

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

PRAIRIE RIVERS NETWORK)	
and SIERRA CLUB,)	
)	
Petitioners,)	
)	PCB _____
v.)	(Third Party NPDES Appeal)
)	
ILLINOIS ENVIRONMENTAL)	
PROTECTION AGENCY and)	
HILLSBORO ENERGY, LLC.,)	
)	
Respondents.)	

NOTICE OF FILING

To: John Therriault, Clerk
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph St., Suite 11-500
Chicago, IL 60601

Division of Legal Counsel
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

Hillsboro Energy, L.L.C.
925 S. Main Street
Hillsboro, IL 62049

PLEASE TAKE NOTICE that I have electronically filed today with the Office of the Clerk of the Pollution Control Board the attached **Petition for Review of a Decision by the Illinois Environmental Protection Agency**, a copy of which is herewith served upon you.

Respectfully Submitted,



Jessica Dexter (Reg. No. 6298340)
Albert Ettinger (Reg. No. 3125045)
Counsel for Prairie Rivers Network and Sierra Club

Date: July 2nd, 2009

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PETITION FOR REVIEW OF A DECISION BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Pursuant to 415 ILCS 5/40(e)(1) and 35 Ill. Adm. Code § 105, Prairie Rivers Network and the Sierra Club (collectively, “Petitioners”) hereby petition for review of the May 29, 2009 decision of the Illinois Environmental Protection Agency (“IEPA”) to grant a new National Pollutant Discharge Elimination System (“NPDES”) permit (Permit No. IL0078727) to Hillsboro Energy, L.L.C., Deer Run Mine to discharge pollutants from a coal mining site into Shoal Creek Watershed Structure No. 5 and three (3) unnamed tributaries of Shoal Creek Watershed Structure No. 5, all of which drain into the Middle Fork of Shoal Creek. (See Final Permit attached as Exhibit C and Responsiveness Summary at <http://www.epa.state.il.us/public-notices/2008/npdes-notices.html#hillsboro-energy-deer-run-mine>).

In support of their petition, Petitioners state:

Petitioners

1. Prairie Rivers Network is an Illinois not-for-profit corporation concerned with river conservation and water quality issues in Illinois. It works with concerned citizens throughout the state to address those issues that impact Illinois streams. Among Prairie Rivers Network members are those who live in the Shoal Creek watershed and are concerned with pollution that would affect their ability to enjoy recreational activities dependent on the ecological health of the Shoal Creek, the West Fork of Shoal Creek, the Middle Fork of the Shoal Creek, Shoal Creek Watershed Structure No. 5 and their tributaries, including swimming, wading, fishing, canoeing, kayaking, hiking, nature study, bird watching and other wildlife viewing. (Joint Request for a Public Hearing by Prairie Rivers Network and the Illinois Chapter of the Sierra Club, July 14, 2008, attached as Exhibit A and Post-Hearing Comments of Prairie Rivers Network and Illinois Chapter of the Sierra Club, October 17, 2008, attached as Exhibit B).

2. The Sierra Club is a California not-for-profit corporation, which has among its purposes to protect and restore the quality of the natural and human environment. The Sierra Club has over 25,000 members residing in the State of Illinois and has members who are adversely affected by any degradation of Shoal Creek, the West Fork of Shoal Creek, the Middle Fork of Shoal Creek, Shoal Creek Watershed Structure no. 5 and tributaries thereto that could affect the uses of those waters. Sierra Club members live in the Shoal Creek watershed, and many Sierra Club members are concerned with pollution that would affect their ability to enjoy recreational activities dependent on the ecological health of Shoal Creek, the West Fork of Shoal Creek, the Middle Fork of the Shoal Creek, Shoal Creek Watershed Structure No. 5 and their

tributaries, including swimming, wading, fishing, canoeing, kayaking, hiking, nature study, bird watching and other wildlife viewing. Sierra Club members are adversely affected by the unnecessary degradation of water quality that occurs as a result of suspended solids, sediment, sulfates, chlorides, iron, manganese and other pollution discharged into Shoal Creek Watershed Structure No. 5, its tributaries and ultimately the Middle Fork of Shoal Creek, the West Fork of Shoal Creek and Shoal Creek itself. (*See* Public Hearing Transcript (Sept. 17, 2008), available at <http://www.epa.state.il.us/public-notices/2008/npdes-notices.html#hillsboro-energy-deer-run-mine> and Exhibits A and B).

3. Members of the Petitioners, including Cindy Skrukrud, Becki Clayborn, Joyce Blumenshine, Mary Ellen DeClue and Mary Arlis Bates appeared at the hearing held in this proceeding or submitted comments in opposition to the permit. They and other members of Petitioners are so situated as to be affected by the permit and by violations of water quality standards in Shoal Creek Watershed Structure No. 5, its tributaries and ultimately the Middle Fork of Shoal Creek, the West Fork of Shoal Creek and Shoal Creek. (*See* Transcript and Exhibits A and B).

Shoal Creek Watershed

4. The Middle Fork of Shoal Creek lies within the Shoal Creek watershed. The Illinois Dept. of Natural Resources' (IDNR's) newly-released biological stream ratings show a significant percentage of the state's Biologically Significant Stream reaches lie within the Shoal Creek watershed. (IDNR, Integrating Multiple Taxa in a Biological Stream Rating System (2008), attached as Exhibit D.) These Biologically Significant Streams represent rare, high-quality stream resources. As IDNR states,

“Stream segments identified as biologically significant are unique resources in the state and we believe that the biological communities present must be protected at the stream reach, **as well as upstream of the reach.**” (Exhibit D at 23 (emphasis added)). Runoff, mine drainage and underground mine pumpage from the proposed Deer Run mine will be tributary to these important stream resources. Deterioration of the existing high quality aquatic community present in the Shoal Creek watershed must be prevented. 35 Ill. Adm. Code § 302.105 (a).

Statement of Issues Raised

6. On June 12, 2008, IEPA gave notice that it had made a tentative decision to issue a new NPDES permit to Hillsboro Energy, L.L.C., Deer Run Mine for discharges into Shoal Creek Watershed Structure No. 5 and its tributaries. The new permit would allow Hillsboro Energy to discharge mine drainage, reclamation area drainage and stormwater runoff into these receiving streams. After reviewing a copy of the draft permit, Petitioners submitted written comments on July 14, 2008, testified at a public hearing held on the draft permit on September 17, 2008, and submitted post-hearing written comments on October 17, 2008 (*See* Transcript and Exhibits A and B).

7. In their written comments and testimony, Petitioners raised legal and scientific issues regarding flaws in the draft permit and in IEPA’s consideration of the draft permit and asked that all technically and economically reasonable measures to avoid or minimize the extent of the proposed increase in pollutant loadings be incorporated into the permit and that the permit be improved in a number of respects. These comments requested:

- a) Proper identification and quantification of all pollutant loadings, analysis of the potential impacts of those increases on the receiving streams, and assurance that the permit would not allow discharges that could cause or contribute to violations of any numeric or narrative water quality standard;
- b) Completion of an appropriate biological study to assure that the discharge would not adversely affect the existing uses of the receiving streams;
- c) Increased surface water monitoring requirements to ensure protection of existing uses;
- d) Incorporation of alternative treatment technologies for minimizing increases in pollutant loadings (sulfate, chloride, iron, manganese, etc).
- e) Separation of mine drainage treatment basins from stormwater basins in order to improve treatment and to decrease the likelihood that additional loadings will contribute to a violation of water quality standards;
- f) Analysis of the potential for groundwater contamination from the mine site to contaminate drinking water sources, especially in light of the potential for seismic activity to disrupt the slurry impoundment or sedimentation basins;
- g) Incorporation into the permit conditions of various best management practices that minimize sulfate formation and chloride leaching;
- h) Incorporation into the permit conditions of fugitive dust minimization measures to protect water quality, especially the water quality of nearby drinking water sources; and
- i) Removal of a permit condition allowing uncontrolled stormwater discharge.

8. On May 29, 2009, Illinois EPA issued the permit that is the subject of the current appeal. While substantial changes were made to the draft permit, the final permit did not remedy many of the flaws discussed above that were raised by Petitioners in oral and written comments.

Specifically with regard to issues that had been raised by Petitioners during the hearing and public comment period:

a) IEPA did not comply with Illinois' antidegradation rules requiring IEPA to identify and quantify proposed pollutant load increases and the potential impacts of those increases on the affected waters. The IEPA failed to identify and quantify additional loadings from the slurry impoundment, including loadings introduced by dredged material from sedimentation ponds. Pollutants from the slurry impoundment ultimately are discharged at Outfall 001. IEPA never considered these additional loadings in its water quality modeling for Sedimentation Pond 001 and Outfall 001, in violation of 35 Ill. Adm. Code §§ 302.105 (f), 304.105 and 309.141.

b) IEPA did not comply with Illinois' antidegradation rules requiring protection of the existing uses of the receiving waters and the rules forbidding discharges that may cause or contribute to the violation of numeric or narrative water quality standards. 35 Ill. Adm. Code § 302.105. *See also*, 35 Ill. Adm. Code §§ 302.210, 304.105 and 309.141. IEPA failed to consider the impact of additional pollutant loadings, including those from underground mine pumpage and coal washing on existing uses. The proposed discharge is located upstream of Biologically Significant Stream reaches regarded as unique high-quality aquatic resources to the State of Illinois, which IDNR states "must be protected." (Exhibit D at 23). IEPA has not assessed the impact of

the proposed discharge on Biologically Significant Streams in the Shoal Creek watershed, nor has it assessed the impact of the proposed activity on local drinking water sources.

To this end, Petitioners specifically requested monitoring to ensure protection of existing uses, but IEPA did not respond to this request in the Responsiveness Summary as required by 35 Ill Admin. Code § 166.192 (a) (5) and 40 CFR § 124.17 (a) (2), and as discussed in paragraph (d) below. The monitoring requested included 1) annual Whole Effluent Toxicity (WET) testing for Shoal Creek Watershed Structure No. 5 in order to ensure protection of the important biological resources in the Shoal Creek watershed, and 2) quarterly monitoring of the tributary that feeds Lake Hillsboro¹ to ensure that the City of Hillsboro's water supply is not negatively impacted by fugitive dust from surface activities or by contaminated groundwater under the surface facilities of the mine that migrates to the stream.

c) Petitioners' repeatedly urged IEPA to take the steps necessary to comply with 35 Ill. Adm. Code § 302.105(c) by assuring that all technically and economically reasonable measures to avoid or minimize the extent of the proposed increase in pollutant loadings be incorporated into the permit and that IEPA perform the required financial analyses regarding pollution control costs. Despite this urging, IEPA never adequately weighed pollution control alternatives, failed entirely to consider the alternative of separating stormwater and treatment basins, and failed to determine both the costs of the various alternatives and the impact of those costs on the viability of the proposed project.

(i) The IEPA dismissed pollution control alternatives (Responsiveness Summary at p.31-35) presented by the Petitioners stating that "none of the suggested alternatives, or any other known alternative to sedimentation pond treatment, presents a

¹ This tributary was referred to as "Big Four Creek" at the public hearing.

feasible alternative, all things considered, to treat stormwater runoff at Deer Run Mine.” (Responsiveness Summary p. 35). IEPA also stated that “the supplemental information submitted, namely a memorandum dated October 15, 2008 from Carpenter Environmental Associates, Inc., (and the references cited in this memorandum) does not objectively evaluate conditions specific to this permit.” (Responsiveness Summary p. 31). Finally, IEPA faults Petitioners for failing to make cost estimates of the alternatives. However, it was not Petitioners’ duty under the regulations to make cost estimates or even to provide alternatives. Petitioners provided information regarding possible alternative treatments to assist IEPA to perform its duty to “assure...all technically feasible and economically reasonable measures to avoid or minimize the extent of the proposed increase of pollutant loading [be] incorporated into the proposed activity.” 35

Ill. Adm. Code § 302.105 (c) (2) (B) (iii).

(ii) Under the Board’s rules, the permit application must provide:

Assessments of alternatives to proposed increases in pollutant loading or activities subject to Agency certification pursuant to Section 401 of the CWA that result in less of a load increase, no load increase or minimal environmental degradation. Such alternatives may include:

- i) Additional treatment levels, including no discharge alternatives;
- ii) Discharge of waste to alternate locations, including publicly-owned treatment works and streams with greater assimilative capacity; or
- iii) Manufacturing practices that incorporate pollution prevention techniques.

35 Ill. Adm. Code 302.105 (f) (D). The permit application did not include such an assessment and no proper assessment of this nature was ever provided by the applicant.

(iii) The Responsiveness Summary provided by IEPA provides no real analysis of proposed alternatives. For instance, no cost estimate was provided for any of the alternatives.

Based on the Responsiveness Summary, several alternatives were dismissed without real analysis for reasons that are not valid under Illinois' antidegradation rules. 35 Ill. Admin. Code §302.105 (c) and (f). Simply stating that an alternative will cost more, would require more land, would use energy, would create a solid waste that would need to be disposed, or is used in other treatment applications does not justify eliminating that alternative under the antidegradation rules. In the Responsiveness Summary, the Cost Effective Sulfate Removal (CESR) process was dismissed based solely on those kinds of invalid justifications. Ion exchange was dismissed because it was described as being applicable only to acidic mine drainage, although no information was provided that substantiated that the technology would not work for alkaline discharges. The other technologies presented by the Petitioners were similarly dismissed based on little or no evidence.

Further, IEPA's Responsiveness Summary contains no indication that IEPA considered Petitioners' request that the site utilize separate treatment (sedimentation) and stormwater basins, in violation of 35 Ill Admin. Code § 166.192 (a) (5) and 40 CFR § 124.17 (a) (2) and as discussed in paragraph (d), below.

Separating stormwater basins from treatment basins would likely result in reduced pollution because settling can occur in the treatment basins without being disturbed or prematurely flushed by storm events. In addition, separating the basin types would offer the opportunity for more defined flows, which would eliminate IEPA's rationale for rejecting several of the treatment alternatives proposed by Petitioners (e.g. coagulation precipitation, Supervac). Neither the applicant nor IEPA estimated the costs of building larger lagoon(s) that would be needed to make the discharges more regular and less likely

to be scoured by storm events. The claim that increased lagoon sizes and better treatment is not feasible because these steps would use additional land is not supported by estimates of the amount of land that would be needed, the value of the land that would be used or any analysis of the increased costs relative to the economic viability of the mine.

d) The IEPA failed to respond to significant comments raised by Petitioners in comment letters and at the public hearing. IEPA is required by 35 Ill. Admin. Code § 309.109 (b) to consider all written comments submitted during the public comment period as it formulates its final determination with respect to the NPDES application. IEPA's specific response to all significant comments, criticisms and suggestions must be detailed in a Responsiveness Summary. 35 Ill Admin. Code § 166.192 (a) (5) (The Responsiveness Summary shall include "The Agency's specific response to all significant comments, criticisms, and suggestions") and 40 CFR § 124.17 (a) (2) (The response to comments shall "Briefly describe and respond to all significant comments on the draft permit ... raised during the public comment period, or during any hearing."). The Responsiveness Summary does not respond to several of Petitioners comments, including:

- (i) separation of stormwater basins from settling (treatment) ponds;
- (ii) monitoring to ensure protection of existing uses;
- (iii) the potential impact of seismic activity on slurry impoundment and sedimentation basins; and
- (iv) the potential of the mine to contaminate local drinking water supplies.

e) Despite Petitioners' requests regarding the incorporation of appropriate best management practices into the permit conditions, the Final NPDES Permit does not

specify management practices that will be required as conditions of the permit to minimize sulfate formation and chloride leaching and control fugitive dust. Instead, the final permit relies on conditions that are not properly set forth in the permit and for which proper monitoring has not been established in violation of 35 Ill. Admin. Code § 309.141, 309.146 and 40 CFR §122.48. In several instances on page 14 of the Construction Authorization, in Condition 3, in Special Condition 7 and in Special Condition 11(c), the requirements of the permit are set forth by reference and are not contained in the permit itself. These provisions do not lay out the permit requirements with sufficient specificity to allow the IEPA or the public to determine whether the permittee is in compliance with the permit.

f) By incorporating a number of permit conditions by reference, the draft permit (See draft permit at <http://www.epa.state.il.us/public-notices/2008/npdes-notices.html#hillsboro-energy-deer-run-mine>) violated notice requirements contained in 35 Ill. Admin. Code §§ 309.108, 309.109 309.110, 309.113 and 309.114.

g) The final permit retains Special Condition No. 10, governing stormwater “discharge not reporting to a sediment basin.” This permit condition allows a discharge in direct conflict with 35 Ill. Admin. Code § 406.108, which requires all “surface drainage from the affected land of a coal mine” to pass “through a sedimentation pond or series of sedimentation ponds before leaving the facility.”

h) The final permit contains a condition that allows for discharges that do not meet water quality standards when “sufficient flows (sic) exists in the receiving stream to ensure that water quality standards in the receiving stream beyond the area of allowed mixing will not be exceeded.” Final Permit, p 21 (Special Condition 11). However, the

area of allowed mixing has not been defined in the permit, in violation of 35 Ill. Admin. Code § 302.102.

i) The permit allows mercury monitoring to cease after an additional sampling period, despite the fact that the constituents of coal can vary from one area to another, meaning that the contaminants contributed by the coal can change over time as coal mining progresses through the mine. Without monitoring throughout the life of the permit, it is impossible for IEPA to identify and quantify mercury loading from this discharge and assess whether existing uses of the stream are being protected, in violation of 35 Ill. Adm. Code §§ 302.105 and 304.105.

9. Members of Petitioners will be adversely affected when pollution discharged under the permit causes unnecessary degradation of the water quality in the Shoal Creek, West Fork Shoal Creek, Middle Fork of Shoal Creek, Shoal Creek Watershed Structure No. 5 and tributaries thereto. They will also be adversely affected when permitted discharges cause or contribute to the degradation of the existing uses of these receiving streams and otherwise injure the ecology of the streams as a result of IEPA's failure to require a proper antidegradation analysis.

WHEREFORE, Prairie Rivers Network and the Sierra Club ask that the Pollution Control Board set aside the NPDES permit (No IL0078727) issued to Hillsboro Energy, L.L.C., Deer Run Mine as not sufficiently protective of the environment and not in accord with law, and direct that the Agency reconsider the permit in order to establish conditions and limits necessary to protect Illinois waters, assure protection of Illinois water quality standards, and comply with the Federal Water Pollution Control Act, 33

U.S.C. § 1251 et seq., and Illinois law.

A handwritten signature in black ink, appearing to read "JD", is positioned above a horizontal line.

Jessica Dexter (Reg. No. 6298340)

Albert Ettinger (Reg. No. 3125045)

Counsel for Prairie Rivers Network and Sierra Club

Date: July 2nd, 2009

Environmental Law and Policy Center

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Chicago, Illinois 60601

312-795-3747

CERTIFICATE OF SERVICE

I, Jessica Dexter, hereby certify that I have served the attached **Petition for Review of a Decision by the Illinois Environmental Protection Agency** 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 July 2nd, 2009; and upon the attached service list by depositing said documents in the United States Mail, postage prepaid, in Chicago, Illinois on July 2nd, 2009.

Respectfully Submitted,



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Staff Attorney
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SERVICE LIST

July 2nd, 2009

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