

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:)	
)	
AMEREN ASH POND CLOSURE RULES)	R09-021
(HUTSONVILLE POWER STATION))	(Rulemaking— Land)
PROPOSED: 35 Ill. Adm. Code 840.101)	
Through 840.144)	

NOTICE OF FILING

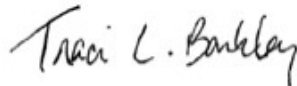
To: John Therriault, Clerk
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Chicago, IL 60601

Tim Fox, Hearing Officer
Illinois Pollution Control Board
James R. Thompson Center
100 W. Randolph, Suite 11-500
Chicago, Illinois 60601

Persons included on the
ATTACHED SERVICE LIST

PLEASE TAKE NOTICE that I have electronically filed today with the Office of the Clerk of the Pollution Control Board the attached **Comments Opposing Proposed Regulations for the Closure of Ash Pond at Ameren Energy Generating Company's Hutsonville Power Station in R09-021**, a copy of which is herewith served upon you.

Respectfully Submitted,



Traci L. Barkley
Water Resources Scientist
Prairie Rivers Network
1902 Fox Drive, Suite G
Champaign, Illinois 61820
(217) 344-2371

Date: October 30th, 2009

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**PRAIRIE RIVERS NETWORK'S COMMENTS OPPOSING PROPOSED
REGULATIONS FOR THE CLOSURE OF ASH POND AT AMEREN ENERGY
GENERATING COMPANY'S HUTSONVILLE POWER STATION**

Dear Illinois Pollution Control Board:

Prairie Rivers Network (PRN) hereby submits these comments in opposition to R2009-021: Ameren Energy Generating Company's Petition for proposed regulations for the closure of Ash Pond D at their Hutsonville Power Station in Crawford County, Illinois. Prairie Rivers Network is the state affiliate of National Wildlife Federation, a non-profit organization that strives to protect the rivers, streams and lakes of Illinois and to promote the lasting health and beauty of watershed communities. Much of our work focuses on how policies such as the Clean Water Act and Safe Drinking Water Act are used in Illinois - laws intended to protect our waters, our environment, and, ultimately, our health.

PRN opposes the Petition for the following reasons:

**A) Petitioner Has Failed to Meet its Burdens Under the Illinois Administrative Code
Regarding Description of Affected Areas, Assessment of Environmental Impacts and the
Technical And Economic Infeasibility of Complying with Existing Regulations**

The Illinois Administrative Procedure Act squarely places the burden on the party seeking a site-specific regulation to make various showings. According to the regulations, Ameren must 1.) describe the site for which regulatory change is sought and the area affected by the proposed change, 2.) provide a detailed assessment of the environmental impacts of the proposed change, and 3.) demonstrate that compliance with the existing regulations is not technically feasible or economically reasonable. *35 Ill. Adm. Code Section 102.202, 210*. As shown below, these burdens have not been met.

1) Petitioner has failed to describe the entire area affected by the proposed change

The proposed regulation and supporting documentation fail to adequately characterize the past, current and potential impacts of Ameren's groundwater contamination to the adjacent landowner, Mrs. Margaret R. DeMent. Mrs. Dement and her Farm Manager, Dwane Wampler own farmland to the south of the Hutsonville Power Station and actively farm the land to produce seed corn, soybeans, and wheat. Much of this land is irrigated with groundwater pumped from three onsite wells. In the meetings conducted between Ameren and Mrs. Dement and Mr. Wampler, at no time did Ameren offer to conduct a water quality assessment of the three actively pumped wells to determine whether they had been impacted by pollution from Ash Pond D or might impact the existing uses of these wells. Furthermore, Mrs. Dement allowed Ameren to install five groundwater monitoring wells on her property, though Ameren has never shared the sampling results with her. What did result from such discussions was a request by Ameren that Mrs. Dement and future owners of her property restrict their groundwater usage from the upper 25' feet of the water table, in perpetuity, through a contract made legal by the exchange of \$1. Without groundwater quality data specifically sampled from Mrs. Dement's onsite wells, it is difficult to say whether Mrs. Dement or Mr. Wampler should be concerned about using the groundwater to irrigate crops, both for direct impact to the plants and for potential bioaccumulation of metals in crops ultimately destined for consumption. Indeed, the recently released report from EPA entitled Steam Electric Power Generating Point Source Category: Final Detailed Study Report (EPA 821-R-09-008, October 2009) states The bioaccumulative properties of several coal combustion wastewater pollutants and long recovery times associated with many of the ecological impacts emphasize the potential threat these wastes present to the local environment. Research published in the scientific literature demonstrates that coal combustion wastewater is not a benign waste and further study if needed to fully understand how these chemically complex wastestreams interact with the environment (Rowe et al., 2002; NRC, 2006)

Information readily available from Mrs. Dement, her Farm Manager Dwane Wampler and groundwater monitoring wells installed by Ameren on their property do not seem to have been used in the effort conducted by Ameren (and reviewed by IEPA) in developing a groundwater cleanup plan and modeling potential scenarios. For instance, was the Petitioner aware that there is a groundwater well, actively pumped for irrigation, located within 50' of Ameren's property boundary? This well location is not recorded on any of the maps or tables detailing wells acknowledged and studied as part of Ameren's ten-year effort to develop the current petition. Was the Petitioner aware that the three wells actively used by Mrs. Dement and Mr. Wampler for irrigation, located approximately 50 feet, one-half mile and three-quarters of a mile from Ameren's property boundary are pumped at a rate of 1000 gallons per minute, on average, during the months of May through September every year? That is 1.4 million gallons per day- not far from the 1.9 million gallons per day that the pumps used in the groundwater trench will be pulling. If these two forces are opposing each other, and this information was not included in Ameren's models, one can assume that the 10 years (p. 13 of Chapter 8 of the TSD) estimated to retreat the pollution plume with take longer. This information does not appear to have been included in the assumptions and data input for the modeling of the design and operation of the groundwater collection trench to mitigate off-site impacts.

2) Petitioner has failed to include a detailed assessment of the environmental impacts of the proposed change

The proposed rule fails to recognize the potential risks to fish and wildlife populations as a result of the closure plan. Section 840.122 of the proposed regulations states “Groundwater collected in the groundwater collection trench must be directed to an outfall for which the Hutsonville Power Station has NPDES authorization or to another option as approved by the Agency in the closure plan or post-closure care plan.” Such ambiguity of the ultimate destination of contaminated groundwater does not meet the requirements of 35 Ill. Adm. Code 102.208(d). Additionally, neither the closure plan nor the post-closure care plan are open for public notice and comment and therefore do not allow potentially impacted parties to voice concern or share relevant information regarding environmental impacts

A thorough assessment of the final plans for the contaminated groundwater must be conducted and evaluated prior to adoption of this regulation by the Illinois Pollution Control Board. Discharge of contaminated ground water from the collection trench into surface waters poses an unnecessary risk to fish and wildlife populations in the river. Contamination from discharges of water from coal ash impoundments has been documented to result in deformities, reproductive failure, disruptions of the endocrine system and death in amphibians, fish, reptiles, and birds (Rowe et al., 2002). According to the US Environmental Protection Agency (EPA) “numerous vertebrate and invertebrate species have demonstrated a sensitivity to coal combustion wastewater” (US EPA, 2009). Many of the contaminants typically associated with coal ash such as arsenic, selenium, and lead are bioaccumulative so even relatively low concentrations of the metals can lead to significant impacts to the fish and wildlife populations. Neither the closure plan nor the existing NPDES permit (which does not monitor for any of the contaminants commonly associated with coal combustion wastes (CCW) except for boron) address potential impacts to fish and wildlife from the discharge of the contaminated ground water.

Selenium is of special concern. Selenium has a high bioaccumulation factor. As a result, impacts to fish and wildlife can result from selenium concentrations in the water as low as 2 ug/L (Lemly, 1993). The exact bioaccumulation factor of selenium can vary due to site specific factors. Sublethal impacts to fish and wildlife populations as a result of selenium contamination may be difficult to detect. Reproductive failure and lower survival rates will occur at selenium tissue concentrations much lower than those necessary to impact adults and lower food chain organisms (Lemly, 1993; Hamilton, 2004). As a result, adult predatory fish and birds may continue to feed and migrate in and out of the area even while the selenium contamination causes a drop in population due to reproductive failure. Some form of biological monitoring should be done in order to determine the actual threat posed by water discharged from the collection trench. Lemly (2005) provides a simple procedure for conducting an aquatic hazard assessment for selenium. The procedure would require sampling for selenium concentrations in the water, sediment, invertebrate tissues, fish eggs, and waterfowl eggs. If fish and waterfowl egg samples are difficult to obtain, the method does describe an alternative method for calculating risk based on tissue samples. The assessment can also be conducted with 4 of the 5 factors using an adjusted scale (Lemly, 2002).

3) Petitioner has failed to demonstrate that compliance with existing regulations is not technically feasible or economically reasonable.

Chapter 5 of the Technical Support Document evaluates closure alternatives that could effectively and efficiently meet the Petitioner's stated closure objectives including: 1) prevent off-site migration of impacted groundwater; 2) minimize infiltration of rain and snowmelt to the coal ash within Pond D; and 3) protect human health and the environment. The written evaluation identified and screened pond closure alternatives including site monitoring, use of a groundwater collection trench, containment using a low permeability vertical barrier, stabilizing the ash in the pond, ash removal and disposal, reconstruction of Pond D, final cover alternatives and surface water management alternatives. What was not identified as an alternative and screened for technical feasibility and economic reasonableness was treatment of the contaminated wastestream pumped and collected through the groundwater collection trench. Treatment of the contaminated water was never considered as evidenced on p. 3-3: "Extracted groundwater would be directly discharged to the interim pond (Pond B) for management and eventual discharge to the Wabash River via the existing NPDES permit."

In EPA's recent report (EPA 2009), EPA identified and investigated technologies for treating flue gas desulphurization and ash transport wastestreams, including settling ponds, chemical precipitation systems, biological treatment systems (anaerobic and aerobic), constructed wetlands, vapor-compression evaporation systems, and other technologies currently under investigation. With exception of the latter, each of these treatment technologies is currently in use at several power generating stations and serve to reduce the amount of pollution entering the environment, demonstrating they have been found to be both technically feasible and economically reasonable in those applications. As an alternative to discharging the contaminated wastewater pumped and collected from the groundwater collection trench to surface waters, the Petitioner must examine the applicability of these wastewater technologies to meet their burden.

Additionally, on page 5-15 of the EPA report, a common practice of dredging and moving ash from ponds is noted: "Alternatively, some plants periodically dredge the pond to remove the ash from the bottom of the pond and transfer the solids off-site for disposal or to an on-site landfill..." In their TSD, p.3-5, Ameren rejects this alternative, stating "The technical and economic feasibility of this is questionable... Consequently, this alternative was not considered due to its technical uncertainties and relatively high cost compared to other groundwater management alternatives that have similar or better effectiveness and less technical uncertainty." Considering that the Petitioner did not provide any cost estimates or an evaluation of its technical feasibility, the Petitioner has failed to adequately evaluate a closure alternative that could effectively and efficiently meet their stated closure objectives.

B) The Illinois Pollution Control Board Cannot Adopt Regulations that are Inconsistent With Federal Law

The Petition must demonstrate that the Board may grant the requested relief consistent with federal law governing the subject of the proposal, per 24 Ill. Adm. Code §102.210(e).

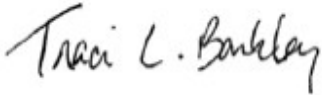
Petitioner is seeking new ash pond closure rules that will allow the discharge of contaminated groundwater into waters of the state. Both state and federal antidegradation laws require identification of increased pollutant loadings as well as a demonstration that any such discharges will be fully protective of existing uses. 40 C.F.R. 131.12; 35 Ill Adm. Code § 302.105 (c) In failing to fully identify where the contaminated groundwater will ultimately be discharged, Petitioners are attempting an end run around antidegradation requirements. Without prior identification of the point of discharge to waters of the state, it is impossible to determine what the existing uses are or whether those uses will be protected by the proposed discharges. The proposed regulation cannot be granted until Petitioners can show the full extent of those impacts by demonstrating where the discharges will occur and by providing a scientifically supported assurance that existing uses will be protected despite the increase in pollutant loading.

Federal law also prohibits a new discharge of pollutants to impaired water bodies where the discharge would cause or contribute to a violation of water quality standards. 40 C.F.R. § 122.4 (i). Again, Section 840.122 of the proposed regulations states “Groundwater collected in the groundwater collection trench must be directed to an outfall for which the Hutsonville Power Station has NPDES authorization or to another option as approved by the Agency in the closure plan or post-closure care plan.” We wish to preemptively address two potential options that could be considered by Ameren. In one scenario, Ameren could seek to direct the contaminated wastewater collected from the groundwater trench to an existing ash pond, Ash Pond B, which ultimately discharges to the Wabash River under NPDES permit IL00004120. Alternatively, Ameren could seek approval to send the wastestream directly to the Wabash River. The wastestream would contain pollutants such as arsenic, barium, cadmium, chromium, lead, mercury and selenium that if discharged to the Wabash River would be contributing additional pollution to a river that is already impaired by mercury, PCBs and fecal coliform. Adding additional loadings of dissolved solids and metals, such as mercury will place additional strains on an already impaired water body that could cause a violation of water quality standards. By granting the site-specific standard requested without further evidence of the impact on water quality, the Board would be setting the stage for a possible violation of federal law. The requested relief should not be granted without further study and assurances that the diverted waste stream will not cause or contribute to the impairments in the Wabash River or other surface waterways.

Finally, the US EPA has submitted a draft rule on CCW disposal in surface impoundments and landfills to the Office of Management and Budget for review. EPA is expected to publicly release the draft rule in mid-December. This rule is expected to address closure requirements along with other issues. Given that publication of the draft rule is only one and a half months away, it seems prudent that the IPCB should at least delay a decision regarding Ameren’s request until the proposed EPA requirements can be reviewed. Ultimately, however, **Prairie**

Rivers Network hereby urges the Illinois Pollution Control Board to DENY Ameren's request as it have not met its burden under 35 Ill. Adm. Code 102.210(d), 35 Ill. Adm. Code 102.202(b) and 35 Ill. Adm. Code 302.105.

Sincerely,



Traci Barkley
Water Resources Scientist

References

Hamilton, S. J.: 2004, 'Review of selenium toxicity in the aquatic food chain', *Science of the Total Environment* **326**, 1-31.

Lemly, A. D.: 1993, 'Guidelines for evaluating selenium data from aquatic monitoring and assessment studies', *Environ. Monit. Assess.* **28**, 83-100.

Lemly, A. D.: 1995, 'A Protocol for Aquatic Hazard Assessment of Selenium', *Ecotoxicology and environmental safety*, **32**, 280-288.

Lemly, A.D.: 2002. Selenium assessment in aquatic ecosystems. Springer, New York City, p. 161.

NRC: 2006, National Research Council of the National Academies. *Managing Coal Combustion Residues in Mines*. National Academies Press, Washington, DC. DCN 03356.

Rowe, C. L., Hopkins, W. A., and Cogdon, J.D.: 2002, 'Ecotoxicological implications of aquatic disposal of coal combustion residues in the United States: A review', *Environ. Monit. Assess.* **80**, 207-276.

US Environmental Protection Agency: 2009, Steam Electric Power Generating, Point Source Category. EPA 821-R-09-008

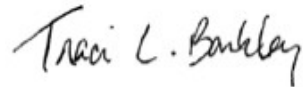
CERTIFICATE OF SERVICE

I, Traci Barkley, certify that I have served the attached **Comments Opposing Proposed Regulations for the Closure of Ash Pond at Ameren Energy Generating Company's Hutsonville Power Station in R09-021** upon:

Mr. John T. Therriault
Assistant Clerk of the Board
Illinois Pollution Control Board
100 West Randolph Street
Suite 11-500
Chicago, Illinois 60601

via electronic filing on October 30th, 2009; and upon the attached service list by depositing said documents in the United States Mail, postage prepaid, in Chicago, Illinois on October 30th, 2009.

Respectfully Submitted,

A handwritten signature in black ink that reads "Traci L. Barkley". The signature is written in a cursive, flowing style.

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October 30th, 2009

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