IEPA Log No.: **C-0317-12**
CoE appl. #: **2012-1006**

Public Notice Beginning Date: **December 20, 2013**
Public Notice Ending Date: **January 10, 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 Arclar Mining, LLC, 7100 Eagle Crest Boulevard, Evansville, IN 47115

Discharge Location: Sections 14, 15, 18, 19, 20, 22 and 23, T9S, R7E of the 3rd P.M. in Saline County near Equality

Name of Receiving Water: Unnamed tributaries of Cockerel Branch, Middle Fork Saline River and Rocky Branch, unnamed pond and unnamed wetlands

Project Description: Rocky Branch Mine.

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.

TJF:0317-12PN.docx

Fact Sheet for Antidegradation Assessment
Peabody Arclar Mining, LLC - Unnamed tributaries of Cockerel Branch, Middle Fork Saline River and Rocky Branch, unnamed pond and unnamed wetlands – Saline County
IEPA Log No. C-0317-12
COE Log# LRL-2012-1006
Contact: Eric Runkel (217) 558-2012
December 20, 2013

Peabody Arclar Mining, LLC (Applicant) is applying for a 401 water quality certification for impacts associated with a new surface coal mine. The Rocky Branch mine would be located east of the Cottage Grove mine, which is nearing completion of mining. Approximately 8.8 million tons of recoverable coal is within the multiple seam mine. Two pits are proposed for mining at Rocky Branch, Pit 1 (east) and Pit 2 (west). Pit 1 is located south of Illinois Route 13 approximately 3.6 miles west of the town of Equality, Illinois. Pit 2 is located south of Illinois Route 13 approximately 7.0 miles west Equality. Both areas are in Saline County, Illinois and approximately 3.4 miles apart. Stormwater runoff from 1091.8 acres of land would be routed through sediment basins and permitted outfalls. For the purposes of this assessment, it is assumed that the entire catchment area would potentially be mined. Multiple unnamed tributaries and Rocky Branch would be affected by this activity.

It should be noted that certain areas of Pit 2 still have an outstanding bond remaining associated with the Arclar Company's Big Ridge Mine and these areas were excluded from delineation and inclusion within this permit request.

Identification and Characterization of the Affected Water Body.

The unnamed pond (identified as 23W-9) and the unnamed tributaries of Cockerel Branch, Middle Fork Saline River, and Rocky Branch are classified as General Use water bodies with zero 7Q10 flow existing upstream. The largest watershed for a stream that would receive impacts from this mine is 1.95 square miles, which is located at the confluence of Rocky Branch and its' unnamed tributary that would receive this discharge. In southern Illinois, streams with five square miles of watershed or less are characterized as 7Q1.1 zero flow streams and are therefore expected to have at least seven days of continuous zero flow nine out of ten years. Given their small size, these water bodies have not been assessed under the Agency's 305(b)/303(d) program and have not been given an integrity rating or been listed as biologically significant in the 2008 Illinois Department of Natural Resources publication Integrating Multiple Taxa in a Biological Stream Rating System. The water bodies are not enhanced in regards to the dissolved oxygen water quality standard.

Despite the small size of the streams onsite, the Applicant conducted stream assessments on September 4-5, 2012 to characterize the biological, chemical, and physical conditions of these headwater streams. Sampling was conducted at seven locations throughout the site on Rocky Branch and unnamed tributaries of the Middle Fork Saline River. The watershed areas above the sampling locations range from 0.06 – 1.4 square miles. Sampling was conducted during a time of high stream flow due to locally heavy rainfall (over 2.5 inches) in the preceding week. Collection, processing, and analysis of fish and macroinvertebrates were conducted following Agency procedures as best as possible. Physical habitat assessments at each site were conducted using the Environmental Protection Agency's Rapid Bio-assessment Protocol (RBP II) for wadeable and headwater streams. Chemical measurements included temperature, conductivity, total dissolved solids, pH, turbidity, iron (total) and manganese (total).

In general, a macroinvertebrate Index of Biotic Integrity (IBI) of ≥41.8 and a fish IBI of ≥41 are required for a stream to be fully supportive of aquatic life use. The results from the biological survey concluded that fish and macroinvertebrate populations were found to be below these indices, which is in line with the Agency's perspective of small headwater streams in that the biological communities found in these streams are adapted to stream drying and are not expected to be comparable in quantity or diversity to biological communities found in perennially flowing waters. Fish sampling was performed at all sites with flowing water (sites 1, 2, 3 and 6). Fish IBI scores ranged from 26 – 36 placing sites in the categories "poor" to "fair." Fish IBI scores were limited by low diversity in species richness, specifically minnows and suckers, low percentages of carnivore species, and relatively low numbers of individuals. Site 2 displayed the most diverse fish community and was the only site not dominated by juvenile sunfish. Macroinvertebrate IBI results ranged from 15.2 – 39.2, placing two sites (4 and 5) in the "poor" category and the remaining sites in the "fair" category. Notable metrics that limited macroinvertebrate IBI scores were low diversity and numbers of Ephemeroptera taxa, absence of intolerant taxa, and low overall taxa richness. Increased diversity and stable proportions of macroinvertebrates exhibiting scraper feeding behavior elevated site 1 scores above all other sites.

Water chemistry analyses found all stream sites to be attaining water quality standards. Sites 2 and 3 displayed significantly higher conductivity, total dissolved solids and pH levels, likely due to this segment of Rocky Branch receiving drainage from areas that were reclaimed by the Illinois Abandoned Mine Land program. Physical habitat assessments consistently scored in the marginal to sub-optimal categories. Total RBP scores for bio-assessment sites had a range of 74 – 115. Variation in stream habitat across the site was low. Total RBP scores at bio-assessment sites were limited most by increased sediment deposition, low pool variability, low sinuosity, low bank stability/vegetative protection, and low vegetative zone width.

Downstream waters that may be impacted by drainage from the disturbance area include Cockerel Branch, the Middle Fork Saline River, and Rocky Branch. Cockerel Branch and Rocky Branch (Segment ATZB) are classified as General Use water bodies with zero 7Q10 flow existing upstream of the project area. Given their small size, these water bodies have not been assessed under the Agency's 305(b)/303(d) program and have not been given an integrity rating or been listed as biologically significant in the 2008 Illinois Department of Natural Resources publication Integrating Multiple Taxa in a Biological Stream Rating System. The water bodies are not enhanced in regards to the dissolved oxygen water quality standard.

The Middle Fork Saline River (Waterbody Segment ATG-03) is listed on the draft 2012 Illinois Integrated Water Quality Report and Section 303(d) List as impaired for aquatic life use (causes = alteration in streamside or littoral vegetative cover (non-pollutant), changes in stream depth and velocity patterns (non-pollutant), aquatic plants (macrophytes) (non-pollutant), dissolved oxygen, chloride, phosphorus (total), sedimentation/siltation, and total suspended solids (TSS)). The water body is not listed as a biologically significant stream but has been given a "C" integrity rating in the 2008 Illinois Department of Natural Resources Publication Integrating Multiple Taxa in a Biological Stream Rating System. The water body is not enhanced in regards to the dissolved oxygen water quality standard.

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

A total of 35,093 linear feet of streams, including 8,540 linear feet of Rocky Branch (intermittent), 16,731 linear feet of ephemeral stream, 6,624 linear feet of intermittent stream, and 3,198 linear feet of perennial stream will be eliminated by the proposed activity. Approximately 6.13 acres of wetland will be eliminated by this proposed activity. Approximately 6.71 acres of open water will be impacted.

Fate and Effect of Parameters Proposed for Increased Loading.

The increase in suspended solids will be local and temporary in downstream reaches that will not be filled during mining. Streams restored on site will be designed to provide a variety of habitats. Aquatic communities at least as diverse as currently inhabit streams will return upon reclamation. A total of 26,729 linear feet of streams will be reconstructed on the applicant's property to mitigate the 35,093 linear feet lost due to mining activities. The streams restored will be constructed to an 'as good or better' quality than previously existed. Wetland functions will improve due to the consolidation of scattered wetlands and conversion to a wetland type native to the area. A total of 9.87 acres of wetlands will be restored to mitigate the 6.13 acres lost due to mining activities. At least 7.0 acres of open water will be created or enhanced to a better condition than currently exists. Stream mitigation will not be allowed to intersect open waters. Some permanent open waters will be allowed to develop into wetlands. A 5-year performance period of monitoring will be employed by the applicant to ensure compliance with projected goals of wetland, stream and open water mitigation. The proposed mitigation is designed to ensure that aquatic functions are replaced. The applicant is also proposing an avoidance area for Pit 1 in the upper watershed valley to minimize and reduce impacts with the permit area. The avoidance area contains stable, low to high gradient streams and is entirely comprised of mature soft to hard mast tree species. The avoidance area, which covers an area approximately 27.6 acres, will not disturb a total of 4,455 linear feet of streams that includes 3,079 linear feet of ephemeral streams and 1,356 linear feet of intermittent streams. Sediment and erosion control measures; including using sedimentation basins, planting fast germinating vegetation, riparian buffers, replacing topsoil in loose lifts, and constructing terraces across steep slopes that would be prone to erosion will be utilized. No adverse impacts to streams would occur as all water quality standards are expected to be met in the receiving waters.

Purpose and Social & Economic Benefits of the Proposed Activity.

The surface mine would extract the coal resources of the site. According to information given by the applicant there would be significant social and economic losses experienced by the local economy if the mining plan does not proceed as planned. Specifically, 200 direct jobs with a payroll of $21.6 million annually would be lost along with many other spin off jobs resulting from the proposed mining activity. The economical availability of high quality coal that is essential to the local, state and national economy could be compromised. Direct and indirect tax revenues that would have been able to help stimulate the local and state economy would be lost. The company's economic losses would be significant and substantial due to investments in land, coal reserves, equipment with no foreseeable return on investment.

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

Project Relocation:

This is not a viable alternative as essentially the same or more aquatic resources would be encountered at any mining location in the Midwest. Also, the potential mining locations are dictated by the site specific geology. Unlike other industries, coal mining cannot relocate to another area just to divert potential impacts. The mine must be located where the mine-able reserve is located.

Alternative Mining Techniques:

Underground mining was evaluated for this site and deemed unacceptable. It was estimated that only 12.5 percent of the available coal reserve would be recoverable utilizing an underground mining technique. This significant reduction in reserve would not support the existing and future investment for the mining infrastructure.

Auger Technique:

Limited auger use may be possible along fringe areas where only a single seam is present, but it is not a feasible alternative to replace surface mining. Multiple seams existing in the coal reserve, low resource recovery by auger method, elevation changes, rolling coal seams, and general configuration of the mining plan make this option unacceptable.

Pod Mining:

This technique consists of excavating smaller pits in-between the aquatic resources. That would make this mining economically infeasible because mining costs would more than double while coal recovery would diminish dramatically. Also, more "lay back" area would be needed to allow for safe operating conditions as seam depth increased compared to the width of pit. And, the overburden from each pit would have to be stockpiled and then replaced immediately back into the same pit after coal removal, as opposed to conventional surface mining where pits advance continuously with overburden being deposited in the previous pit. Additionally, coal recovery would be missed from under each aquatic resource utilizing this technique. This alternative was eliminated from further consideration because of the increase in cost of recovery and the lowering of recoverable coal reserves.

No Mining:

No mining as a means to reduce pollutant loading is not a reasonable alternative due to associated economic losses and given that water quality standards are expected to be met. Mining at Rocky Branch would allow for continued employment of miners from the Cottage Grove mine which is soon to be closed. The proposed mine would provide approximately 200 direct jobs with an annual payroll of approximately $21.6 million annually. Many of these employees would be long term miners and are not currently trained for other employment. The mining industry is vitally important to the local economy of Saline Counties and the surrounding counties as well as to the region and state. Approximately 42% of the electricity produced in the United States and approximately 35% of the electricity produced in Illinois comes from coal-fired power plants. It is, therefore, vital to the local, state, and national economy that available high quality coal be mined to maintain a continuous supply of fuel to the coal-fired power plants. Economic losses would occur if sufficient electricity is not provided to energy consumers. The loss in tax revenue to Illinois and Saline County, both direct and indirect would be significant, particularly when a replacement industry is unknown. In addition, the economic loss to the company, should no mining at the site occur, would be substantial because of the significant investment in land, coal reserves, permitting expenses, and mining equipment made by the company using a business plan dependent on maximizing recovery of the coal reserve.

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

The IDNR EcoCAT system was consulted on June 19, 2012 in regards to the proposed Pit 1 mine. It was determined that no threatened or endangered species or protected natural areas are in the vicinity of the areas and consultation was immediately terminated. The IDNR EcoCAT system was also consulted on June 19, 2012 in regards to the proposed Pit 2 mine. It was determined that protected resources (Hart Woods INAI Site, Pruett Woods Natural Heritage Landmark) may be in the vicinity of the project location. IDNR has evaluated this information and has concluded that adverse effects are unlikely. Consultation was therefore terminated as stated in the June 19, 2012 letter from Pat Malone.

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 would result in the attainment of water quality standards; that all existing uses of the receiving streams would be maintained; 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 would benefit the community at large by preserving existing mining jobs and the ancillary economic benefits of these jobs to the local economy. Comments received during the 401 certification public notice period will be evaluated before a final decision is made by the Agency.