

## PERMANENT WATER IMPOUNDMENT

As per rule 880-X-10C-.20(2)(a, b, c, d, e, & f), sediment basin No. 116 was designed, approved, constructed and certified to meet all requirements of rules 880-X-8F.11(1)(b), 880-X-10C-.13, 880-X-10C-.17, 880-X-10C-.18, and 880-X-10C-.20(1 & 3). The operation and maintenance requirements approved in the design plans will remain in effect.

As per rule 880-X-10C-.20(2), sediment basin no. 116 the following is submitted.

- (a) The proposed post mining land use for Basin 116 is Fish & Wildlife Habitat. The size and configuration of the proposed permanent water impoundment (PWI) is basically the same as shown in the approved design plans. The approximate surface area at normal pool, existing storage capacity, average depth of water and maximum water depth are as shown in the following table. The approximate surface areas are based on information provided in the approved plans and all other measurements are based on information presented in the most recent annual re-certification reports for each basin.

BASIN I.D.	APPROXIMATE SURFACE AREA (ACRES)	EXISTING STORAGE CAPACITY (AC. - FT.)	AVERAGE DEPTH (FT.)	*MAXIMUM DEPTH (FT.)
116	1.52	3.1	9.0	9.00

\* Maximum depth as measured from lowest point of basin to primary spillway elevation. The size and configuration of each PWI is suitable for the proposed post-mining land use. Each PWI will enhance the post-mining land use by providing wildlife refuge, and areas for fish habitat.

- (b) The proposed post mining land use for Basin 116 is Fish & Wildlife Habitat. The quality of the discharge from the impoundment is suitable on a permanent basis for the intended land use (Fish & Wildlife Habitat). Samples of water have been collected, analyzed and reported since the beginning of mining. These analyses are recorded in the attached Discharge Monitoring Reports:

The attached water quality data indicates that the quality of each PWI is suitable for its intended use and is adequate to meet the requirements of rule 880-X-10C-.20(2)(b).

- (c) The proposed post mining land use for Basin 116 is Fish & Wildlife Habitat. The water level in the proposed PWI does not fluctuate from the principle spillway elevation more than two (2) feet during periods of dry weather; therefore, the water level in each PWI is sufficiently stable and capable of supporting its intended use.
- (d) The final grading slopes in the areas surrounding the dam & the pool area is no steeper than 2.5H:1V. Therefore, adequate safety and access is provided for the proposed water users.
- (e) Because of the drainage areas of each of the proposed PWI's, location of the impoundments, the water quality and quantity, leaving these basins as PWI's will not result in the diminution of the

quality or quantity of water utilized by adjacent or surrounding landowners for agricultural, industrial, recreational, or domestic uses.

- (f) Based on the information and data presented, this impoundment is suitable for the proposed post-mining land use, which is Fish & Wildlife Habitat.
- (g) The PWI's are adequate to safely pass the anticipated peak flows resulting from a 25 Year - 6 Hour precipitation event. Available freeboard during a 25 Year - 6 Hour precipitation event for each PWI is given in the table below.

BASIN	FREEBOARD
116	3.50'

### MAINTENANCE PLAN

The maintenance requirements approved in the detailed design plans will remain in effect. Permanent water impoundment 116 will be inspected regularly, at least monthly, with maintenance performed as necessary. Debris, which may have collected and clogged the spillway system, will be removed to allow the impoundment to function properly as designed. Any slope instability, slope failures, or eroded areas will be repaired and re-vegetated. Areas where initial vegetation was unsuccessful will be re-vegetated as necessary.

After the approval of Phase III Bond Release, the responsibility for the sound future maintenance, as outlined in these plans and the approved detailed design plans, for these impoundments will revert back to the individual landowners.

### MODIFICATIONS NECESSARY PRIOR TO CERTIFICATION

None.

### CERTIFICATION STATEMENT

I, hereby certify that the impoundment is designed, constructed and is being maintained to meet the requirements of Chapter 880-X-10 to the best of knowledge and belief.

  
PROFESSIONAL ENGINEER

1/23/15  
DATE









ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (ADEM)  
 MINING AND NATURAL RESOURCE SECTION  
 DISCHARGE MONITORING REPORT (DMR)

ADEM Form 351 8-02

NPDES # AL0077542

Gooden Creek Mine

OUTFALL NUMBER 116

Marion, Walker, Winston Counties

Ptype 1

Surface Mine

ASMC Permit #

P-3878

Birmingham Coal & Coke Company, Inc.

912 Edenton Street

Birmingham, AL 35242

205-408-5881

= Data Not Required

Year

1st Qtr   
Jan-Feb-Mar

2nd Qtr   
Apr-May-Jun

3rd Qtr    
Jul-Aug-Sep

4th Qtr   
Oct-Nov-Dec

STANDARD LIMITS

Parameter	Ph	TSS	Fe	Mn	Specific Conductance	Sulfate	TDS	FLOW*
Daily Minimum	6.0							
Monthly Average		35	3.0	2.0	Report	Report	Report	Report
Daily Maximum	9.0	70	6.0	4.0	Report	Report	Report	Report
Unit	s.u.	mg/l	mg/l		s.u.	ml/l	mg/l	MGD
Frequency	2/mth	2/mth	2/mth	2/mth	2/mnth	2/mnth	1/qtr	2/mnth
7/10/14	No Discharge							
7/24/14	No Discharge							
8/6/14	No Discharge							
8/20/14	No Discharge							
9/10/14	No Discharge							
9/24/14	No Discharge							
Pump Discharge Point (Y/N)		N		pH Exemption Claimed (Y/N)		N		

TOXICITY LIMITS\*\*

Ceriodaphnia Acute	Pimephales Acute
0	
pass(0)/fail(1)	pass(0)/fail(1)
1/qtr	1/qtr

In accordance with Part IV.E of the referenced NPDES permit, if the permittee claims the pH exemption, detailed documentation sufficient to prove eligibility must be retained on file and be available for review by ADEM until the permit is properly terminated.  
 In accordance with Part IV.F of the referenced NPDES permit, if the permittee claims the manganese exemption, detailed documentation sufficient to prove eligibility must be submitted as attachment to this DMR. For each claim of manganese exemption the permittee shall report "NODI=9" as the reported manganese value on this DMR.

Birmingham Coal & Coke Co., Inc. Central Testing, Guardian Systems, Marion Biogassav Lab., KKM Labs  
 Name of Permittee and/or Company(s) Collecting Samples And Performing Analyses:

I certify under penalty of law that this document and all attachments were prepared under my direction/supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Greg Jones, V.P.

Name & Title of Responsible Official

Signature

10-25-2014  
 Date

\* Instantaneous measure. Flow must be monitored in MGD each time a sample is collected. \*\* Refer to permit for toxicity requirements  
 Refer to Part I.B. of the permit. At least one sample must be obtained and analyzed for pumped or mechanical discharges if a discharge occurred at any time during the quarterly (three month) monitoring period. If applicable, list minimum of two required inspection dates for each month and report "No Discharge During Entire Quarter".

Gooden Creek Mine P-3878  
Satnding Pool Samples

Pond #	Sample Date	pH (su)	TSS(mg/L)	Fe(mg/L)	Mn(mg/L)
100	1/15/14	7.7	16	0.3	0.8
101	1/15/14	7.5	13	0.4	0.5
103	1/15/14	7.4	18	0.8	1.3
104	1/15/14	7.8	12	0.5	0.5
105	1/15/14	7.9	18	0.5	1.0
106	1/15/14	7.1	16	0.3	0.7
107	1/15/14	7.2	15	0.8	1.2
108	1/15/14	6.8	11	0.8	0.8
116	1/15/14	7.1	14	0.6	0.2
001	1/15/14	7.7	12	0.5	0.5
002	1/15/14	7.5	19	0.5	1.3
004	1/15/14	7.3	14	0.5	1.4
009	1/15/14	7.3	15	0.7	0.8
014	1/15/14	7.1	12	1.1	0.9
066	1/15/14	7.1	15	0.9	0.6
067	1/15/14	7.8	13	0.8	0.3
068	1/15/14	7.5	15	0.7	1.3
069	1/15/14	6.8	14	0.6	0.9
071	1/15/14	7.5	12	1.0	0.9
072	1/15/14	7.7	14	0.9	1.1
073	1/15/14	7.0	11	0.7	0.3
074	1/15/14	7.1	15	1.6	1.4
095	1/15/14	7.2	15	0.8	1.1
096	1/15/14	7.8	14	0.9	0.9
097	1/15/14	7.3	14	0.6	1.6
098	1/15/14	6.9	10	0.8	1.4
099	1/15/14	7.6	15	0.6	0.6
115	1/15/14	6.8	13	0.9	0.5
141	1/15/14	7.3	14	0.6	0.8
142	1/15/14	7.2	11	1.3	0.6
157	1/15/14	7.8	11	1.1	0.5
117	1/15/14	6.9	12	1.1	0.5
118	1/15/14	7.0	16	0.9	0.3