AQUATIC RESOURCES MANAGEMENT, LLC

December 22, 2011

United States Army Corps of Engineers
Louisville District
845 Sassafras Creek Road
Sassafras, KY 41759-8806

Re: DNR# 880-0179

2006- 61

Dear Reviewer,

Please find enclosed one (1) original copy of the Second Year Monitoring report for the Big Branch Mitigation site.

Should you require any more information upon your review of this package or require a site visit feel free to contact me at 859-388-9595 or by e-mail at nbaker@aquaticresources.us.

Sincerely,

Nick Baker
Vice President and Environmental Scientist

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YEAR TWO MONITORING REPORT
UNITED STATES CORPS OF ENGINEERS
Big Branch Mitigation
KDNR PERMIT NO. 880-0179

ICG East Kentucky, LLC.

A SUBSIDARY OF:

ICG
International Coal Group, Inc.

Prepared:
December 22, 2011

Prepared by:

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(859) 388-9595

Big Branch Mitigation Site
Year Two Monitoring Report
KDSMRE Permit #880-0179

Project Overview

This report is to notify the United States Army Corps of Engineers (USACE) of the completion on two full growing seasons for the Big Branch mitigation site. This USACE permit is an Individual permit #20060061 associated with KDSMRE Permit #880-0179. Aquatic Resources Management (ARM) is the agent responsible for conducting the monitoring and producing the reports on behalf of the applicant. The inspection date of the field visit occurred on May 25, 2011.

Purpose of the Approved Project

The purpose of the proposed mining activity by ICG East Kentucky, LLC is for the placement of hollow fills and in-stream ponds to facilitate the efficient extraction of coal reserves. The intermittent and ephemeral streams to be impacted by the mining were 32,898 linear feet. Moreover, the mitigation proposed is 6,623 linear feet of stream restoration that will enhance the aquatic resources. The ephemeral restoration will take place once the hollow fills have been completed, and the onsite mitigation for the temporary impacts will be completed upon phase II bond release.

Site Location

Mitigation for this site includes Big Branch and two unnamed tributaries, see attached location maps for a detailed location of each. The Big Branch mitigation site corresponds with KDSMRE Permit # 880-0179 and is located off Big Branch Road and KY Hwy 1714 in Martin County, KY.

A representative from ARM visited the mitigation site at the request of the applicant once the construction had been completed. A thorough investigation was conducted in order to determine the condition of the project(s). Based on

the observations made, it was determined that the Big Branch mitigation site is meeting the success criteria outline by the permit, with the exception of the riparian survival, structure repairs, and some incision problems.

Mitigation Commencement and Completion Dates

Construction on mitigation sites started in August of 2007 and was completed by November of 2007.

Performance Standards

Stream stability will be examined for erosion controls. The erosion controls will be considered successful if the stream is in a stable condition. The limits of the mitigation site will be designated and flagged with surveyor's stakes to indicate the restored reach. The vegetation will be maintained at an 80% rate of success for native species in the riparian corridor. It is also anticipated that natural succession of native species will occur on-site in the riparian zone. Non-native and invasive species will be kept to a rate less than 20% overall in the restoration area.

After the restoration efforts have been met the applicant will be responsible for annual monitoring, producing reports, and sending them to the Louisville District of the United States Army Corps of Engineers. The applicant is obligated to maintain the projects mitigation area following the requirements set by the KDSMRE and USACE. Monitoring and site maintenance will continue until final approval of the mitigation is achieved. Any changes that have been identified by the USACE and are necessary for the mitigation to become successful will be implemented by the applicant. The goals of the proposed mitigation plan are to restore the stream to a natural state before mining and logging impacts, and achieve a "gain" or "increase" in ecological integrity. As part of the proposed

mitigation plan, the applicant will take all measures possible to ensure an increase of ecological integrity.

The site visit on May 25, 2011 indicated that the sites are trending toward the standard set forth by the permit. Please see the tables below showing the Rapid Bioassessment Protocol (RBP) scores trending to the predicted mitigation maturity scores as accepted by the USACE.

Table 1.

Big Branch Mitigation Monitoring						
Big Branch Perennial						
RPB Habitat Parameters	Pre-mitigation	Year One	Year Two	Year Three	Year Four	Predicted Year Five
Epifaunal Substrate	6	12	14			16
Embeddedness	5	11	13			15
Velocity/Depth Regime	6	14	14			15
Sediment Deposition	5	12	12			16
Channel Flow Status	13	14	14			17
Channel Alteration	7	14	14			16
Frequency of Riffles	7	14	14			16
Bank Stability (both)	6	12	14			18
Veg. Protection (both)	14	12	14			16
Riparian Width (both)	8	10	10			18
Total Habitat Score	77	125	133			163
Big Branch Intermittent Mitigation Monitoring						
RPB Habitat Parameters	Pre-mitigation	Year One	Year Two	Year Three	Year Four	Predicted Year Five
Epifaunal Substrate	8	12	14			17
Embeddedness	4	11	13			16
Velocity/Depth Regime	6	14	14			15
Sediment Deposition	5	12	12			16
Channel Flow Status	13	14	14			17
Channel Alteration	8	12	12			14
Frequency of Riffles	5	14	14			16
Bank Stability (both)	6	12	14			18
Veg. Protection (both)	14	12	14			16

Riparian Width (both)	8	10	10			18
Total Habitat Score	77	123	131			163

UT #1 to Big Branch Mitigation Monitoring						
RPB Habitat Parameters	Pre-mitigation	Year One	Year Two	Year Three	Year Four	Predicted Year Five
Epifaunal Substrate	5	10	12			18
Embeddedness	6	10	12			16
Velocity/Depth Regime	6	12	12			15
Sediment Deposition	5	10	12			16
Channel Flow Status	5	10	10			15
Channel Alteration	4	12	12			14
Frequency of Riffles	8	12	14			16
Bank Stability (both)	6	10	12			18
Veg. Protection (both)	6	10	12			18
Riparian Width (both)	8	10	10			18
Total Habitat Score	59	106	118			162

UT #2 to Big Branch Mitigation Monitoring						
RPB Habitat Parameters	Pre-mitigation	Year One	Year Two	Year Three	Year Four	Predicted Year Five
Epifaunal Substrate	4	10	12			18
Embeddedness	3	10	12			16
Velocity/Depth Regime	5	12	12			15
Sediment Deposition	5	10	12			16
Channel Flow Status	8	10	10			15
Channel Alteration	6	12	12			14
Frequency of Riffles	6	12	14			16
Bank Stability (both)	6	10	12			18
Veg. Protection (both)	10	10	12			18
Riparian Width (both)	4	10	10			16
Total Habitat Score	57	106	118			162

ICG East Kentucky, LLC
KDSMRE Permit #880-0179
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Summary Data

The success of the mitigation site begins with channel stability along with the creation of macroinvertebrate and fish habitat. The Pre-mitigation versus year one and two post-mitigation scores are listed in Table 1 above. The table displays a general trend toward the stated goals in the compensatory mitigation plan.

The mitigation site had various challenges to overcome to ensure its success. The most important aspect of the restoration was the steep slope. The slope places a direct challenge on building and maintaining the correct dimension, pattern, and profile. All three of these components of stream restoration are vital in the success of the restoration site on all levels.

When the riparian communities are replaced this dormant season, the structure repairs completed, and incision corrected all aspects of the mitigation will be trending toward the stated goals in the approved compensatory mitigation plan (CMP). Pictures of the mitigation site illustrate past and current conditions (figures 1-6), as well as a map showing the locations of the photos (figure 7), and a map depicting the site location (figure 8) are included.

Figure 1 Looking Upstream Upper Reach 10/30/07 Pic 142

Figure 2 Looking Upstream Upper Reach 5/25/11 Pic. 791

Figure 3 Looking Upstream Middle Reach 10/30/07 Pic. 134

Figure 4 Looking Upstream Middle Reach 5/26/10 Pic. 799

Figure 5 Looking Upstream Lower Reach 10/30/07 Pic. 125

Figure 6 Looking Upstream Lower Reach 5/25/10 Pic. 814

Conclusions

The applicant is committed to the success of this mitigation project. The aspects that are preventing the site from achieving the stated scores in the CMP can be easily corrected. When the riparian communities are successfully replaced and have a good survival rate (>80%), the structure repairs completed, and incision addressed and corrected the mitigation site will be trending toward achieving its performance standards.