



PRAIRIE RIVERS NETWORK

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August 31, 2009

Via facsimile to 217 782 9891 and US mail

Shu-Mei Tsai
Illinois EPA
Division of Water Pollution Control
Permit Section
1021 N Grand Ave East
PO Box 19276
Springfield, IL 62794-9276

Re: Coffee Power Station
REQUEST FOR HEARING

Dear Ms. Tsai:

These comments are submitted on behalf of Prairie Rivers Network and the Illinois Chapter of the Sierra Club, regarding the above referenced draft permit for the discharge of storm water runoff from a landfill holding coal combustion by-products and from a closed ash pond into Coffeen Lake in Montgomery County, Illinois.

Prairie Rivers Network (PRN) is the state affiliate of the 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. Several of our members and members of the Illinois Chapter of the Sierra Club (Sierra Club), a statewide organization representing over 26,000 individuals committed to protecting the Illinois environment, live and recreate in the Kaskaskia watershed and would be adversely affected by a discharge of pollutants that degrades water quality.

Objections

As detailed below, we object to the issuance of this permit for the following reasons which are described in further detail in the following paragraphs:

- I) Antidegradation Assessment Fails to Fully Identify Load Increases & Potential Impacts on Water Quality;
- II.) Agency Has Failed to Ensure Protection of Existing Uses

I.
Antidegradation Assessment Fails to Fully Identify Load Increases & Potential Impacts on Water Quality

The Agency must identify and quantify the proposed load increases and the impacts of those increases in accordance with 35 IAC 302.105(f). Upon review of the antidegradation assessment, it appears that the IEPA considered only three pollutants: boron, phosphorus, and sulfate. This seems incredible given the potential toxicity of coal combustion waste (CCW). There are a host of toxic substances that can be found in CCW including the following: antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, iron, selenium and strontium 90. In addition, we would expect increased levels of ammonia from the scrubber waste. The antidegradation assessment must address the “potential” impacts of constituents expected in the loadings and explain how the water quality of the receiving water will be protected from these loadings. It is clearly insufficient (and indefensible) to simply ignore these constituents or to claim that there is no potential impact because landfilling of coal ash and scrubber byproducts and collection of storm water runoff in ash settling ponds are accepted practices. Once properly identified, the load increases must be minimized. 35 IAC 302.105 (c).

In this case, we are not objecting to the use of a dry ash landfill, but we do expect the landfill to be operated in such a way as to minimize pollutant loadings to both ground and surface water. Please instruct Ameren Energy Generating Company to *identify and quantify* all of the potential toxins present in the waste stream so that appropriate measures can be taken to minimize discharges from Outfalls 018, 023 and 024 and to protect both existing and designated uses.

II.
Agency Must Ensure Protection of Existing Uses

IEPA must assure that all existing uses will be fully protected. 35 IAC 302.105 (c)(2)(B). The first step is to identify and characterize the water body’s existing uses. 35 IAC 302.105 (f). We know that Coffeen Lake is used for subsistence fishing and that this use is already impaired by mercury. We also know that fish reproduction is occurring in the lake and that such use may be threatened by ammonia loadings from scrubber waste. We do not know if there are mussels in Coffeen Lake that would also be threatened by ammonia loadings. As such, it is the Agency’s duty to conduct a mussel survey or to place evidence in the record demonstrating that a survey was conducted and no mussels were found.

We request the Agency place limits for ammonia, mercury, and the toxins listed above in the permit or demonstrate in the record and in response to this letter why such limits are not necessary for the protection of existing uses using a reasonable potential analysis. At a minimum, the toxic metals identified above should be monitored in the effluents.

There are additional concerns about existing use protection that arise when coal combustion waste is stored in landfills. According to US EPA, “the primary concern regarding the disposal of wastes from coal-fired power plants is the potential for waste leachate to cause ground-water contamination.” At certain concentrations, arsenic, barium, cadmium, chromium, lead, mercury and selenium have toxic effects. *Wastes From the Combustion of Coal by Electric Utility Power Plants, EPA/530-SW-88-002*. In order to protect drinking water supplies from leachate, the Agency should determine whether there are any public or private water wells in the vicinity. Please indicate what the Agency has done to identify such wells.

The Agency must also model the leachate. There is no indication in the public notice or draft permit, however, that any such modeling has been done. We know that leachate test ASTM D3987085 was utilized by the Met South Coal Combustion By-Product Management Facility, however that particular method has been declared unreliable by US EPA for determining the leaching potential of power plant waste. Please indicate which leachate testing method was used by the applicant and the results of such testing. If no testing has been done, please instruct Ameren to model the leachate using an appropriate testing method.

In order to protect groundwater and to reduce the potential for leachate contamination, the landfill should include an appropriate liner in accordance with the requirement in 35 IAC 811.306. For instance, a compacted soil liner must be at least five (5) feet thick with a maximum hydraulic conductivity of 1×10^{-7} cm/sec. In the alternative, Ameren may install a composite liner consisting of a geomembrane (no less than 60 mm thick) overlying a compacted earth liner at least three feet in thickness. See 35 IAC 811.306 (d).

Finally, the permit should contain a special condition requiring groundwater monitoring in accordance with 35 IAC 811.318 (b)(1).

Questions to be addressed at public hearing include:

- 1) Are there residential wells located within 2500 feet of the boundaries of the proposed disposal site? If so, are they upgradient or downgradient of the proposed disposal site?
- 2) Coal combustion waste reused under Sec 3.315 is classified as coal combustion byproducts (CCB) and is exempt from the solid waste standards applied to CCW. Besides the obvious benefit to the applicant of skirting additional regulations, can you please explain how burying power plant waste in a landfill can be considered a beneficial reuse?
- 3) Generally, permeability and reactive qualities of power plant waste are unknown. Has the agency conducted modeling to determine if potential exists for contaminant leaching and groundwater contamination? Has the Agency investigated whether the location of the CCW landfill is proposed for an area that is likely to serve as an aquifer recharge area? This is a serious issue that needs to be explored and addressed by IEPA staff as mandated in CFR 405.106(d): “The refuse area shall not be located in an area of natural springs or an aquifer recharge area or intercept a drainage course unless special



provisions have been made to protect such. The burden of proof shall be on the Agency to show that an area is an aquifer recharge area.”

4) Applicant must provide a reclamation plan to the Agency for the power plant waste site - did they?

5) Why is chloride and manganese monitoring required of runoff from the closed ash pond (Outfalls 023 and 024) but not of the new dry ash landfill (Outfall 018)?

6) Is longwall mining proposed under the power plant waste landfill?

7) Please explain what consideration for a liner of the landfill cell(s) have been made by the applicant and/or the Agency?

8) Please be prepared to provide an explanation and supporting materials of any potential negative economic effects weighed against any social or economic development benefits anticipated from the proposed activities which require the NPDES permit.

9) Does the Coffeen Power Station now or will it in the future use activated carbon injection for mercury control?

10) Has the power plant waste proposed for disposal at the Coffeen facility been evaluated using any other leach tests and if so, what do the results show?

11) Please explain why permit limits were not established for the following parameters: arsenic, cadmium, chromium, copper, dissolved iron, manganese, nickel, radium 226, strontium 90, selenium, sulfate, total dissolved solids and zinc in line with CFR (B) Section 302. At a minimum, why are not all of these pollutants included in the quarterly monitoring required?

12) Please explain the site characterization process that was conducted in order to determine that the location for the proposed landfill was appropriate and would be protective of water quality standards and existing uses in the receiving stream and underlying groundwater resources.

13) Was the siting process detailed in 415 ILCS 5/1 et seq, in Sections 3.330, 39, 39.2 and 40.1 followed for the Coffeen waste disposal site?

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Thank you for considering our request for a public hearing. We would be happy to meet with IEPA staff prior to scheduling a public hearing to discuss this permit as well as



similar concerns with the proposed disposal of CCW at the Joppa Electric Generating Station (comment letter submitted August 7, 2009).

Sincerely,

Kim Knowles
Water Resources Specialist

cc: Ameren Energy Generating Company
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