

ILLINOIS POLLUTION CONTROL BOARD
August 10, 2020

MIDWEST GENERATION, LLC,)	
)	
Petitioner,)	
)	
v.)	PCB 20-38
)	PCB 20-39
ILLINOIS ENVIRONMENTAL)	(Thermal Demonstration)
PROTECTION AGENCY,)	(Consolidated)
)	
Respondent.)	

HEARING OFFICER ORDER

In an order on February 6, 2020, the Board found that Midwest Generation, LLC (MG) had provided timely and sufficient notice of its two petitions for alternative thermal effluent limitations. On its own motion, the Board consolidated the two proceedings for hearing.

The Board noted that it had not received a request to hold a hearing and had not determined whether it would hold one. The Board stated that it may submit questions to MG through a Board or hearing officer order.

To assist the Board in its consideration of the consolidated petitions, MG is directed to file written responses to the questions in the attachment to this order within 30 days, on or before Wednesday, September 9, 2020. Any motion for an extension of that deadline may be directed to the hearing officer. *See* 35 Ill. Adm. Code 101.522.

IT IS SO ORDERED.

Bradley P. Halloran, Hearing Officer
Illinois Pollution Control Board
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PCB 20-38, 20-39: Midwest Generation, LLC v. IEPA
Attachment to Hearing Officer Order of August 6, 2020

Questions for Midwest Generation (MG) and IEPA

1. The petitions state that “[t]he estimated retirement date for Joliet 9 is 2030.” Pet. at 10. Does MG plan to replace it with an additional unit at that time? See 35 Ill. Adm. Code 1130(a)(6).
2. The petitions state that discharge temperatures from Joliet Station 9 in the summer months are as high as 98.1°F. Pet. at 12. However, the Proposed Near Field limit for July and August is only 93°F. Please comment on how often MG expects discharge temperatures above this Proposed Near Field Limit and the availability of excursion hours.
3. Also for Joliet 9, the proposed December and March far-field temperature limit is 65°F and near-field temperature limit is 70°F, but the petition notes that the discharge temperature has reached 80.8°F. Pet. at 13. Please comment on how often MG expects discharge temperatures above the proposed limits and the availability of excursion hours.
4. The petitions state that, “[a]t ambient temperatures exceeding 45 °F, cold shock typically does not occur, regardless of the magnitude of the change.” Pet. at 29. The demonstration adds that, “if the Joliet Stations were to suddenly cease discharging, the expected drop in ambient temperatures is not expected to fall significantly below the 45°F threshold where cold shock could result in adverse impacts.” Demonstration at 5-5. However, the petitions note that, “[i]n the case of Joliet Stations, mean winter ambient temperatures are normally between 40.6°F to 48.1°F.” Pet. at 29. Please comment on how often the winter water temperature dips below 45°F. What temperature drop below 45°F would be considered significant to cause cold shock?
5. The petitions state that, “[a]s of the filing of this Petition, U.S. EPA has not yet provided any comments or questions on the Demonstration Report.” Pet. at 6. Since MG filed the petitions on December 30, 2019, has USEPA provided MG with a response? If so, please submit any written response into the record.
6. In Appendix A, Figure A-4b, both tables are listed as “Mean Monthly Intake Temperatures 2012-2018”. As in Figure A-4a, is the lower table intended to be “Maximum Monthly Intake Temperatures 2012-2018?”

USEPA Interagency 316(a) Technical Guidance Manual 3.3.5 Fish

7. The Demonstration notes that catches of Pallid Shiner, a state-endangered species in Illinois, were highest in 2003 and 2004 but catches have since declined because expansion of aquatic macrophytes has reduced sampling efficiency in the Five-Mile Stretch. Demonstration at 4-9. Please comment in detail on how sampling efficiency has been affected by aquatic macrophytes.

Also, please summarize the sampling data to show whether the numbers for Pallid Shiner show an upward or downward trend since it was first caught in the study area.

The Demonstration notes that there is a strong indication that “the Banded Killifish found in non-preferred habitats in the CSSC, LDPR, and elsewhere in northern Illinois are actually the invasive subspecies, “Eastern Banded Killifish,” and not the state-threatened “Western Banded Killifish.” Demonstration at 4-9.

8. Please comment on whether the rationale changes if the suspected State-listed Western Banded Killifish turns out to be the invasive Eastern Banded Killifish.
9. Has IDNR provided any additional information on distinguishing between the two Banded Killifish species?
10. Regarding the increasing numbers of the State-Listed Banded Killifish, please comment on whether MG would be adverse to additional surveillance of their numbers in the study area if the Board grants an alternative standard?
11. At page 2 of the Petitions, footnote 2 states that, “although the Board’s regulations assign different Designated Uses to the UDIP and Five-Mile Stretch, there is little meaningful ecological difference between these adjacent waterbodies.” At page B-1 of Appendix B, footnote 1 states that “there is a common BIC for both the UDIP and the Five-Mile Stretch.” Are these statements correct, and does MG’s Demonstration appropriately address a single biological community inhabiting both portions and a common BIC? *See* Pet. at 2.
12. At page 21 of the Petitions, the “Proposed UDIP Thermal AELs” do not appear to be entirely consistent with the “Proposed Near-Field AELs for Joliet Stations 9 and 29” at page 32. Please clarify whether the proposed Near-Field AELs on page 32 are the correct limits consistent with the proposed ATELs in MG’s Demonstration at page 3-12.

Proposed ATEL Language

13. The petitions state that the proposed “near-field thermal alternative effluent limits for the Joliet Stations are effective at the edge of each Station’s respective 26-acre mixing zone, as determined for compliance monitoring purposes through the continued use of the Joliet Stations’ Near-Field Models under the terms of their respective NPDES Permits.” Pet. at 32. Please clarify whether the far-field alternative thermal limits apply at the I-55 Bridge. If so, please comment on whether MG will rely on models to determine compliance with the far-field limits. Also, please comment on whether the proposed condition (3) in the ATEL language proposed below adequately addresses compliance with the ATEL.
14. MG proposed language for the Joliet Stations’ ATEL. Pet. at 31-33. MG also provided clarification regarding IEPA’s recommended conditions. *See* Pet. Resp. at 2-6, Exh. A. IEPA accepted MG’s clarifying language pertaining to excursion hours, the use of

cooling towers, and the thermal loading limitation concerning relief to downstream dischargers. IEPA Rep. at 4. Please comment on revisions below for the proposed ATEL, which are based on the Board's order in PCB 18-58 and reflect IEPA's recommendations except for the condition concerning downstream dischargers.

Under 35 Ill. Adm. Code 106.Subpart K and 35 Ill. Adm. Code 304.141(c), the Board orders that the following alternative thermal effluent limitations apply to the discharges to the Upper Dresden Island Pool (UDIP) from Midwest Generation, LLC's (Midwest Generation) Joliet Generating Stations 9 and 29.

1. Temperature

- a. Instead of thermal effluent limitations based on the General Use thermal water quality standards contained in 35 Ill. Adm. Code 302.211 and the Upper Dresden Island Pool (UDIP) Use thermal water quality standards provisions contained in 35 Ill. Adm. Code 302.408 (c)-(f), and (i), the following daily maximum temperature effluent limitations apply to Joliet Stations 9 and 29:

Month	Daily Maximum Near- Field (UDIP) (°F)	Daily Maximum Far- Field (Five-Mile Stretch) (°F)
January	65	60
February	65	60
March	70	65
April	80	73
May	85	85
June	93	90
July	93	91
August	93	91
September	93	90
October	90	85
November	85	75
December	70	65

- b. Instead of the water temperature requirements of 35 Ill. Adm. Code 302.408(c), (d), (e), (f) and (i) applicable to UDIP, effluent temperatures must not exceed the near-field daily maximum temperature limitations in paragraph (1)(a) during more than 5% of the hours (438 hours) in a calendar year. Moreover, the effluent temperature must never exceed the daily maximum near-field temperature limitations in paragraph (1)(a) by more than 3°F.

- c. Instead of the water temperature requirements of 35 Ill. Adm. Code 302.211 applicable to the Five-Mile Stretch, effluent temperatures must not exceed the daily maximum far-field temperature limitations in paragraph (1)(a) during more than 2% of the hours (175 hours) in a calendar year. Moreover, the effluent temperature must never exceed the daily maximum far-field temperature limitations in paragraph (1)(a) by more than 3°F.
 - c. The alternative near-field thermal effluent limitations in paragraphs (1)(a) apply at the edge of the 26-acre mixing zone allowed in each of the Joliet Generating Stations' National Pollutant Discharge Elimination System (NPDES) permits.
 - d. The alternative far-field thermal effluent limitations in paragraph (1)(a) apply at the I-55 Bridge (River Mile 277.9). For purposes of this order, the "Five-Mile Stretch" is the segment of the Lower Des Plaines River starting from the I-55 Bridge (River Mile 277.9) to the Illinois River (River Mile 273.0).
2. Midwest Generation will continue to operate its Joliet 29 Generating Station Cooling Towers to minimize the use of excursion hours when possible.
 3. Compliance. Midwest Generation must demonstrate compliance with paragraph (1) by modeling that is approved by the Illinois Environmental Protection Agency (IEPA) as a condition of the Joliet Stations' NPDES permit.
 4. NPDES Permit. IEPA must expeditiously modify Midwest Generation, LLC's NPDES permits for the Joliet Generating Stations to make the permits consistent with this opinion and order.

Question for the Agency

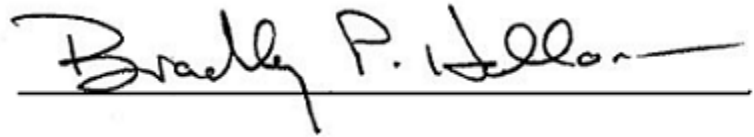
15. IEPA recommends that the Board condition MG's ATEL to address regulatory relief for the downstream dischargers rather than requiring separate Subpart K petitions. IEPA believes that separate petitions would result in the unnecessary use of both Board and IEPA resources. IEPA Resp. at 4. Please comment on whether extending relief to other downstream thermal dischargers is allowed under 35 Ill. Adm. Code 106, Subpart K when the dischargers have not filed petitions seeking alternative effluent limitations. If so, provide specific language addressing downstream dischargers for the Board to consider.

CERTIFICATE OF SERVICE

It is hereby certified that true copies of the foregoing order were e-mailed, on August 10, 2020, to each of the persons on the service list below.

It is hereby certified that a true copy of the foregoing order was e-mailed to the following on August 10, 2020:

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