

# EXHIBIT 2

Quad Cities Nuclear Station

10/6/2011 USEPA Letter to IEPA  
(Willhite) re Ameren Coffeen Power  
Station NPDES Permit



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

RECEIVED  
CLERK'S OFFICE

OCT 19 2011

STATE OF ILLINOIS  
Pollution Control Board

OCT 06 2011

REPLY TO THE ATTENTION OF  
WN-16J

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

PCB06-64

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

73970

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.

# EXHIBIT 4

Quad Cities Nuclear Station

Exelon HCP Permit



# FEDERAL FISH AND WILDLIFE PERMIT

1. PERMITTEE

EXELON GENERATION COMPANY, LLC  
dba EXELON  
22710 206TH AVE. N  
CORDOVA, IL 61242  
U.S.A.

2. AUTHORITY-STATUTES  
16 USC 1539(a)

REGULATIONS  
50 CFR 17.22

50 CFR 13

3. NUMBER  
**TE17852A-0**

4. RENEWABLE  
 YES  
 NO

5. MAY COPY  
 YES  
 NO

6. EFFECTIVE  
08/16/2010

7. EXPIRES  
08/15/2034

8. NAME AND TITLE OF PRINCIPAL OFFICER (If #1 is a business)  
TIMOTHY J TULON  
SITE VICE PRESIDENT

9. TYPE OF PERMIT  
NATIVE ENDANGERED SP. HABITAT CONSERVATION PLAN - E  
WILDLIFE

10. LOCATION WHERE AUTHORIZED ACTIVITY MAY BE CONDUCTED

Quad Cities Nuclear Station, Mississippi River Mile 506.8L

11. CONDITIONS AND AUTHORIZATIONS:

A. GENERAL CONDITIONS SET OUT IN SUBPART D OF 50 CFR 13, AND SPECIFIC CONDITIONS CONTAINED IN FEDERAL REGULATIONS CITED IN BLOCK #2 ABOVE, ARE HEREBY MADE A PART OF THIS PERMIT. ALL ACTIVITIES AUTHORIZED HEREIN MUST BE CARRIED OUT IN ACCORD WITH AND FOR THE PURPOSES DESCRIBED IN THE APPLICATION SUBMITTED. CONTINUED VALIDITY, OR RENEWAL, OF THIS PERMIT IS SUBJECT TO COMPLETE AND TIMELY COMPLIANCE WITH ALL APPLICABLE CONDITIONS, INCLUDING THE FILING OF ALL REQUIRED INFORMATION AND REPORTS.

B. THE VALIDITY OF THIS PERMIT IS ALSO CONDITIONED UPON STRICT OBSERVANCE OF ALL APPLICABLE FOREIGN, STATE, LOCAL OR OTHER FEDERAL LAW.

C. VALID FOR USE BY PERMITTEE NAMED ABOVE.

D. ACCEPTANCE OF THIS PERMIT SERVES AS EVIDENCE THAT THE PERMITTEE AND AUTHORIZED AGENTS UNDERSTAND AND AGREE TO ABIDE BY THE TERMS OF THIS PERMIT AND ALL SECTIONS OF TITLE 50 CODE OF FEDERAL REGULATIONS, PARTS 13 AND 17, PERTINENT TO ISSUED PERMITS. SECTION 11 OF THE ENDANGERED SPECIES ACT OF 1973, AS AMENDED, PROVIDES FOR CIVIL AND CRIMINAL PENALTIES FOR FAILURE TO COMPLY WITH PERMIT CONIDITIONS.

E. Incidental Take

E.1. This Incidental Take Permit (ITP) authorizes intentional take of two mussel species: *Lampsilis higginsii* (Higgins eye pearl mussel), which was federally listed as endangered on June 14, 1976 (41 FR 24064) and *Plethobasus cyphus* (sheepnose mussel), a candidate for Federal listing, resulting from potential impacts of three activities that are described in detail in the Quad Cities Nuclear Station (QCNS) Habitat Conservation Plan (HCP) to include: (1) implementation of an alternate thermal standard, (2) periodic maintenance dredging in front of the intake forebay, and (3) removal of an Edison Pier, located just upstream of the QCNS river screen house.

E.2. This ITP shall become effective on the date that the Illinois Pollution Control Board (IPCB) order would grant the adjusted thermal standard for QCNS. This ITP Permit does not authorize alternate thermal standards for QCNS. Alternate thermal standards (ATS) will be implemented following proceedings before the Illinois Pollution Control Board pursuant to the Board's

ADDITIONAL CONDITIONS AND AUTHORIZATIONS ALSO APPLY

12. REPORTING REQUIREMENTS

ANNUAL REPORT DUE: 03/31

ISSUED BY

TITLE  
FIELD SUPERVISOR

DATE  
08/16/2010



authority to issue alternate thermal standards under Section 316 of the Clean Water Act. Following the Board's decision to grant approval of alternate thermal standards for QCNS, the Illinois Environmental Protection Agency (IEPA) would incorporate the revised standards in the QCNS N.P.D.E.S Permit and QCNS would be subject to any changes or restrictions that IEPA sets forth.

- E.3. This ITP shall remain in effect for 24 years or until an earlier time as provided in the Implementing Agreement.
- E.4. The actions planned as part of the HCP will be carried out such that they will be supportive of, and do not conflict in any way with, planned actions described in the Higgins Eye Pearlymussel Recovery Plan (2004).
- E.5. The authorization granted by this ITP is subject to full and complete compliance with, and implementation of, the Habitat Conservation Plan and Implementation Agreement, executed between the Permittee and U.S. Fish and Wildlife Service.
- E.6. The avoidance and minimization measures, with their implementing terms and conditions, are designed to avoid and minimize the impact of incidental take that might otherwise result from the proposed action. If, during the course of the action, the predicted level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. The Permittee must immediately provide an explanation to the Service's Rock Island Field Office regarding the causes of the taking and the need for possible modification of the reasonable and prudent measures.
- E.7. Amendments to the Incidental Take Permit will not extend its total duration, which is set at 24 years. The ITP expires if the Station discontinues open-cycle operation, which is the principle reason for the HCP. In the event that affected mussels are delisted, the HCP mitigation will be terminated.

#### F. Mitigation

- F.1. QCNS will establish a fund through the National Fish and Wildlife Foundation (NFWF) that will be used for implementation of the HCP and funding projects that satisfies QCNS minimization and mitigation obligations in concert with those activities that will occur at the QCNS fish hatchery. These may include any of the activities listed in Chapter 5 of the HCP or additional projects or activities carried out by QCNS, universities, or agencies that further the recovery of these species as deemed appropriate by the FWS and QCNS. The fund will be created by and maintained through contributions by QCNS. During years when propagation activities are reduced, any funds remaining from the \$15,000 annual mitigation budget will be added to an initial \$15,000 donation by QCNS to the National Fish and Wildlife Foundation. A minimum of \$15,000 will be maintained in the NFWF fund to ensure adequate funding for the following year. Research partnerships with local and/or state colleges and universities will be formed and at a minimum, one graduate student will be sponsored every five years (starting year five to allow for protocol establishment, etc.) using funding from the National Fish and Wildlife Foundation grant money or directly sponsored by QCNS. By the end of the HCP (24 years hence) all monies set aside at the National Fish and Wildlife Foundation will be fully expended on research/projects related to recovery and/or temperature effects on listed and rare mussel fauna.
- F.2. Exelon Corporation will fund all minimization and mitigation measures, including monitoring, associated with this HCP. This work is in addition to programs already conducted at the site. Fish monitoring programs associated with the QCNS are already funded because of the Long-term Monitoring program. This monitoring is mandated as part of the NPDES permit and the open-cycle agreement.
- F.3. The QCNS Biological Steering Committee, and the USFWS will provide oversight of the HCP activities by reviewing the results of ongoing fishery and mussel monitoring and recommending changes to the following year's program, if necessary. The QCNS Biological Steering Committee is composed of the members of the QCNS Long-term Monitoring Program Steering Committee as well as additional experts, both government and non-government. The Long-Term Fisheries Monitoring Program and the game-fish rearing program are overviewed at the QCNS Biological Steering Committee meeting, which meets in March of each year. The meeting allows those agencies with jurisdiction in the QCNS area to gather and review the long-term monitoring programs. Because of the framework already established with these programs, a session will now be added to review those activities associated with the HCP. Additional members will be added to the Quad Cities Station Steering Committee to include those who are knowledgeable with the mussel monitoring and propagation activities.
- F.4. Pursuant to its no surprises policy, the USFWS will not require the Exelon Corporation to mitigate unforeseen circumstances as stated in the HCP by establishing and sustaining baseline responsibilities beyond the scope of this plan. Exelon may, however, work with the agencies to mitigate additional circumstances at their own discretion.

#### G. Mussel Monitoring

- G.1. The mussel bed monitoring program described in the HCP will be triggered when any of the following conditions occur: (1) QCNS uses excursion hours in excess of 1% (87.6 hours which is the limit of formerly permitted hours), mussel bed monitoring

in the Upstream, Steamboat Slough and Cordova mussel beds will be conducted in that year, (2) QCNS Biological Steering Committee or USFWS deems it necessary to monitor the mussel beds due to a plant incident and concern for the Essential Habitat and (3) if 4 years have lapsed since the last monitoring effort.

G.2. A mussel bed monitoring program will be developed and implemented to evaluate ATS effects on covered species population levels and habitat conditions, including temperature-induced effects and long-term viability of augmented and reintroduced Higgins eye, sheepsnose and other rare mussel populations. Monitoring will include a temperature monitoring program at established Upstream, Steamboat Slough and Cordova mussel beds such that substrate, mid-depth and near-surface water temperatures will be measured. Mussel bed temperature monitoring will be conducted annually for the first 2 or more years to establish a baseline relationship between temperatures at the various beds and water temperatures at the continuous monitoring sites. Once the baseline is established, in situ temperature monitoring at the beds will be conducted during excursion periods, at a minimum.

#### H. HCP Monitoring, Reporting and Adaptive Management

H.1. The Endangered Species Act (ESA), under Section 10 regulations, requires that an HCP specify measures that will be taken to monitor the impacts of take resulting from project actions (50 CFR 17.22(b)(1)(iii)(B) and 50 CFR 222.22(b)(5)(iii)). Monitoring for the QCNS HCP will focus on three primary objectives referred to as (1) implementation monitoring, (2) effectiveness monitoring and (3) validation monitoring. As noted in the Implementing Agreement and the HCP, QCNS will file an annual report by March 31 of each year that provides the results of implementation, effectiveness and compliance monitoring. The report will include information on the following areas: (1) Number and type of covered activities completed for the calendar year, (2) Minimization and mitigation implemented (frequency and type), (3) Presumptive take, (4) Calculations of the amount that QCNS must either contribute to the mitigation fund or provide in mitigation, (5) Temperature monitoring report, (6) Summary of the status of HCP biological goals and objectives, (7) Documentation of compliance with the previous year's compensation requirements (funding and project implementation, if appropriate), including a discussion of mitigation (details about the nature of the project, who is implementing it, the amount of QCNS funds provided, status of the project, what take it is compensating for, and the timeframe for the project) and (8) Process for convening periodic meetings.

H.2. The QCNS HCP will be implemented using an adaptive management approach, thereby allowing the QCNS to evaluate and modify conservation measures to ensure the continued achievement of the HCP's biological goals and objectives. Recommendations on implementing changes to the HCP's operating conservation program will be made by various people and/or institutional bodies, depending on the implications of the change. The following process will be used: (1) Agencies and/or stakeholders should contact the Exelon Fish Biologist with any proposed change. It is assumed that the Exelon fish biologist, in coordination with the USFWS, will evaluate all potential changes. (2) Exelon Fish Biologist will consult with the USFWS to determine the viability, relevance and potential ramifications of the proposed change. If the USFWS deems the change is in compliance with the rules and obligations of the HCP, the Exelon Fish Biologist will then distribute the proposed changes to the Steering Committee members prior to the annual spring meetings to allow time for feedback preparation, if possible. Members of the Mississippi River Mussel Coordination Team will also be contacted as appropriate. (3) If no objections to the change are found, a letter outlining the changes will be drafted and sent to all agencies with jurisdiction in the applicable areas. These additional steps are included to strengthen the multi-agency transparent approach of this program and minimize confusion. (4) In the event that the change needs to be made in a timely manner that will not allow the issue to be brought up at the spring meeting, the Exelon Fish Biologist will verbally contact those Agencies that have jurisdiction or interest in the program. (5) Should the USFWS determine the proposed action is not in compliance with the intent and obligations of the HCP and its associated incidental take permit, the proposal will be dismissed.

H.3. Take will be monitored by an ongoing mussel monitoring program that began in 2004. QCNS is required by this ITP to continue the mussel monitoring program to monitor mussel take. If a negative deviation from the trends of parameters measured in the long-term mussel monitoring program is determined, then an additional year of monitoring will be conducted to verify if there is a developing negative trend. If consecutive negative data points are observed and the take is associated with the ATS, then the HCP consultation and its permit conditions will be reopened and measures will be taken to avoid take in excess of natural variation and permit conditions.

cc: FWS/Region 3 (AES/TE)  
IL DNR

END