



**Peabody Arclar Mining, L.L.C.
Wildcat Hills Mine –
(Cottage Grove Pit/ Wildcat UG)**

**401 Water Quality Certification
Responsiveness Summary**

Regarding

September 15, 2011 Public Hearing

Illinois Environmental Protection Agency
Office of Community Relations
December 2011

**Peabody Arclar Mining, L.L.C.
Wildcat Hills Mine (Cottage Grove Pit/Wildcat UG)
401 Water Quality Certification -- Responsiveness Summary**

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Final December 7, 2011

Peabody Arclar Mining, LLC
Wildcat Hills Mine (Cottage Grove Pit/Wildcat UG)
401 Water Quality Certification
IEPA Log. No. C-0283-10

ILLINOIS EPA DECISION

On December 7, 2011, the Illinois Environmental Protection Agency (Illinois EPA) issued the **Peabody** Arclar Mining, LLC, a 401 Water Quality Certification for Wildcat Hills Mine Cottage Grove Pits 9 and 10.

The Illinois EPA made this determination in accordance with 35 Illinois Administrative Code Subtitle C (*Water Pollution*), the Illinois Environmental Protection Act and the federal Clean Water Act. The Section 401 certification process is governed by the provisions of 35 Illinois Administrative Code 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-12063/>

PRE-HEARING PUBLIC OUTREACH

The 401 Water Quality Certification hearing notice was published in the Harrisburg *Daily Register* on August 3, August 9 and August 16, 2011.

The hearing notice was mailed or e-mailed to:

- a) Adjacent land owners,
- b) Gallatin and Saline County officials,
- c) Municipal officials in Eldorado, Equality, Harrisburg and Ridgeway as well as state and federal elected officials,
- d) Corps of Engineers and the IDNR Office of Mines & Minerals, and
- e) Illinois Chapter of the Sierra Club and Prairie Rivers Network (hearing requestors).

The hearing notice was posted on the Illinois EPA website:

<http://www.epa.state.il.us/public-notices/sec-401-notices.html#peabody-arclar-wildcat-401>

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

September 15, 2011 PUBLIC HEARING

Hearing Officer Dean Studer opened the hearing September 15, 2011, at 7 p.m. in the SIC Foundation Center, 540 North Commercial St. in Harrisburg, Illinois.

Illinois EPA presentations:

Thaddeus Faught, 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 8 p.m. on September 15, 2011.

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

Approximately 35 persons representing neighbors, interested citizens, Prairie Rivers Network, Members of the Vineyard Indian Settlement, United Mine Workers of America, and Peabody Energy participated in or attended the hearing.

A court reporter prepared a transcript of the public hearing which was posted on the Illinois EPA website on September 19, 2011.

The hearing record remained open through October 6, 2011.

Background of Wildcat Hills Mine - Cottage Grove Pits Numbers 9 and 10 401 Water Quality Certification

Saline and Gallatin Counties

The IEPA Bureau of Water has received an application for a Section 401 water quality certification (Log. No. C-0283-10) for discharge of dredge or fill materials into waters of the United States associated with a Section 404 permit application (CoE appl. # 2010-588) received by the United States Army Corps of Engineers. The address of the applicant is Peabody Arclar Mining, LLC, 7100 Eagle Crest Boulevard, Evansville, Indiana.

The applicant has applied for a 401 water quality certification for impacts associated with **Wildcat Hills Mine – Cottage Grove Pits 9 & 10**, located in portions of Sections 2, 11 and 12, Township 9 South, Range 7 East and portions of Sections 7, 8 and 17, Township 9 South, Range 8 East, in Saline and Gallatin Counties. The purpose of this project is to extract bituminous coal by surface mining methods. Maximum recovery of the coal seam would require excavation of overlying materials including existing streams and wetlands. The permit area contains 33 jurisdictional streams and 6 jurisdictional wetlands. Grading and filling associated with the mining operation would directly impact approximately 13,732 linear feet of intermittent streams and approximately 8,797 linear feet of ephemeral streams. Additionally, 0.03 acres of forested wetland and 0.84 acres of emergent wetland would be filled.

The mitigation plan for the proposed stream impacts includes the establishment of a total of 18,131 linear feet of streams. The jurisdictional wetlands planned for disturbance will be mitigated off-site and in advance of the mining disturbance. Existing wetlands would be mitigated with the creation of 2.25 acres of temporarily flooded broad-leaved deciduous forested wetlands.

The permit application is available for examination at the IEPA offices in Springfield. The public notice/fact sheet can be viewed on the IEPA website:

<http://www.epa.state.il.us/public-notices/sec-401-notices.html#peabody-arclar-wildcat-401>

Comments, questions and concerns in regular type
Illinois EPA responses in bold type

Responses to Comments, Questions and Concerns

Antidegradation Assessment

1. Under antidegradation regulations, which falls under the 401 certification authority, it is required that alternatives be evaluated to the additional pollutant loading and an avoidance analysis needs to be completed. I don't see in the permit any alternatives presented to damming the streams and using them as treatment basins; nor do I see an avoidance analysis.

Since Illinois EPA is charged with making sure that alternatives and avoidance analysis be evaluated, how will you make this happen?

The Applicant provided the following response. The Illinois EPA (Agency) concurs with the Applicant's response:

An alternative analysis is provided in the Section 404 Permit and 401 Water Quality Certification Applications. This includes an avoidance analysis.

It should also be noted the existing streams are made up of straight cut agricultural drainage ditches with little or no riparian buffer. The mitigation plan includes more stable natural stream design with significant forested riparian buffers. Avoidance of existing streams would result in the continued intensive agricultural practices immediately adjacent to the stream banks, and a lost opportunity for stream and habitat enhancement.

All sediment basins are being constructed off-line from existing streams with the exception of sediment basin 031. The location of each basin has been chosen to maximize water treatment efficiency by taking into account topography, property control boundaries, coal extraction boundaries and existing vegetation. Sediment basin 031 is located in an existing agricultural drainage ditch and will be mined through during the extraction process. Therefore, the same portion of stream will be impacted regardless of basin placement. In most instances, it is a best management practice to construct sediment basins in an existing drainageway as close to the coal extraction area as possible. This practice helps ensure consistent, effective stormwater retention and minimizes advanced watershed disturbance.

2. In the antidegradation assessment, it states that there was previously failed stream mitigation that will now be mitigated. What stream mitigation failed and what will be done to correct it?

The mitigation of Cockerel Branch, as required in Permit LRL-2004-353-gjd, has not been completed due to expansion of the mining area and adjacent mine support activities such as coal stockpiles, soil stockpiles, sediment basins, and haul roads in Pit 10. The stream has been constructed per the specifications set in Permit LRL-2004-353-gjd, but the rock control structures and associated riparian buffers have not been completed. Since this mitigation is not yet completed, monitoring and an evaluation of mitigation success have not yet begun.

As stated in the 401 Water Quality Certification Application for impacts at Cottage Grove Pits 9 and 10, a portion of Cockerel Branch, which has yet to be completely mitigated, was delineated as meeting the USACE wetland criteria rather than identified as a stream due to restriction of water flow. The discussion in the permit narrative (and antidegradation assessment) about the crushed haul road culverts in a section of Cockerel Branch was included as a possible cause for the flow restriction. Corrective actions will take place to ensure that this impacted segment will meet the mitigation requirements specified in Permit LRL-2004-353-gjd. Once the haul road culverts are removed, the impacted segment of Cockerel Branch will be re-graded in order to facilitate proper flow and sediment conveyance. Riparian buffers and rock control structures will then be added and the mitigated area will then be subject to monitoring and the mitigation success criteria specified in LRL-2004-353-gjd.

In regards to the impacts occurring to Cockerel Branch covered under this 401 Water Quality Certification, Cockerel Branch will be reconstructed with a more stable two-stage design which will improve channel stability while increasing ecological function by providing a narrower channel within a larger trapezoidal channel to improve sediment conveyance and increase flow depth during low flow periods. Fifty-foot riparian buffers will also be incorporated on each side to provide in-stream cover and shade. Channel stability will be improved by the reduction of bank erosion within the channel during larger flows.

It should be noted that in addition to the requirements to provide stream mitigation to the “wetland” segment of Cockerel Branch, the Applicant will also provide wetland mitigation for the 0.58 acre “wetland” portion of Cockerel Branch that had developed due to the incomplete stream mitigation of Permit LRL-2004-353-gjd. The applicant will provide mitigation for these impacts by constructing 1.74 acres of forested wetlands in the Eagle Creek mitigation area.

3. Regarding the failed mitigation, there was destruction of natural water bodies, but the mitigation that was required wasn't fully realized. What steps are you going to take to make sure that what's being proposed under the 404 permit and the 401 certification will actually be realized to the fullest extent that's being promised by the applicant in this planned expansion?

Conditions of the 401 Water Quality Certification (WQC) require the Applicant to follow their approved mitigation plan which includes corrective measures if performance standards are not met.

4. Could the Agency provide a number indicating how many linear feet of streams have been impacted already by this entire mine site?

Based on US Army Corps of Engineers requirements at the time of each permit, there are impacts to approximately 38,720 feet of stream at the Cottage Grove mine.

5. There are a number of strip mines upstream in the watershed, and we would ask whether that has been taken into consideration in the antidegradation assessment? It speaks to the cumulative effects of mining in the area on the stream.

This question of cumulative effects of mining in the area is answered in the Responsiveness Summary for the NPDES Permit, under Water Quality Standards, Response #21.

6. We strongly oppose the approval of the Peabody Arclar Mining, LLC NPDES permit. Pollution to our waterways is already a serious threat to both public health and the surrounding natural environment. Surface runoff high in sulfates continually flows into the Saline River watershed from abandoned mines. Many locals that previously drew water from nearby creeks and wells for domestic uses are now unable to because of contamination. Miles of creeks and rivers that were once prime fishing grounds now contain no visible aquatic life.

Illinois EPA's 305(b)/303(d) assessment program serves as a means to monitor the chemical, physical, and biological health of the Saline River watershed, and restore the integrity of waters that become impaired. Having assessed these streams for several years, the Agency has not observed any instances where miles of creeks and rivers once containing an abundance of fish have been degraded to the extent that visible aquatic life is no longer present.

The surface waters that would be impacted by this 401 Certification and authorized to receive NPDES permit discharges are not listed as impaired for any designated uses due to sulfate. The NPDES permit will regulate sulfate to attain the water quality standard in the receiving waters at all times.

Illinois EPA is not aware of any past or present domestic use of these surface waters and therefore has not designated any of the receiving waters as being used for human consumption, which are afforded additional protection for parameters such as sulfate.

The Agency does not have knowledge of any specific threat to potable wells. Groundwater monitoring is in place to identify potential

contamination, should it occur from the mine. If local residents have specific concerns about potable well contamination from the mine, they can file a complaint with IDNR, as that agency has a program in place to investigate and replace, if necessary, private potable wells that are affected by mining.

7. Regarding how the Agency accounts for fish species under the antidegradation assessment – in the most downstream sample point, there was a fish IBI of around 30. It is my understanding that the proposed project would be creating sedimentation basins under this 401 permit to hold backflow to downstream segments of Cockerel Branch. Cockerel Branch is right on the border of being able to support some fish species for parts of the year, and some people fish there. Does the agency anticipate that decreased flow in that area, due to the sedimentation basins, will impact fish? How is that accounted for in the assessment?

Any decreased flow in Cockerel Branch due to stormwater retention within sedimentation basins would be local and temporary. The three fish species observed in the biological assessment (blackstripe topminnow, creek chub, and mosquitofish) are pioneering species that are adapted to the reoccurring presence and absence of water in headwater streams.

The temporary impacts to Cockerel Branch, and its inhabitants, are accounted for in the antidegradation assessment and would be offset with enhanced mitigation (two-stage channel design), which would restore and potentially enhance this aquatic ecosystem.

Additionally, the Applicant has proposed to perform yearly biological monitoring of mitigated streams (including Cockerel Branch) to measure the rate of species migration into the mitigated streams. Sampling protocols would be similar to those used in the pre-mining biological assessments. Monitoring would begin the first full year after the riparian buffers have been planted and would continue for a minimum of five years. The monitoring would be used to measure the rate of species migration into the mitigated streams.

8. **Comment:** You need to carefully evaluate proposed destruction of water bodies that are headwater streams or wetlands that provide a pretty significant function within the watershed. Many people rely on this water body for fishing and recreation as well as aesthetic purposes. We need to see that the Illinois EPA is holding the applicant to the highest standard.

The proposed project has been evaluated by several governmental authorities, including IDNR, US Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE), and Illinois EPA. The application was reviewed in accordance with section 401 of the federal Clean Water Act and 35 Ill. Adm. Code Part 395 to ensure that the impacts are appropriately mitigated.

Legal Issues

1. Regarding question # 1 above (under Antidegradation Assessment), it is required that alternatives be evaluated to damming a stream or creating a treatment basin. The Illinois Pollution Control Board ruled in a case a few years ago at New Lennox that an affordability analysis needs to be done using USEPA interim economic guidance for water quality standards. We would like to see that applied here regarding an alternative of avoiding impacts to damming up streams. It seems that the applicant would have to prove they cannot afford avoidance in their request to dam the streams and use them as treatment basins.

An alternatives and avoidance analysis was submitted with the joint Section 404 Permit and 401 Water Quality Certification Applications. All sediment basins are being constructed off-line from existing streams with the exception of sediment basin 031. In making the decision to place sedimentation basin 031 where proposed, an economic evaluation is not relevant since the entire drainage area will be mined and replaced through its entire length all the way downstream to the off-site undisturbed channel.

The location of the basin is instead an avoidance and technical issue that is based on mining and coal extraction limits, topography and flow gradients, etc. It should also be noted the existing streams are made up of straight cut agricultural drainage ditches with little or no riparian buffer. The mitigation plan includes a more stable and enhanced stream design with significant forested riparian buffers which will have a post-mining easement placed on the reconstructed channel and riparian buffer. Avoidance of existing streams would result in the continued intensive agricultural practices immediately adjacent to the stream banks, and a lost opportunity for stream and habitat enhancement.

The location of each basin has been selected to maximize water treatment efficiency by taking into account topography, property control boundaries, coal extraction boundaries and existing vegetation. Sedimentation basin 031 is located in an existing agricultural drainage ditch and will be mined through during the extraction process. Therefore, the same portion of stream will be impacted regardless of basin placement. Furthermore, in most instances, it is a best management practice to construct sediment basins in an existing drainageway as close to the coal extraction area as possible. This practice helps ensure consistent, effective detention and minimizes additional watershed disturbance.

2. We see that over 4 miles of streams will be destroyed as a result of the proposed expansion. Wetland acres will also be lost. Under what authority is the Illinois EPA allowing this to happen?

Impacts to the streams and wetlands were processed under the authority of Sections 404 and 401 of the Clean Water Act in coordination with the U.S. Army Corps of Engineers and 35 Ill. Adm. Code Part 395 and Subtitle C.

This includes review of alternatives to avoid and minimize impacts to Waters of the U.S. and, in this case, requires mitigation for any unavoidable impacts.

3. According to the federal Clean Water Act (CWA) and the Illinois Environmental Protection Act, allowing strip mining through streams and wetlands or damming the headwaters of a stream to form treatment basins is specifically prohibited (35 IL Admin. Code 301.440), which states that “nothing herein contained shall authorize the use of natural or otherwise protected waters as sewers or treatment works except that in-stream aeration under agency permit is allowable.”

Additionally, Illinois EPA is charged with ensuring that water quality standards be met in all waters of the state (35 IL Admin. Code 302.210). I would argue that it is not the intent of Peabody Arclar, in the permit application before the Agency, to meet water quality standards in the impoundment. They are using it to meet standards downstream.

35 Ill. Adm. Code Section 301.440, prohibits damming of a stream or headwaters of the stream 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 nor waters of the State as defined by 35 Ill. Adm. Code Section 301.440. 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.

Stream Characterization

1. Since this project is changing the hydrological regime in a major way by impounding the water, how does Illinois EPA evaluate water quality considerations given that the release of water from ponds is precipitation driven and somewhat water quality driven? How do you consider both water quality implications and the hydrologic implications to ensure that the existing uses for aquatic life are preserved in the proposed 404 project?

As described in #7 (Antidegradation Assessment section), any decreased flow due to stormwater retention within sedimentation basins would be local and temporary. Given that the streams that would receive NPDES Permit-regulated discharges from the sedimentation ponds are headwater streams, the organisms inhabiting these streams are adapted to the reoccurring presence and absence of water. The temporary impacts to Cockerel Branch, and its inhabitants, are accounted for in the antidegradation assessment and would be offset with stream mitigation. The applicant has proposed to perform yearly biological assessments (for five years) of mitigated streams, which would be used to measure the success of mitigation and ensure that existing uses for aquatic life are preserved.

2. How do you work through the physical and the chemical parts of evaluating the plan for impounding the stream? It would be helpful for us to understand how you ensure that both physical and chemical considerations are taken into account.

Discharges from the sedimentation basins are regulated by the NPDES permit. The physical impacts of impounding headwater streams are considered, and the temporary impacts that may occur are accounted for and offset with stream mitigation efforts. Chemical considerations are accounted for through the development and regulation of water quality standards-based effluent limits at each outfall in the NPDES Permit.

Mitigation Plans

1. We object to the plan that does not compensate 100 percent for what areas will be destroyed. The planned disturbances will destroy a total of 22,530 linear feet of the river, and approximately four miles of ephemeral and intermittent streams. However, only 18,131 feet of stream are proposed for restoration, and this represents only 80 percent of what will be lost. Why wouldn't the Applicant be responsible for mitigation 100 percent of what will be lost?

The proposed mitigation plan was developed by the applicant with oversight and approval from the USACE and Illinois EPA. As described in the Antidegradation Assessment, the ephemeral streams located in mixed, reclaimed, and agriculture land use settings would be mitigated at a 0.5:1 ratio, which results in approximately 80% of the total stream lengths being mitigated.

Rather than replacing ephemeral streams from these land use settings at a 1:1 ratio, the applicant proposed to mitigate these streams with in-stream enhancements and increased riparian buffers widths. The mitigation plans for these ephemeral streams have been explained in the Section 404 Permit and 401 Water Quality Certification applications, as well as the antidegradation assessment.

The USACE and Illinois EPA have determined that the mitigation plans for the proposed impacts to ephemeral streams are satisfactory. The mitigation plan would provide appropriate in-stream restorations to the ephemeral drainageways and would appropriately return the disturbed area to its pre-mining land uses. The in-stream enhancements will allow for aquatic functions to be restored without a 1:1 replacement of linear feet of stream.

2. We object to the planting plan proposed for repairing of riparian corridors. It lacks adequate tree species diversity, refers to unnamed species of herbaceous, grass and clover species – any of which could be unsuitable and/or non-native invasive species and may be unsuitable for wet conditions.

The plan calls for six tree species – yellow poplar, persimmon, red oak, white oak, hickory and black walnut. It calls for five species of grasses; unnamed species of clovers; and a minimum of five unnamed herbaceous species of ground cover. We question the suitability of the proposed tree species. The Illinois Department of Natural Resources Regional Forester, Gary Stratton, recommends species that will do well in both wet and dry conditions, such as burr oak, swamp oak, white oak, cherry bark oak, pin oak, pecan or shell bark hickory.

We would like to see a complete list of the proposed species of trees, grasses and clovers that are intended for the project. Additionally, there is no mention of a shrub layer in the plan. We would like to see the addition of specific species of shrubs proposed for the project. Is it possible to receive the complete list of proposed species before the end of the comment period, so we can properly evaluate the corridors mitigation plan?

The vegetative species list is appropriate for the site. Herbaceous vegetative species are needed initially for protection of the soil resource during its most fragile period. Tree and tree root growth will gradually shade out the initial herbaceous species as the need subsides.

It should be noted that riparian planting table (Section 3, page 35 of the permit application) contains “Quercus spp.” and “Carya spp.”, which signifies that multiple species for each genus will be utilized in the plantings. The table (see below) has been revised to specify the species (rather than genera) that may be used in the riparian plantings. The revised table includes species recommended by the IDNR regional forester. The final species used will be from the approved list, but also determined by nursery availability and the presence of micro sites within the mitigation areas. Peabody Arclar Mining employs a credentialed experienced forester with extensive coal mine reforestation experience.

Forest/Wildlife Habitat for Stream Buffer Areas			
Scientific Name	Common Name	Seeding or Planting Rate	Method of Application
Dactylis glomerata	Orchard Grass	10 lb/ac	Broadcast
Trifolium pratense	Red Clover	4 lb/ac	Broadcast
Bromus spp.	Brome Grass	10 lb/ac	Broadcast
Agrostis alba	Red Top	2 lb/ac	Broadcast
Trifolium hybridum	Alsike Clover	3 lb/ac	Broadcast
Trifolium spp.	Ladino Clover	3 lb/ac	Broadcast
Lolium perenne	Rye Grass [perennial]	10 lb/ac	Broadcast
Liriodendron tulipifera	Yellow Poplar	600 seedlings/ac	Mechanical or Hand
Diospyros virginiana	Persimmon	600 seedlings/ac	Mechanical or Hand
Quercus spp.	Red Oak species	600 seedlings/ac	Mechanical or Hand
Red Oak Species may include			
<i>Quercus coccinea</i>	Scarlet Oak		
<i>Quercus</i>	Northern Pin Oak		

<i>ellipsoidalis</i>			
<i>Quercus imbricaria</i>	<i>Shingle Oak</i>		
<i>Quercus marilandica</i>	<i>Blackjack Oak</i>		
<i>Quercus palustris</i>	<i>Pin Oak</i>		
<i>Quercus rubra</i>	<i>Northern Red Oak</i>		
<i>Quercus velutina</i>	<i>Black Oak</i>		
<i>Quercus shumardii</i>	<i>Shumard Oak</i>		
Quercus spp.	White Oak species	600 seedlings/ac	Mechanical or Hand
<i>White Oak Species may include</i>			
<i>Quercus alba</i>	<i>White Oak</i>		
<i>Quercus bicolor</i>	<i>Swamp White Oak</i>		
<i>Quercus lyrata</i>	<i>Overcup Oak</i>		
<i>Quercus macrocarpa</i>	<i>Bur Oak</i>		
<i>Quercus michauxii</i>	<i>Swamp Chestnut Oak</i>		
Carya spp.	Hickory	600 seedlings/ac	Mechanical or Hand
<i>Hickory Species may include</i>			
<i>Carya glabra</i>	<i>Pignut Hickory</i>		
<i>Carya ovata</i>	<i>Shagbark Hickory</i>		
<i>Carya cordiformis</i>	<i>Bitternut Hickory</i>		
<i>Carya laciniosa</i>	<i>Shellbark Hickory</i>		
Juglans nigra	Black Walnut	600 seedlings/ac	Mechanical or Hand

Shrubs are not included in the planting plan as a hardwood forest is the mitigation objective for these areas. The USACE has set the goal of mitigation planting only hard-mast tree species, with the exception of persimmon, in part to compensate for an overall loss of hardwood forests throughout the United States. Plant competition can be a significant inhibitor to the successful restoration efforts using slow-growing hard-mast species; therefore, efforts to limit competition are required.

In regards to volunteer invasive, undesirable, and exotic species that potentially may migrate into the mitigation the following methods may be used for eradication during the monitoring period. Mowing, target tilling, or hand removal can be employed to discourage and eradicate undesirable volunteer species. Targeted herbicide treatment could be implemented following the manufacturers' instructions, but the specific eradication measures will be determined by the specific site conditions. If some volunteer species provide beneficial support that warrants them to remain in the mitigation site, a request to not remove those species will be submitted to the USACE for approval.

Illinois EPA does not expect to receive a final list for the chosen species for vegetative restoration project. The final choice of vegetative species will be from the approved list (above) when the restoration project begins, and it is monitored by the Army Corps of Engineers.

3. We object to the wetland mitigation planting plan for similar reasons as stated above. It lists the same tree species and is vague about the grasses and clover.

For wetland mitigation, red oak (*Quercus rubra*) and white oak (*Quercus alba*) are not suitable for wetlands. Good oak species suitable for wetlands includes burr oak, swamp white oak, overcup oak, and pin oak (with the caution about not too many pin oaks because of their susceptibility to galls). Please refer to the USGS Midwest wetland floral species (submitted as an exhibit).

Again, we ask for a complete list of all species proposed for the wetland mitigation so that we can properly evaluate it. We request a wetland (as well as riparian river corridor) plan that contains only native species, contains more species diversity, including a shrub layer, and has a comprehensive list of plants with scientific names, so we know what we are talking about. We request ample time beyond the stated close of the comment period to review the plant list.

See answer 2 above for clarification for the lack of shrub species in the planting lists. In regards, to the species planted in the wetland mitigation, the following table from the permit application specifies the tree species by wetland indicator status type, as discussed in the National List of Plant Species that Occur in Wetlands report for the National Wetlands Inventory. It states that for the red and white oak genus, along with the hickory genus, OBL, FACW, or FAC species should be used in the wetland mitigation.

OBL (Obligate) species occur almost always under natural conditions in wetlands. FACW (Facultative Wetland) species usually occur in wetlands, but occasionally found in non-wetlands. FAC (Facultative) species are equally likely to occur in wetlands or non-wetlands. FACU (Facultative Upland) and UPL (Obligate Upland) species should not be used as these are not normally found in wetland settings. The initial wetland planting table contains “*Quercus spp.*” and “*Carya spp.*”, which signifies that multiple species for each genus will be utilized in the plantings. The table has been revised to specify the species (rather than genera) that may be used in the wetland plantings (see below). The revised table (below) includes species recommended by the IDNR regional forester.

Wetland Seeding and Planting Stock Summary ¹⁰			
Scientific Name	Common Name	Seeding or Planting Rate	Method of Application
Agrostis alba	Red Top	2 lb/ac	Drilled or Broadcast
Lolium perenne	Perennial Rye	5 lb/ac	Drilled or Broadcast
Echinochloa spp.	Barnyard Grass	5 lb/ac	Drilled or Broadcast
Carex spp.	Sedges [various]	Label Rate	Drilled or Broadcast
Trifolium hybridum	Alsike Clover	3 lb/ac	Drilled or Broadcast
Echinochloa spp.	Japanese Millet	5 lb/ac	Drilled or Broadcast
Astragalus cicer	Cicer Milk Vetch	3 lb/ac	Drilled or Broadcast
Lolium multiflorum	Annual Rye	4 lb/ac	Drilled or Broadcast
Quercus spp.	Red Oak [Obl, FacW or Fac species] ¹	60 container trees or 600 seedlings/ac	Mechanical or Hand
<i>Quercus imbricaria</i>	<i>Shingle Oak</i>		
<i>Quercus palustris</i>	<i>Pin Oak</i>		
<i>Quercus shumardii</i>	<i>Shumard Oak</i>		
Quercus spp.	White Oak [Obl, FacW or Fac species] ¹	60 container trees or 600 seedlings/ac	Mechanical or Hand
<i>Quercus bicolor</i>	<i>Swamp White Oak</i>		
<i>Quercus lyrata</i>	<i>Overcup Oak</i>		
<i>Quercus macrocarpa</i>	<i>Bur Oak</i>		
<i>Quercus michauxii</i>	<i>Swamp Chestnut Oak</i>		
Carya spp.	Hickory [Obl, FacW or Fac species] ¹	60 container trees or 600 seedlings/ac	Mechanical or Hand
<i>Carya cordiformis</i>	<i>Bitternut Hickory</i>		
<i>Cayra laciniosa</i>	<i>Shellbark Hickory</i>		
<i>Cayra ovata</i>	<i>Shagbark Hickory</i>		
Carya illinoensis	Pecan [FacW] ¹	60 container trees or 600 seedlings/ac	Mechanical or Hand

¹ Reed, P., National List of Plant Species that Occur in Wetlands: 1988 National Summary, USFW-USSLD COE-EPA-CSS, 1988.

4. We request a ten-year mitigation monitoring plan as opposed to the five-year plan as proposed. We also request that the plans address invasive species control measures.

The Section 404 permit, as conditionally approved by USACE, stipulates a minimum of a 5-year monitoring period for wetland mitigation. The USACE, who oversees the performance of the mitigated 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.

Providing that the proper soils, hydrology, and vegetation are restored and the requirements of the mitigation plan are met or exceeded after five years, it is expected that the restored wetlands will achieve their functional roles.

The Applicant proposes to plant non-invasive trees. The 401 WQC application includes a plan for “Exotic and Undesirable Species Control” which outlines the methods proposed to prevent the introduction and/or establishment of invasive species detrimental to the survival and success of planted woody species. The Illinois EPA has determined that the 5-year monitoring period and USACE option to extend the monitoring period required by the Corps of Engineers is adequate to assure establishment of the forested wetland.

Other Issues

1. We have deep concern for the protection and historical preservation of Native American sites containing ancestral remains and artifacts. We recently lost an ancestral cemetery at another surface mining operation of Peabody’s at the location between Mitchellsville and Pierson Hill. Within the Wildcat Hills Mine site are two grave sites and several mounds and former village sites. If Peabody is allowed to expand their mining operations into those areas, we run the risk of further loss of sites of paramount importance to American historical preservation.

Historic preservation is not an issue that is under the jurisdiction of the 401 WQC regulations. The Applicant has stated that with respect to historical sites within this permit area, the Applicant is following all state and federal requirements to ensure all areas are evaluated properly and historically significant sites are assessed properly. The Applicant is unaware of any disturbance to ancestral remains at its sites. The U.S. Army Corps of Engineers examined the National Register of Historic Places during their review of the 404 permit application and also provided the public and state and federal historic preservation offices an opportunity to comment on this issue during their public notice of August 16, 2010.

2. The coal company from the very beginning of their occupancy has not been a good neighbor. While the coal mine provides some jobs, short-term, they destroy the way of life for past generations and the generations to come. Examples of the damage done to land and water from mining in the past include:

- Red-stained water seeping in areas all around us;
- Red and yellow dust billowing from the mines and floating through the air as far as the eye can see;
- Damage from dynamite blasting shaking the homes (more damage than the small earthquakes we have had); and
- Noise levels from the mines' machinery can be heard for miles and disrupts the residents' quality of life.

We believe that the mines are destroying farm land, timber land, the watershed, the water supply and wildlife habitat as we know it. As elected officials it is our duty and responsibility to try to protect the people in our township. Nothing the mines have done since they have been in our township has been advantageous to the majority of the people living here. The value of our homes and property has been adversely affected.

The mines want to close more of our roads, which will do more damage to the terrain of the land, affect the flow of the waterways, and affect tax revenues. If they are allowed to close some of the roads they propose, when flood water backs up during certain times of the year, some residents will be cut off and effectively on "islands."

Discharges from the mine site are regulated by the NPDES permit which requires that those discharges meet water quality standards. Blasting, noise issues and road closures are not under the jurisdiction of the 401 WQC regulations.

In cases where citizens observe stained seepage entering streams or visual air pollution leaving the site, they may contact the Illinois EPA's Marion Regional Office at 618/993-7200 or they may make a citizen pollution complaint on-line at <http://www.epa.state.il.us/pollution-complaint/>.

ACRONYMS AND INITIALS

401 WQC	Section 401 Water Quality Certification
IBI	Index of Biotic Integrity
IDNR	Illinois Department of Natural Resources
Illinois EPA	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 Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

DISTRIBUTION OF RESPONSIVENESS SUMMARY

An announcement that the 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 EPA Office of Community Relations, 217-558-8280, e-mail: <Dean.Studer@illinois.gov>.

WHO CAN ANSWER YOUR QUESTIONS

Illinois EPA 401 Water Quality Certification:

Illinois EPA Technical Decisions.....	Thaddeus Faught	217-782-3362
Antidegradation Assessment	Brian Koch.....	217-558-2012
Mitigation Plans	Brian Koch.....	217-558-2012
Public Hearing of September 15, 2011	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#peabody-arclar-wildcat-401>