standards, to set good standards to be the new standards for the new permit to be as stringent as they need to be to protect the health of the communities?

The Illinois EPA ensures that the NPDES permit will comply with current water quality standards which are approved by the Illinois Pollution Control Board through the Administrative Procedures Act. The current water quality standards are based on the available relevant toxicity data to protect aquatic life, wildlife, and human health. The Illinois EPA uses the triennial review of 33 U.S.C. 1313(c) (every three years) to determine if adequate toxicity data has been generated resulting in a need to recalculate the water quality standards. The Illinois EPA would then need to petition the Illinois Pollution Control Board to modify the water quality standards.

Enforcement/Compliance Issues

52. The State of Illinois has indicated that advocates in favor of denying this permit should be prepared to quote chapter and verse of the state regulations. At the public hearing however it was evident that some very smart folks did not understand either the state or federal regulations. Furthermore state regulations have become increasingly complex through time. Practitioners and consultants that routinely deal with the regulations might have a familiarity and ability to address this complexity but the general public will not. We suggest that a two page summary and explanation of the state and federal statutes under which the permit is written be part of future draft permit applications. We also suggest that it be made part of the responsiveness summary.

    The USEPA developed a fact sheet outlining a brief history and introduction to the national water pollution control permitting program as administered by the USEPA and provides an overview of the permitting activities implemented through the NPDES program today. This information can be found at http://www.epa.gov/npdes/pubs/101pape.pdf

    The Illinois EPA has been delegated authority to issue NPDES permits in Illinois. The State received this delegated authority, by USEPA, on October 20, 1977 pursuant to Sections 4, 11, and 39 of the Illinois Environmental Protection Act.

53. Midwest Generation is currently in bankruptcy. They will not be interested in extensive modifications of their plant or their unit processes. However, USEPA guidance concerning water treatment at coal plants suggests that state permit writers "anticipate" the intent of the proposed federal rules changes to be finalized in September of this year. The guidelines emphasize timely introduction of BAT technologies. Continuing to "study the issue" does not imply timeliness. We believe that thermal and impingement/entrainment data may already be available. Illinois EPA should confirm this before the permit is finalized.

    Section 316(a) of the Clean Water Act applies to the thermal discharges from this facility 33 U.S.C 1326(a). The facility has applied for and was granted thermal relief by the Illinois Pollution Control Board, Order 77-82, dated August 3, 1978. Since that time, thermal discharges have been further reduced with the removal of Unit 6 (100 MW) from service on December 21, 2007. As a condition of the continuation of the facility's 316(a) thermal relief the reissued permit requires biological sampling and thermal modeling. The Illinois EPA will review the data during the next permit cycle to determine if additional limitations are necessary.

    Section 316(b) of the Clean Water Act applies to the operation of the cooling water intake structure 33 U.S.C 1326(b). The Illinois EPA used the data provided in the 1975/1976 316(b) study which is summarized in response #16.

To characterize the current effect of the cooling water intake structure operation, the discharger is being required to submit an impingement mortality and entrainment characterization study and a alternatives analysis. Illinois EPA will review this information during the next permit cycle and determine if additional facilities or monitoring is necessary.

Groundwater Issues

54. Is there anything in this permit that would require amending the standards or monitoring or regulation or plans to clean up ground water contamination?

The permit does not contain groundwater monitoring requirements. However, the approved compliance commitment agreement (CCA) submitted by Midwest Generation in response to violation notice W-2012-00056 does require ongoing groundwater monitoring. The CCA also requires the installation and monitoring of two additional monitoring wells at the site to further assess groundwater flow and quality.

55. Is that a continuous monitoring or how often?

Groundwater samples are collected and analyzed, and the analytical results are reported quarterly.

56. Could that be increased, I mean quarterly? Can we check that more often, and what kind of plan is there?

The Illinois EPA has determined that a quarterly sampling frequency is adequate for groundwater monitoring at the site. Based on currently available data, it does not appear that the active ash ponds are the source of contamination. There appears to be some other source. Midwest Generation has engaged their consultants and is evaluating the situation. The site investigation for a source(s) of contaminants up gradient of the active ash ponds is not part of the approved CCA.

57. Have any studies been conducted regarding the hydrologic connection between the ground water affected by the site and Lake Michigan and/or other surface waters?

No such studies are required under this permit. The proposed regulations for closure of ash ponds under 35 Ill. Adm. Code 841, currently before the Illinois Pollution Control Board, contain provisions that will require facilities like the Waukegan Generating Station to perform modeling and groundwater monitoring of well systems to assess the potential for ash disposal units to impact surface water and groundwater.

Miscellaneous Issues

58. Please strengthen the draft water pollution permit for the Waukegan coal plant so that it properly accounts for pollution that can harm me, my community, Lake Michigan and all the living things in the Lake.

    This permit was strengthened over the previous permit in the following ways: (1) metals monitoring, (2) dissolved oxygen monitoring, (3) impingement mortality and entrainment characterization study and an alternatives analysis submittal requirement, (4) biological sampling and thermal modeling, (5) reduction in condenser cooling water discharged due to the removal of Unit 6 (100 MW), and (6) elimination of fly ash sluice as an authorized discharge.

59. Review the Lake Michigan thermal water quality standards to ensure the coal plant is not harming water quality and aquatic life.

    The facility has an approved thermal demonstration in accordance with Section 316(a) of the Clean Water Act 33 U.S.C. 1326(a) and is not subject to the thermal water quality limits of 35 Ill. Adm. Code 302.507. However, as a condition for the continuation of the facility's 316(a) thermal variance (PCB 72-73 Consolidated, dated September 21, 1978), the permittee is being required to conduct the following activities and studies: (a) complete a literature search for biological studies conducted in Lake Michigan in the general vicinity of the facility, including but not limited to, relevant biological monitoring data from state or federal agencies; (b) prepare a Representative Important Species (RIS) List, including an explanation of the rationale for selection of each species on the list; and (c) based on the results of the biological studies literature search and the RIS List, prepare a study plan for biological sampling and thermal monitoring, including, as appropriate, thermal modeling.

60. Strengthen coal ash pollution limits that the U.S. EPA has already determined are inadequate.

    The permit authorizes the discharge of water which comes into contact with coal ash not the discharge of untreated coal ash. The water which contacts coal ash discharged from this facility is limited to the more stringent of the state or federal standards. The permit also requires metals monitoring to ensure compliance with effluent and water quality standards.

61. Include measures to address the groundwater contamination that already exists near the plant.

    Midwest Generation has voluntarily initiated a site investigation to identify source(s) of contaminants up gradient of the active ash ponds. Because site investigations frequently need to be modified based on preliminary findings,

inclusion in a NPDES permit, is not a good means to respond quickly to modifications of any site investigations.

62. Minimize fish kills from the plant's intake pipes. We have already done such harm to the living things in the water and this does affect us. We need to fix this, not to make it worse.

    To characterize the current effect of the cooling water intake structure operation, the discharger is being required to submit an impingement mortality and entrainment characterization study and an alternatives analysis. We will review this information during the next permit cycle and determine if additional limits or monitoring is necessary.

63. Concerns regarding heavy metals such as mercury in Lake Michigan. Concerns for citizens who fish in the lake and eat the fish.

    See responses #46 and #49.

Acronyms and Initials

BOD	Biochemical oxygen demand
CCA	Compliance Commitment Agreement
COD	Chemical oxygen demand
CFR	Code of Federal Regulations
DMR	Discharge Monitoring Report
IDNR	Illinois Department of Natural Resources
IEPA	Illinois Environmental Protection Agency
ILCS	Illinois Compiled Statutes
Ill. Adm. Code	Illinois Administrative Code
mg/L	Milligrams per liter
MGD	Million gallons per day
NPDES	National Pollutant Discharge Elimination System
pH	A measure of acidity or alkalinity of a solution
TDS	Total dissolved solids
TMDL	Total maximum daily load
TSS	Total suspended solids
303(d)	Section of federal Clean Water Act dealing with surface water quality standards.
7Q10	Lowest continuous seven-day flow during a 10-year period

DISTRIBUTION OF RESPONSIVENESS SUMMARY

An announcement, that the NPDES permit decision and accompanying responsiveness summary is available on the Illinois EPA website, is being mailed or e-mailed to all who registered at the hearing and to all who sent in written comments. Printed copies of this responsiveness summary are available from Barb Lieberoff, Illinois EPA, 217-524-3038, e-mail: Barb.Lieberoff@illinois.gov.

WHO CAN ANSWER YOUR QUESTIONS

Illinois EPA NPDES Permit:

Illinois EPA NPDES technical decisions:	Jaime Rabins	217-782-0610
Legal questions	Sara Terranova	217-782-5544
Water quality issues	Scott Twait	217-782-3362
Groundwater Issues	Lynn Dunaway	217-785-2762
Public hearing of July 31, 2013	Dean Studer	217-558-8280

The public hearing notice, the hearing transcript, the NPDES permit and the responsiveness summary are available on the Illinois EPA website (please copy this website into your browser):

http://www.epa.illinois.gov/public-notices/2013/npdes-notices/index#midwest-generation-waukegan

CERTIFICATE OF SERVICE

I, the undersigned, certify that I have served the attached the *Petition for Administrative Review of an NPDES Permit Issued by the Illinois Environmental Protection Agency*, by US Postal Service by First Class Mail, postage prepaid, upon the following persons:

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