

# **Prairie Coal Company, L.L.C.**

## **Lost Prairie Mine**

### **401 Water Quality Certification**

### **Responsiveness Summary**

### **Regarding**

**March 21, 2012 Public Hearing**

**Illinois Environmental Protection Agency**

**Office of Community Relations**



**October 26, 2012**

**Prairie Coal Company, L.L.C.  
Lost Prairie Mine  
401 Water Quality Certification---Responsiveness Summary**

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**Final  
October 26, 2012**

**Prairie Coal Company L.L.C.**  
**Lost Prairie Mine**  
401 Water Quality Certification  
IEPA Log Nos. C-0386-09 and C-0387-09

## **Illinois EPA Decision**

On October 26, 2012, the Illinois Environmental Protection Agency (Illinois EPA) issued the Prairie Coal Company L.L.C., a 401 Water Quality Certification for Lost Prairie Mine.

The Illinois EPA made this determination in accordance with 35 Illinois Administrative Code (Ill. Admin. Code) Subtitle C (*Water Pollution*), the Illinois Environmental Protection Act and the federal Clean Water Act. The 401 certification process is governed by the provisions of 35 Ill. Admin. Code Part 395, *Procedures and Criteria for Certification of Applications for Federal Permits or Licenses for Discharges into Waters of the State*, which can be obtained online at:

<http://www.ipcb.state.il.us/documents/dsweb/Get/Document-12064/>

## **PRE HEARING PUBLIC OUTREACH**

The 401 Water Quality Certification hearing notice was published in the *Pinckneyville Press* on February 15, 22, & 29, 2012.

The hearing notice was mailed or e-mailed to:

- a) adjacent land owners;
- b) Perry county officials;
- c) municipal officials in: Pinckneyville as well as state and federal representatives;
- d) Corps of Engineers, the IDNR Office of Mines & Minerals, and the Illinois' Attorney General; and
- e) Illinois Chapter of the Sierra Club, Prairie Rivers Network and the Environmental Law and Policy Center (hearing requestors).

The hearing notice was posted on the Illinois EPA website:

<http://www.epa.state.il.us/public-notices/sec-401-notices.html#lost-prairie-mine>

Hearing notices were posted at the Illinois EPA headquarters in Springfield and in the Marion Regional Office.

## **March 21, 2012 PUBLIC HEARING**

Hearing Officer Dean Studer opened the hearing March 21, 2012, at 7:00p.m. at the Pinckneyville Junior High School, State Route 154, Pinckneyville, Illinois.

### **Illinois EPA Presentations:**

Keith Runge, Facility Evaluation Unit Project Manager, provided a description of the project.

Comments and questions were received from the audience.

Hearing Officer Dean Studer closed the hearing at 7:30p.m. on March 21, 2012.

Illinois EPA personnel were available before, during and after the hearing to meet with elected officials, news media and concerned citizens.

Approximately 15 persons representing neighbors, local government, businesses, miners, elected officials, environmental groups, interested citizens, and Prairie Coal Company L.L.C. participated at and/or attended the hearing. A court reporter prepared a transcript of the public hearing which was posted on the Illinois EPA website. <http://www.epa.state.il.us/public-notice/2012/lost-prairie-mine/hearing-transcript.pdf>

The hearing record remained open through April 20, 2012.

## **Background of Prairie Coal Company, L.L.C. Lost Prairie Mine 401 Water Quality Certification**

The IEPA Bureau of Water has received an application for a Section 401 water quality certification (Log. No. C-0386-09 and C-0387-09) for discharge into waters of the United States associated with a Section 404 permit application (USACE appl. # 2010-247) received by the United States Army Corps of Engineers. The address of the applicant is Prairie Coal Company, L.L.C., City One Place, Suite 300, St. Louis, MO. 63141.

The applicant has applied for Section 401 water quality certification for impacts associated with the above ground facilities associated with an underground mine. The project area consists of approximately 848 acres located in Sections 29, 30, 31, and 32, T4S, R3W in Perry County. Two portals will be created by construction of the slope along with two airshafts for ventilation. The surface facilities will include roads, a rail load out and transport system, coal and soil stockpiles, coal refuse disposal facilities, preparation plant, an office/maintenance building with parking area, and Sedimentation Pond #1. Sediment Pond #1 is a temporary impoundment and will be reclaimed during the final reclamation process.

Impacts to aquatic resources have been avoided to the extent possible by the design of the proposed mine facilities. Access roads, railroad tracts, and coal processing/staging areas have been placed in areas currently used as agriculture lands. At the request of USACE, the mine relocated an overburden stockpile to an upland area so it would be less environmentally damaging to the streams and wetland. By minimizing development within the valley of Stream 1, impacts to streams and their riparian areas, as well as the upland buffer forest, have been reduced. The proposed impacts were avoided to the maximum extent practicable, minimized, and the unavoidable impacts are proposed to be compensated for in the mitigation plan.

The subject facility proposes to build a dam on an unnamed tributary of Wolf Creek at a point where 0 cfs of flow exists upstream of the outfall during critical 7Q10 low-flow conditions. The unnamed tributary of Wolf Creek is classified as General Use Water. The unnamed tributary of Wolf Creek is not listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*, nor is it given an integrity rating in that document. The unnamed tributary of Wolf Creek, tributary to Waterbody Segment, NCK-01, is not listed on the draft 2010 Illinois Integrated Water Quality Report and Section 303(d) List since it has not been assessed. The unnamed tributary of Wolf Creek is not subject to enhanced dissolved oxygen standards.

The permit application is available for examination at Illinois EPA offices in Springfield. The public notice/fact sheet can be viewed on the Illinois EPA website at: <http://www.epa.state.il.us/public-notices/sec-401-notices.html#lost-prairie-mine>.

## Responses to Comments, Questions and Concerns

Comments, Questions and Concerns in regular text  
**Agency responses in bold text**

### **Antidegradation Assessment**

1. The applicant has failed to assess alternatives that avoid impacts to streams and wetlands. More specifically why wasn't the applicant asked to consider off-line sedimentation basins?

**Although the use of off-line sedimentation basins was not discussed in the Assessment of Alternatives, it was considered and assessed by the applicant. However, due to the additional costs involved, off-line sedimentation basins are not a viable alternative.**

**In order to use off-line sedimentation basins and place them out of wetlands and streams, there would have to be ponds placed in upland areas with water storage capacity equal to the proposed pond. This would require at least three basins to ensure the required sedimentation capacity and control is achieved. The cost of constructing ponds in three upland locations would be in excess of one-million dollars.**

**Additional diversion ditches would have to be constructed to insure the affected drainage would be directed to the off-line sedimentation basins and not discharged to a receiving stream without passing through an NPDES discharge point. Since the off-line sedimentation basins would be constructed in upland areas, the diversion ditches would have to be constructed at deeper elevations or additional grading would have to be performed before the diversions were constructed. The total length of diversion ditches would increase, and since liners are required under the diversion ditches, additional liners would be needed. This additional construction would increase the project cost.**

**Another important reason off-line sedimentation basins are not a viable alternative for this project is the water in the sediment pond will be used as make-up water for the coal preparation plant. A large volume of water in storage is required for this, and the water must be pumped to the plant at a rate of 800-1,200 gallons per minute. The pond is sized so the amount of water required for plant operations can be pumped without causing interruption in the coal cleaning process. If smaller ponds were used, this would cause additional pumping and require additional pump controls. The pumping costs would be higher because more pumps would be**

required and the pumping would have to be coordinated to operate in a sequence to assure that the coal cleaning process was continuous.

Even though a slightly smaller amount of linear ephemeral streams would be affected through the use of three ponds, this is not a practical alternative due to the substantially higher cost and the complex logistics to construct and operate the water distribution system between the smaller ponds and the coal cleaning plant. The design selected allows the mine operation to achieve the operational objective of having sufficient water storage capacity and sedimentation control while minimizing the amount of ephemeral stream length disturbed.

The facility did relocate an overburden stockpile in a upland area so there would be less environmental effects to the streams and wetland per the request of the USACE. The preparation plant slurry pond and coarse refuse piles were also located on higher ground and not in any major stream reaches to minimize stream and wetland impacts.

2. 35 Ill. Adm. Code 301.440 strictly prohibits the use of natural waters of the state as a treatment works.

**35 Ill. Adm. Code Section 301.440 prohibits use of natural or otherwise protected waters as sewers or treatment works if waters are considered “waters of the state.” However, in this case, the applicant has sought a 401/404 Permit for construction of a sedimentation pond and under 33 C.F.R. 328(a)(8), this is not designated as waters of the United States. However, all impoundments have outfalls that are covered under the NPDES permit for this facility to ensure water quality standards are met in the receiving waters of the State.**

3. There is a failure to demonstrate that existing uses will be fully protected.

**All of the impacts will be to ephemeral streams. No perennial streams will be impacted by the proposed activity. The “Aquatic Resources Report” prepared by Midwest Reclamation Resources, Inc. summarized the habitat of the streams by stating: “the streams within the project area had moderate RBP (rapid bioassessment protocols) scores, mostly attributable to little human disturbance and wide riparian corridors**

**IEPA did not require Lost Prairie to conduct assessments to identify the fish and macroinvertebrates in the impacted streams because these are ephemeral streams where the results of any biological monitoring would be**

dependent on the amount of rain that the watershed has received over the preceding months. The USGS Illinois Streamstats basin characteristics program gives a watershed size of 1.06 square miles at the discharge location. According to the Illinois State Water Survey, the unnamed tributary of Wolf Creek in the area of the proposed mine discharge is likely to be a 7Q1.1 zero flow stream. In this region of Illinois, 7Q1.1 zero flow streams are streams with a watershed area of 5 square miles or less. These streams will exhibit no flow for at least a continuous seven day period nine out of ten years. Aquatic life communities are poorly developed in these types of streams due to lack of water during dry periods during most years. Given this flow regime, the nature of these streams is well known to Illinois EPA and no additional biological characterization is required.

The impacted streams will be mitigated according to the mitigation plan, which was based on the Illinois Stream Mitigation Method. IDNR will supervise the reconstruction of these streams using guidelines for riffles, pools, and sinuosity. The Illinois Stream Mitigation Method credit requirements and the IDNR guidelines are compatible. Based on the above information concerning the existing streams and mitigation to be provided in accordance with the Illinois Stream Mitigation Method, the Agency expects existing uses to be protected.

4. Prairie Coal Company's alternative analysis fails to adequately assess the feasibility and avoidance of impacts to waters of the state.

As part of avoidance of impacts to the waters of the state, the facility did relocate an overburden stockpile in a upland area so there would be less environmental effects to the streams and wetland per the request of the USACE. The preparation plant slurry pond and coarse refuse piles were also located on higher ground and not in any major stream reaches to minimize stream and wetland impacts.



## Mitigation Plans

5. According to the Applicant's Compensatory Mitigation Plan, the onsite wetlands are of "fairly decent quality," and should therefore be replaced at a 2.5:1 mitigation ratio. We see no support in the record for this conclusion or any scientific explanation for what it might mean. Nor is there support in the record for the 2.5:1 ratio. Is IEPA to allow an applicant the power to choose its own mitigation ratio without scientific support?

**The Agency has determined that the proposed mitigation is appropriate for forested wetland impacts mitigated on-site. The forested wetlands were evaluated by a biologist familiar with wetland quality based on the diversity and quality of plant species. This ratio is consistently utilized for this category of wetlands and has the concurrence of the Corps of Engineers.**

6. How is the Agency going to address the temporal loss of nearly two miles of headwater streams being destroyed by the sediment pond during the mining?

**The Illinois Stream Mitigation Method does account for the temporal lag between impacts to the aquatic resources and mitigation for those impacts. The "Mitigation Construction Timing" category requires the applicant to specify if mitigation will occur before impacts, concurrent with impacts, or after impacts. A specific value is used in the worksheet which generates mitigation credits tailored towards the timing of impacts and mitigation. Given that the applicant proposes to conduct stream mitigation after impacts, rather than concurrent with or before impacts, a value of '0' was used for the 'Mitigation Construction Timing' factor used in determining the total amount of mitigation credits needed.**

7. What is the delineated monitoring period for the on-site mitigation plan? The monitoring period should be no less than 10 years.

**The Section 404 permit, as conditionally approved by USACE, stipulated a minimum of a 5-year monitoring period for mitigation. The USACE, who oversees the performance of the mitigation of streams and wetlands, did not require a 10-year monitoring period. However, in the event that mitigation may not be meeting the performance standards required in the mitigation plan, the monitoring period can be extended by USACE.**

## **Stream Characterization**

8. How big are the wetlands that are to be constructed along the side the reconstructed channel?

**There are a total of four wetland cells. The hydrology in the area will be characterized by saturated soils and periods of surface inundation during storm events. The wetlands will generally have water depths during wet seasons ranging from 1 to 4 feet. The wetlands will be allowed to dry up during seasonally dry periods. Wetland cell #1 has 1.8 acres, wetland cell #2 has 1.8 acres, wetland cell #3 has 2.1 acres, and wetland cell #4 has 2.7 acres.**

## Acronyms and Initials

401 WQC	401 Water Quality Certification
IBI	Index of Biotic Integrity
IDNR	Illinois Department of Natural Resources
IEPA	Illinois Environmental Protection Agency
Ill. Adm. Code	Illinois Administrative Code
NPDES	National Pollutant Discharge Elimination System
Section 401	Section of the Federal Clean Water Act
SMCRA	Surface Mining Control and Reclamation Act of 1977 (federal)
USACE	United States Army Corp of Engineers
USFWS	United States Fish and Wildlife Service

## DISTRIBUTION OF RESPONSIVENESS SUMMARY

An announcement, that the 401 water quality certification decision and accompanying responsiveness summary is available on the Agency website, was mailed to all who registered at the hearing and to all who sent in written comments. Printed copies of this responsiveness summary are available from Dean Studer, Illinois Office of Community Relations, 217-558-8280, email: [Dean.Studer@ilinois.gov](mailto:Dean.Studer@ilinois.gov)

## WHO CAN ANSWER YOUR QUESTIONS

### Illinois EPA 401 Water Quality Certification:

Illinois EPA Technical Decisions:	Keith Runge,	217-782-3362
Antidegradation Assessment	Scott Twait	217-558-2012
Mitigation Plans	Scott Twait	217-558-2012
Public hearing of March 21, 2012	Dean Studer	217-558-8280

The public hearing notice, the hearing transcript, and the responsiveness summary are available on the Illinois EPA website: <http://www.epa.state.il.us/public-notices/sec-401-notices.html#lost-prairie-mine>.