



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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 CHICAGO, IL 60604-3590

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 Pollution Control Board

OCT 06 2011

REPLY TO THE ATTENTION OF
 WN-16J

PCB0664

Marcia T. Willhite
 Chief, Bureau of Water
 Illinois Environmental Protection Agency
 Post Office Box 19276
 Springfield, Illinois 62794-9276

Re: Ameren Coffeen Power Station NPDES Permit No. IL0000108

Dear Ms. Willhite:

We have reviewed the information submitted to the U.S. Environmental Protection Agency pursuant to 40 C.F.R. §123.44(d)(2) for the proposed permit modification for the Coffeen Power Station. The studies available for Coffeen Lake provide a comprehensive analysis of the biological community and the impacts from the Coffeen Power Station. However, we have significant concerns regarding the process for granting thermal relief by the Illinois Pollution Control Board (IPCB) and Illinois Environmental Protection Agency (Illinois EPA). An enclosure to this letter provides specific details and recommends actions to resolve our concerns. The current permit expires in January 2013 and we encourage Illinois EPA, the IPCB and Ameren to address these issues prior to the reissuance of the permit. We do not, however, believe it is necessary to object to the permit modification at this time. If any clarification from EPA is necessary, do not hesitate to contact us for assistance.

Based on our review of the available information, EPA will not object to the permit modification as drafted.

If you have any questions, please contact Sean Ramach at (312) 886-5284.

Sincerely,

Tinka G. Hyde
 Director, Water Division

cc: Mr. G. Tanner Girard
 Acting Chairman, Illinois Pollution Control Board

Mr. John Pozzo
 Supervising Engineer, Ameren Energy

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Summary of EPA's Review of the Ameren Coffeen Power Station Thermal Relief Demonstration

EPA has identified the following issues that should be clarified prior to the permit's expiration date in January 2013 in order to ensure that when the permit is reissued, it is consistent with the Clean Water Act (CWA).

- 1) CWA § 316(a) allows for alternative effluent limitations to effluent limitations based on water quality standards developed for the permit when it is demonstrated that the protection and propagation of shellfish, fish and wildlife in and on the waterbody is assured. The Illinois Administrative Code (IAC) at 35 IAC § 304.141(c) authorizes the implementation of CWA § 316(a) alternative effluent limitations in National Pollutant Discharge Elimination System (NPDES) permits. Illinois Environmental Protection Agency (IEPA) has indicated that the relief granted by the Illinois Pollution Control Board (IPCB) to the Ameren Coffeen Power Station is a CWA § 316(a) alternative limitation. However, the IAC provision referenced in granting the relief is 35 IAC § 302.211(j), which provides for alternate thermal standards for artificial cooling lakes. In its March 18, 2010 opinion and order, the IPCB indicates that this regulation is consistent with CWA § 316(a), but as discussed below, this regulation does not appear to authorize thermal relief consistent with CWA § 316(a).
 - a) 35 IAC § 302.211(j) was established in 1975. Rulemaking development by the IPCB is described in Water Quality and Effluent Standards Amendments, Cooling Lakes, R75-2, (Sept. 29, 1975). A number of excerpts from that document, as provided below, indicate that 35 IAC § 302.211(j) was not meant to be an authorizing regulation for a CWA § 316(a) variance. As stated by the IPCB:

the word "alternate" was changed to reflect the difference between the specific thermal standards to be set under this Regulation, and an alternate thermal standard to be set pursuant to §316(a) of the FWPCA. *Slip op. at 42.*

(On July 31, 1975, the Board did grant a two year Variance of "specific standards" for Lake Clinton.) While this was intended by the Agency to eliminate unnecessary duplication of effort by Illinois Power, the Board felt that the statutory requirements for Variances and those for regulatory amendments were not sufficiently similar to allow this as a "grandfather" vehicle. It was questionable whether, 1) the public hearing requirements for a Regulation could properly be fulfilled by the Variance hearings, and 2) because a Variance is designed to grant temporary relief from the general rules, and is conditioned on efforts to achieve compliance with those general rules, it was not clear that temporary approval of a thermal effluent under those conditions would be legally sufficient to justify the permanent imposition of the same standard. *Slip op. at 42*

- b) Additionally, in the variance proceeding Illinois Power Company v. EPA, PCB 75-31, the Board stated:

First, Illinois Power shall, and has, participated in a pending regulatory proceeding before the Board which would, if successful, provide a means by which it could obtain the equivalent of a permanent variance, which is presently unobtainable. In the Matter of Cooling Lakes, R75-2. Should that Regulatory Proposal, or the alternatives suggested by IEPA, be adopted by the Board, Illinois Power could be granted a specific thermal effluent limitation; such a specific limitation would provide permanent relief (subject, of course, to future Board actions, such as those provided for under Ch. 3, Rule 203(i) (5)), by granting a thermal standard exceeding the generally applicable one of Rule 203 (i). Second, the Board would hope that federal approval of the Board's NPDES regulations is imminent. Such approval would cause Rule 410(c) of the Water Pollution Regulations to provide for just such specific, long-term relief as Illinois Power would require. Rule 410(c), by adopting the federal standard under Sec. 316(a) of the FWPCA, provides for the adoption by the Board of an alternate thermal standard such as is requested by Illinois Power." *Slip op. at 14.*

A 316(a) alternate thermal limitation is a variance and not a permanent limitation. The alternate limitation is renewed with the reissuance of each NPDES permit based upon additional studies reflecting actual operating experience as required by the permitting authority. These excerpts clearly indicate that the IPCB did not consider 35 IAC § 302.211(j) to be the equivalent of 316(a). Relief granted under 35 IAC § 302.211(j) is intended to be permanent, consistent with an adjustment to water quality standards. It is also clear that the thermal standard under 35 IAC § 302.211(j) is applicable to the artificial cooling lake, not the specific discharger into that artificial cooling lake. Even presuming that an artificial cooling lake would typically only have one authorized discharger, it is clear that the standards are intended to be set for the artificial cooling lake, not the discharger specifically (See discussion of standards for Lake Clinton and Sangchris in R75-2, slip op. at pp25-35).

- c) In its March 18, 2010 opinion and order, the IPCB indicates that Ameren asserts as a basis for seeking relief that compliance with the existing standards is technically infeasible or unreasonably cost-prohibitive. While the petition and order also address the environmental impacts of the discharge, the federal statute and regulation do not allow consideration of technical or economic factors in making a Clean Water Act § 316(a) determination. While there is nothing to preclude the state from requiring such a demonstration in addition to the Clean Water Act § 316(a) demonstration, it should be made clear that economic and technical considerations are not relevant to the Clean Water Act 316(a) determination, which is limited to the factors set out in the CWA and its implementing regulations.

- d) The March 18, 2010 order on page 7 in foot note 9 states:

Section 316(a) of the CWA and 40 CFR 125 Subpart H address alternate thermal limitations in terms of effluent standards. Although the Board's rule for ACL demonstrations provides for the use of a Section 316(a) showing, *the demonstration required under the Board's Section 302.211(j)(3) is for water quality standards that apply at the outside edge of the mixing zone in the artificial cooling lake and not as effluent limits* (emphasis added).

This footnote indicates that the demonstration under 35 IAC § 302.211(j) is for water quality standards, not effluent limitations. This raises uncertainty as to whether the relief provided under this provision is granted under § 316(a). Additionally, if the water quality standard is what is being modified, then the variance or site specific criterion must be submitted to EPA for approval before effluent limitations may be included in a permit based upon the variance or criterion.

Based on this information, EPA recommends that IEPA and the IPCB determine whether 35 IAC § 302.211(j) does in fact authorize Clean Water Act § 316(a) alternate effluent limitations, in addition to 35 IAC § 304.141(c), or if it is instead a procedure to modify water quality standards for a receiving water body. If it is the latter, changes to water quality standards require approval by EPA before effluent limitations based on the variance or site specific criterion can be included in NPDES permits. EPA is aware that there are numerous artificial cooling lakes in Illinois, and understands that any decision will have impacts beyond this specific permit issuance.

- 2) In reviewing the biological studies submitted to support the request for alternative limitations, EPA has concerns regarding potential adverse impacts to lower trophic levels due to the proposed alternate limitations. The current Representative and Important Species (RIS) list only addresses higher trophic level organisms. While the biological reports did a sufficient job in demonstrating that past thermal discharges did not appear to have an adverse impact on the entire community, EPA remains concerned that the increase in temperature may cause impacts to the forage species due to 1) potential change in spawning behavior due to change in the thermal regime and 2) increased predation at significant life stages due to earlier spawning and increased growth by the top predators and forage species due to the change in temperature regime. The biological reports indicate a potential trend of decreasing biomass in the RIS species. However, the demonstration submitted with the permit modification request did not provide any information or prediction regarding impact to the lower trophic levels. The demonstration only indicated that the RIS species would not be harmed from the temperature changes in May and October.

EPA believes that such analysis is necessary to demonstrate that a balanced and indigenous community, not just those species that are important from a recreational use aspect, is being protected and propagated in compliance with the CWA.

- 3) When a discharger submits a permit application for the reissuance of its NPDES permit, 40 C.F. R. §122.21(m) requires that a request for a CWA § 316(a) variance must be filed as well. 40 C.F.R. §125.72 states that only such information as the Director requests must be submitted with that request, but that the permittee should be prepared with studies to support the continuation of the variance. We have expressed reservations that the thermal relief granted under 35 IAC § 302.211(j) is in accordance with CWA § 316(a). It is also not clear that the Board has reviewed and approved the 316(a) variance at each permit reissuance as would be required by federal regulations, if the relief is indeed authorized under Section 316(a). This obligation is applicable to any 316(a) alternate limitation included in any NPDES permit.

- 4) Additionally, we note that a “provisional variance” was granted to the permittee on October 24, 2007 by IEPA for a 45 day period. Based on our review of the statutes authorizing this relief, as well as the rationale set out in support of the relief, we believe that the “provisional variance” was a change to water quality standards. We have no record of this “provisional variance” being submitted to EPA for review nor are we aware of any public notice or modification of the NPDES permit to allow implementation of this relief. We ask that you clarify this process and under what authorities the relief is granted in order to ensure that this practice is consistent with the Clean Water Act, and that appropriate EPA approval and public notice is conducted.

