

IEPA Log No.: **C-0053-12**

CoE appl. #: **2012-195**

Public Notice Beginning Date: **November 21, 2014**

Public Notice Ending Date: **December 22, 2014**

Section 401 of the Federal Water Pollution Control Act  
Amendments of 1972

### **Section 401 Water Quality Certification to Discharge into Waters of the State**

#### **Public Notice/Fact Sheet Issued By:**

Illinois Environmental Protection Agency  
Bureau of Water  
Division of Water Pollution Control  
Permit Section  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276  
217/782-3362

**Name and Address of Discharger:** Peabody Coulterville Mining, LLC, 7100 Eagle Crest Boulevard, Suite 100, Evansville, IN 47715

**Discharge Location:** Sections 15, 16, 21, and 22, T4S, R5W of the 3<sup>rd</sup> P.M. in Randolph County near Coulterville

**Name of Receiving Water:** Unnamed tributaries of Plum Creek and unnamed wetlands

**Project Description:** Gateway Mine Refuse Cell 5.

The Illinois Environmental Protection Agency (IEPA) has received an application for a Section 401 water quality certification to discharge into the waters of the state associated with a Section 404 permit application received by the U.S. Army Corps of Engineers. The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice. The last day comments will be received will be on the Public Notice period ending date unless a commenter demonstrating the need for additional time requests an extension to this comment period and the request is granted by the IEPA. Interested persons are invited to submit written comments on the project to the IEPA at the above address. Commenters shall provide their names and addresses along with comments on the certification application. Commenters may include a request for public hearing. The certification and notice number(s) must appear on each comment page.

The attached Fact Sheet provides a description of the project and the antidegradation assessment.

The application, Public Notice/Fact Sheet, comments received, and other documents are available for inspection and may be copied at the IEPA at the address shown above between 9:30 a.m. and 3:30 p.m. Monday through Friday when scheduled by the interested person.

If written comments or requests indicate a significant degree of public interest in the certification application, the IEPA may, at its discretion, hold a public hearing. Public notice will be given 30 days before any public hearing. If a Section 401 water quality certification is issued, response to relevant comments will be provided at the time of the certification. For further information, please call Thaddeus Faught at 217/782-3362.

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Fact Sheet for Antidegradation Assessment

Peabody Coulterville Mining – Unnamed Tributaries to Plum Creek and Unnamed Wetlands –

Randolph County

Log # C-0053-12

COE # MVS-2012-195

Contact: Diane Shasteen (217) 558-2012

November 21, 2014

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Peabody Coulterville Mining, LLC (“Applicant”) has applied for Section 401 water quality certification for impacts to approximately 1,628 linear feet of ephemeral streams (0.15 acres) and 2,827 linear feet of intermittent streams (0.47 acres), of unnamed tributaries to Plum Creek which is tributary to the Kaskaskia River. The proposed project encompasses Sections 15, 16, 21, and 22, Township 4 South, Range 5 West, is bounded by Jean, Sarah, and Zeigler Mine Roads, and is located at 13101 11 Zeigler Road, Coulterville, Randolph County, Illinois. The proposed permitted area covers 107.5 acres and is currently used for agricultural purposes with some wooded fence lines and wooded stream corridor. The purpose of the project is to construct a new refuse cell (“Refuse Cell 5”) contiguous to the active refuse area which receives coarse and fine refuse from the Gateway Mine preparation plant. Approximately five million cubic yards and seven years of coal refuse capacity will be created by construction of this cell. Refuse Cell 5 would utilize the existing embankments of Slurry Cell 3 and 4 for one side of the impoundment, with the remaining three sides contained by the above mentioned roadways. This project will maximize the storage capacity of the area while minimizing its environmental footprint.

In addition to the stream impacts, the proposed project will impact 0.67 acres of forested, emergent, and unconsolidated bottom low quality wetlands. Original mitigation was proposed for on-site stream and wetland construction. However in an effort to reduce temporal lag, the Applicant has proposed off-site mitigation in Mary’s River watershed consisting of forested wetland restoration and preservation, upland forest preservation, and Mary’s River preservation.

### **Identification and Characterization of the Affected Water Body.**

The ephemeral and intermittent streams to be impacted, unnamed tributaries (no Segment Codes) to Plum Creek have not been assessed by Illinois EPA. These streams are not listed as biologically significant streams in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*, nor are they given an integrity rating in that document. The USGS Illinois Streamstats basin characteristics program gives a watershed size of 0.44 square miles and 0.12 square miles for the unnamed tributaries. According to the Illinois State Water Survey, these unnamed tributaries are likely to be a 7Q1.1 zero flow streams. 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 in these headwater streams are tolerant of the effects of drying. Depending on the rainfall received before biological surveys, either a very limited aquatic life community, or no community at all would be found. Given this flow regime, no additional biological characterization would be required.

The Applicant contracted Wetland Services, Inc. to conduct a stream bioassessment to characterize the biological, chemical, and physical conditions of streams located in the project area. In May 2010, a bioassessment was conducted following the Environmental Protection Agency’s Rapid Bio-assessment

Protocol (RBP II) for wadeable and headwater streams. This assessment was completed on an intermittent stream (1MS2) located in the northwest corner of the proposed project site. Macroinvertebrate, fish, and chemical measurements including temperature, total dissolved solids, pH, and turbidity were collected. The macroinvertebrate community was dominated by tolerant taxa including Chironomidae (blood worms), Physidae (left handed snails), and Decapoda (crayfish). A macroinvertebrate Index of Biotic Integrity (mIBI) of 19.37 was calculated ranking the site as poor. No fish were collected at the site, and the results of chemical measurements included pH (8.5) and TDS (403 mg/L). Total RBP score for the site was 102. Physical habitat assessments consistently scored in the marginal to sub-optimal categories; the site was considered limited due to low channel flow status, low pool substrate character, and low pool variability.

Plum Creek (IL\_OZC-01), a direct tributary to the Kaskaskia River, is a General Use Water with an estimated zero cfs 7Q10 flow. According to the draft 2014 Illinois Integrated Water Quality Report and Section 303(d) List, Plum Creek has been assessed by Illinois EPA and is listed as fully supporting Aquatic Life use. Fish Consumption, Secondary Contact, and Aesthetic Quality uses have not been assessed. Plum Creek is listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*; it is not given an integrity rating in that document. Plum Creek is not designated as an enhanced water pursuant to the dissolved oxygen water quality standard.

A wetland assessment was completed by Wetland Services, Inc. at the proposed site. A total of 0.67 acres of forested (0.03), emergent (0.03), and unconsolidated bottom (0.61) wetlands were delineated in the project area. No floristic quality scores were given for these wetlands. However, the species lists from these sites contain common wetland species such as common cattails, barnyard grass, common duckweed, and phragmites; along with many facultative upland tree species such as Red Oak, Eastern Cottonwood, and Honey Locust. Based on these assessments, the wetlands located on site would be classified as low quality wetlands.

Impacts to these areas are unavoidable and off-site mitigation will consist of forested wetland restoration and preservation, upland forest preservation, and Mary's River preservation.

### **Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses.**

The pollutant load increases that would occur during this project include possible increases in suspended solids during construction. Prior to land clearing, the Applicant will construct appropriate sedimentation basins and upstream collection channels. The sediment basins will have a minimum 10-hour retention time and be constructed down-gradient of the coal refuse impoundment to collect surface runoff. Collection channels will utilize riprap or quickly germinating vegetation to minimize soil erosion.

The project will eliminate approximately 1,628 linear feet of ephemeral streams (0.15 acres) and 2,827 linear feet of intermittent streams (0.47 acres), unnamed tributaries to Plum Creek, a tributary to the Kaskaskia River. Approximately 0.67 acres of forested (0.03), emergent (0.03), and unconsolidated bottom (0.61) wetlands will be eliminated by the proposed construction.

### **Fate and Effect of Parameters Proposed for Increased Loading.**

The increase in suspended solids in the project area will be local and temporary. Erosion control measures mentioned above will be utilized to minimize any increase in suspended solids. All releases from the sedimentation basins will be regulated by Section 402 of the Clean Water Act and subject to NPDES (IL0062189) effluent discharge limits.

Original mitigation was proposed for on-site stream construction (4,500 linear feet) and on-site wetland construction (1.37 acres). Due to the lag time of this proposed mitigation, the Applicant has proposed the following off-site mitigation consisting of forested wetland restoration (8.0 acres), forested wetland preservation (20.1 acres), upland forest preservation (0.08 acres) and Mary's River preservation (0.6 acres). The proposed site is approximately 30.2 acres, of which 21.5 acres is forested wetlands and intermittent stream (Mary's River), located in the Mary's River watershed. Forested wetland restoration is planned for 8.0 acres currently in agricultural production. The mitigation area is located approximately 4.4 miles south of the proposed Refuse Cell 5 and is owned by a Peabody-owned company, American Land Holdings of Illinois, LLC. The ownership of the property is not expected to change in the future and the site will be protected by a deed restriction. The ACOE required an additional 0.5:1 mitigation ratio as compensation because the off-site mitigation area is outside the Plum Creek watershed. While off-site mitigation has been proposed the initial drainage network and sedimentation basins proposed on-site will still be utilized to accommodate runoff from the site and limit downstream sedimentation loading.

### **Purpose and Social & Economic Benefits of the Proposed Activity.**

The purpose of constructing Refuse Cell 5 is to provide approximately five million cubic yards (seven years) of coal refuse capacity for the existing Gateway and proposed Gateway North Mines. The coal preparation plant, located adjacent to the proposed construction site, separates non-combustible materials from the mined coal producing clean coal and refuse. This refuse is further divided into coarse or fine refuse; the fine refuse is blended with water producing slurry which is disposed of in a refuse cell. The construction of Refuse Cell 5 will provide continuation of mining activities, coal preparation plant operations, and provide slurry containment on site. The Gateway and Gateway North mines contain approximately 85 million tons of useable coal, which in turn could produce approximately 84 million megawatt-hours of electricity. This will allow for the continued employment of 250 Gateway Mine and coal preparation plant employees, and an anticipated 340 Gateway North Mine employees. The operation of the mines provides approximately \$250,000 per year in tax revenues for the surrounding counties and the State of Illinois. Nearly 50% of Illinois' electricity is generated from coal, the production of Illinois coal helps keep the cost of electricity low and provides affordable energy to Illinois' citizens and businesses.

### **Assessments of Alternatives for Less Increase in Loading or Minimal Environmental Degradation.**

The applicant has completed an analysis of the economic and environmental advantages and disadvantages of four alternatives. The results of the analysis are listed in Table 1 below. The preferred action alternative is the construction of Refuse Cell 5 due to land ownership, utilization of existing refuse cells as boundaries for the new cell, and the proximity to the existing coal supply (~ 85 million tons) and infrastructure including rail lines and the coal refuse facility. Alternatives 1-3 would result in significant and substantial company economic losses and lack of foreseeable returns due to prior investments in land, coal reserves, and equipment.

**Table 1: Project Alternatives for Peabody Coulterville Mining, LLC Refuse Cell 5**

| No Action Alternative  | Project Relocation Alternative   | Disposal Method Alternative-<br>dispose in adjacent<br>underground mining voids                                      | Preferred Action Alternative -<br>Refuse Cell 5 Project   |
|--|--|--|---|
| <b>Disadvantages</b>   |  |  |   |
| Fails to meet Applicant's purpose and need of utilizing Gateway Mine's and Gateway North Mine's viable coal reserves | Threatens coal supply to regional electric utilities while replacement supplies are located, acquired, and permitted | Threatens coal supply to regional electric utilities while replacement supplies are located, acquired, and permitted | Loss of function of the disturbed streams and wetlands located in the project footprint                                 |
| Threatens necessary coal supply for electric utilities   | Non utilization of Gateway and Gateway North Mines' viable coal reserves or existing facilities                      | Non utilization of Gateway and Gateway North Mines' existing facilities  | <b>Advantages</b>   |
| No assurance of disturbance to site without regulated requirements   | No assurance of disturbance to site without regulated requirements   | No assurance of disturbance to site without regulated requirements   | Disturbance minimized to maximum extent   |
| Continued degradation of jurisdictional waters from agriculture  | Increased impacts/disturbance to another site to produce/process the same amount of coal                             | Obtaining rights from surface owners to dispose of coal refuse in mining voids                                       | Maximizes coal recovery of the reserve; minimizes impacts/disturbances to another site by utilizing existing facilities |
| Loss of ~216 direct jobs; associated with closure of Gateway Mine  |  | Obtaining right of way for pipelines to deliver slurry to boreholes  | Continuation of ~216 direct jobs; associated with Gateway Mine  |
| Loss of ~35 jobs; associated with Gateway Mine preparation plant   |  | Limited by accuracy of underground mine maps for location of voids   | Continuation of ~35 jobs; associated with Gateway Mine preparation plant  |
| Loss of ~340 jobs; associated with not opening Gateway North Mine  |  | Bulkhead construction limited to underground workings that are dry   | Continuation of ~340 jobs; associated with opening Gateway North Mine   |
| Loss of ~ \$250,000 annual tax revenue for surrounding counties and state  |  | Injected slurry would displace existing water, resulting in new/increased discharge elsewhere                        | Continuation of ~ \$250,000 annual tax revenue for surrounding counties and state                                       |
| Loss of off-site mitigation protection through deed restrictions   |  | Maintaining adequate supply of makeup water needed to produce slurry that can be injected                            | Allows for the full utilization of the resource, supply to regional utilities and results in affordable electricity     |
| Loss of acquisition investments  |  |  | Recycle slurry water; decanted and reused in coal preparation plant   |
| <b>Advantage</b>   |  |  | Low hazard rating due to absence of surrounding structures  |
| Eliminates refuse expansion-related disturbances of streams and wetlands for Refuse Cell 5                           | Eliminates refuse expansion-related disturbances of streams and wetlands for Refuse Cell 5                           | Eliminates refuse expansion-related disturbances of streams and wetlands for Refuse Cell 5                           | Off-site mitigation through proposed deed restrictions  |
|  |  |  | Low potential for significant environmental or economic damage in event of failure                                      |

Conclusion:

The construction of the proposed project will follow conditions set forth by the Agency and USACE. The completion of the refuse cell construction project is the most cost effective, viable means for providing permanent coal byproduct storage for the existing Gateway and proposed Gateway North Mines. Sedimentation basins and diversions will be placed as close to Refuse Cell 5 to minimize the disturbance footprint and the effects to aquatic resources. Approximately 600 direct jobs, with a payroll of \$69 million annually, will be retained or created with the addition of Refuse Cell 5, which in turn allows for the continued operation of Gateway Mine and preparation plant and the expansion of the Gateway North Mine. The availability of high quality coal and a tax revenue base of approximately \$250,000 will remain uncompromised. Disturbance to ephemeral and intermittent streams and wetlands will be mitigated through the restoration and preservation of forested wetlands in the Mary's River watershed.

**Summary Comments of the Illinois Department of Natural Resources, Regional Planning Commissions, Zoning Boards or Other Entities**

An Eco-CAT endangered species consultation submitted on August 23, 2013 to the Illinois Department of Natural Resources resulted in no record of State-listed threatened or endangered species or protected natural areas in the vicinity of the project and consultation for IDNR Project #1402928 was immediately terminated.

**Agency Conclusion.**

This preliminary assessment was conducted pursuant to the Illinois Pollution Control Board regulation for Antidegradation found at 35 Ill. Adm. Code 302.105 (antidegradation standard) and was based on the information available to the Agency at the time the antidegradation review summary was written. We tentatively find that the proposed activity will result in the attainment of water quality standards; that all technically and economically reasonable measures to avoid or minimize the extent of the proposed increase in pollutant loading have been incorporated into the proposed activity; and that this activity will benefit the community at large by providing approximately 600 jobs and \$250,000 in tax revenues along with affordable energy to Illinois's citizens and businesses. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.