



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, MOBILE
CORPS OF ENGINEERS
BIRMINGHAM FIELD OFFICE
218 SUMMIT PARKWAY, SUITE 222
HOMEWOOD, ALABAMA 35209

July 25, 2011

Inland Section North
Regulatory Division

SUBJECT: Nationwide Permit Authorization; SAM-2011-00880-CHE – Little Spring Creek Mine – Haley Brothers Coal, Inc.

Haley Brothers Coal, Inc.
c/o Delta Natural Resource Service, Inc.
Post Office Box 941
Hartselle, Alabama 35640

Gentlemen:

We have reviewed your application to conduct surface coal mining operations that will impact 9,320 linear feet of intermittent streams, 2,930 linear feet of ephemeral streams, and 2.32 acres of wetlands. The project is located in Sections 2 and 3, Township 13 South, Range 7 West, in Jasper, Walker County, Alabama (33.944143,-87.255435). Department of the Army (DA) permit authorization is necessary because your project would involve placement of dredged and/or fill material into waters of the U.S., including wetlands under our regulatory jurisdiction.

Based on the information you provided, Nationwide Permit 21, Surface Coal Mining Operations (Federal Register, March 12, 2007 Vol. 72, No. 47), authorizes your proposal as depicted on the enclosed drawings dated July 25, 2011. In order for this NWP authorization to be valid, you must ensure that the work is performed in accordance with the Regional and General Conditions of Nationwide Permit 21, which can be viewed at our website at www.sam.usace.army.mil/RD/reg, and the following special conditions:

a. A status report on the progress of the mining must be submitted to the U.S. Army Corps of Engineers, Mobile District, Regulatory Division, prior to January 15, 2012.

b. The permittee shall debit 16,599 Stream credits and 2.57 wetland credits from the Big Sandy Mitigation Bank in compliance with the provisions of the approved mitigation banking instrument for the bank. The permittee may conduct the purchase in two stages:

1. Increment 1: The permittee shall purchase 13,959 stream credits and 2.57 wetland credits from the Big Sandy Mitigation Bank in compliance with the provisions of the approved mitigation banking instrument for the bank and provide documentation to the U.S. Army Corps of Engineers, Mobile District, Regulatory Division, that the

transaction has been completed prior to conducting any of the impacts in increment 1, which is verified by this permit.

2. Increment 2: The permittee shall purchase 2,640 stream credits from the Big Sandy Mitigation Bank in compliance with the provisions of the approved mitigation banking instrument for the bank and provide documentation to the U.S. Army Corps of Engineers, Mobile District, Regulatory Division, that the transaction has been completed prior to conducting any of the impacts in increment 2, which are verified by this permit.

c. You shall comply with all the terms and conditions of the Alabama Department of Environmental Management Section 401 Water Quality Certifications for the Nationwide Permits. This document can be viewed at our website: www.sam.usace.army.mil/rd/reg/nwp.htm for you review and compliance, or at your request a paper copy will be provided to you.

This verification is valid until the NWP is modified, reissued, or revoked. All of the existing NWPs are scheduled to be modified, reissued, or revoked prior to March 18, 2012. It is incumbent upon the applicant to remain informed of changes to the NWPs. We will issue a public notice when the NWPs are reissued.

Furthermore, if the applicant commences or is under contract to commence this activity before the date that the relevant nationwide permit is modified or revoked, he will have twelve (12) months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this nationwide permit.

The District Engineer shall be notified promptly in writing at the commencement and within 60 days upon completion of the work. The enclosed form letter(s) may be used for that purpose. If the scope of work or project locations changes, you are urged to contact this office for a verification of this determination.

This letter of authorization does not obviate the necessity to obtain any other Federal, State, or local permits, which may be required. Nothing in this letter shall be construed as excusing you from compliance with other Federal, State, or local statutes, ordinances, or regulations which may affect this work.

Please contact me at (205) 290-9096 or Casey.H.Ehorn@usace.army.mil if you have any questions. For additional information about our Regulatory Program, visit our web site at

www.sam.usace.army.mil/RD/reg, and please take a moment to complete our customer satisfaction survey while you are there. Your responses are appreciated and will allow us to improve our services.

Sincerely,

A handwritten signature in black ink that reads "Casey Ehorn". The signature is written in a cursive style with a long horizontal flourish at the end.

Casey Ehorn
Regulatory Division

Enclosures

Enclosure 1



US Army Corps of Engineers
Mobile District

NOTIFICATION OF COMMENCEMENT OF WORK

Permit Number: SAM-2011-00880-CHE

Name of Permittee: Haley Brothers Coal, Inc.

Date of Permit Issuance: July 25, 2011

Upon commencement of the authorized work and any mitigation required by the permit, you must complete and return this notification to the following address:

**U.S. Army Corps of Engineers, Mobile District
Regulatory Division (RD-I-N)
218 Summit Pkwy, Suite 222
Homewood, AL 35209**

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with all terms and conditions of this permit the permit is subject to permit suspension, modification, or revocation and you are subject to an enforcement action by this office.

IT SHALL NOT BE LAWFUL TO DEVIATE FROM SUCH PLANS EITHER BEFORE OR AFTER COMPLETION OF THE WORK, unless modification of said plans has previously been submitted to and received the approval of the Department of the Army. If for any reason it becomes necessary to make a material change in location or plans for this work, revised plans should be submitted promptly to the District Engineer in order that the revised plans may receive the approval required by law before work is begun.

PERMITTEE TO COMPLETE THE FOLLOWING:

Date Work Commenced: _____

Signature of Permittee

Date

Enclosure 2



**US Army Corps of Engineers
Mobile District**

Permit Number: SAM-2011-00880-CHE

Name of Permittee: Haley Brothers Coal, Inc.

Date of Permit Issuance: July 25, 2011

Upon completion of the activity authorized by this permit and any mitigation required by the permit, please sign this certification and return it to the following address:

**U.S. Army Corps of Engineers, Mobile District
Regulatory Division (RD-I-N)
218 Summit Pkwy, Suite 222
Homewood, AL 35209**

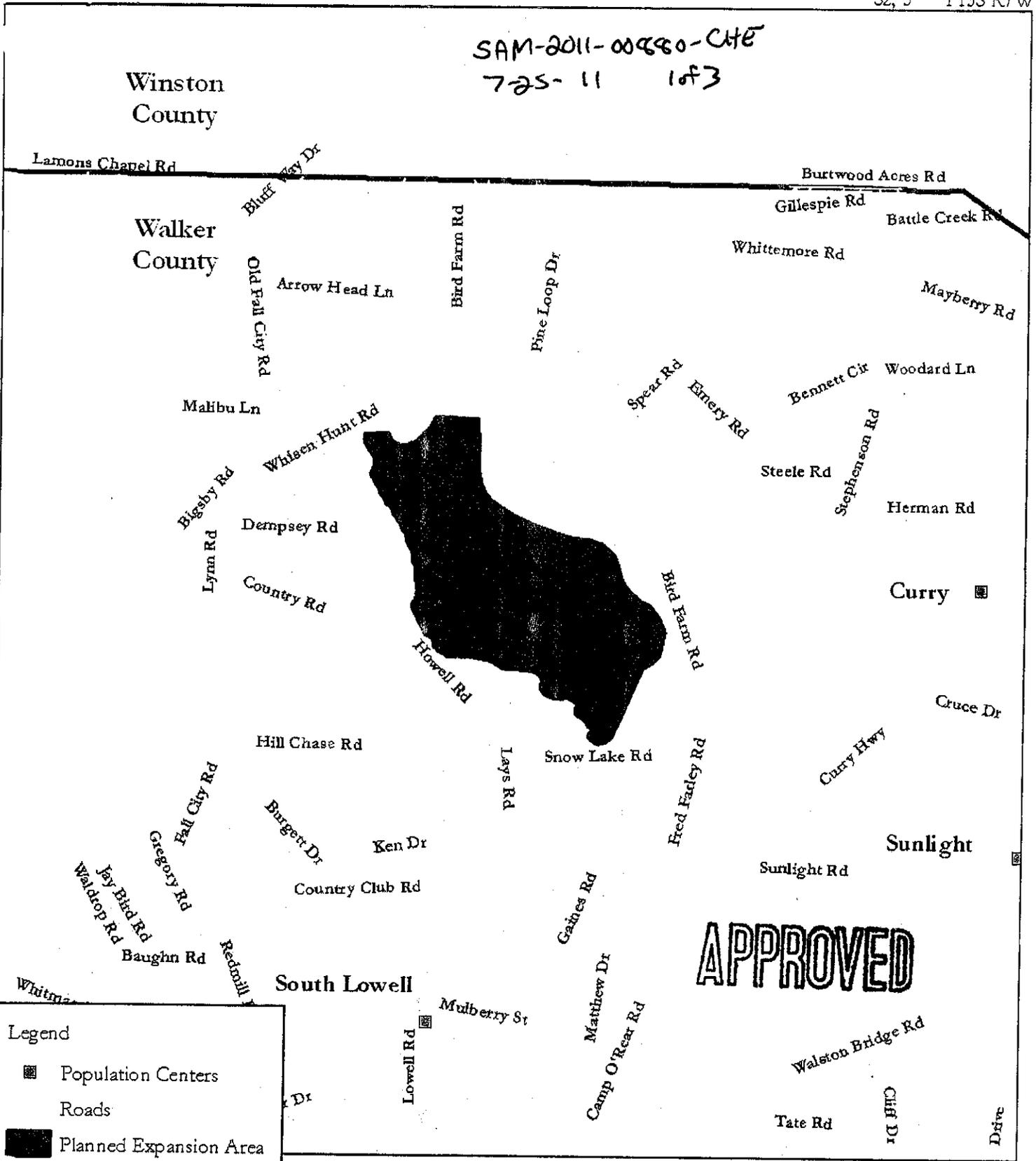
Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with all terms and conditions of this permit the permit is subject to permit suspension, modification, or revocation and you are subject to an enforcement action by this office.

I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of the said permit, and the required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

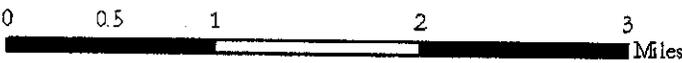
Date

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7-25-11 1 of 3

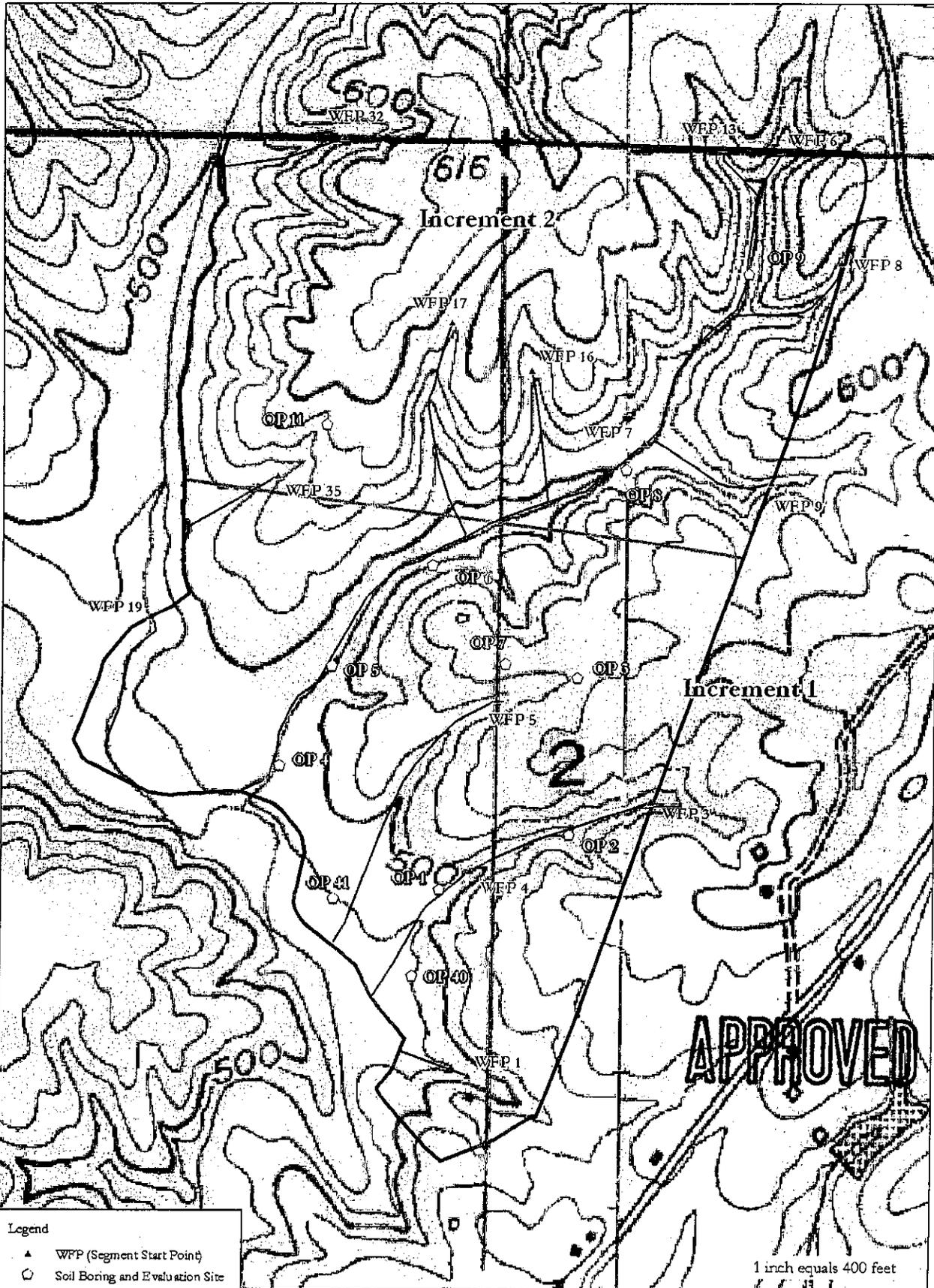


Legend

- Population Centers
- Roads
- Planned Expansion Area
- Permit Area
- County Boundary



Increment Map



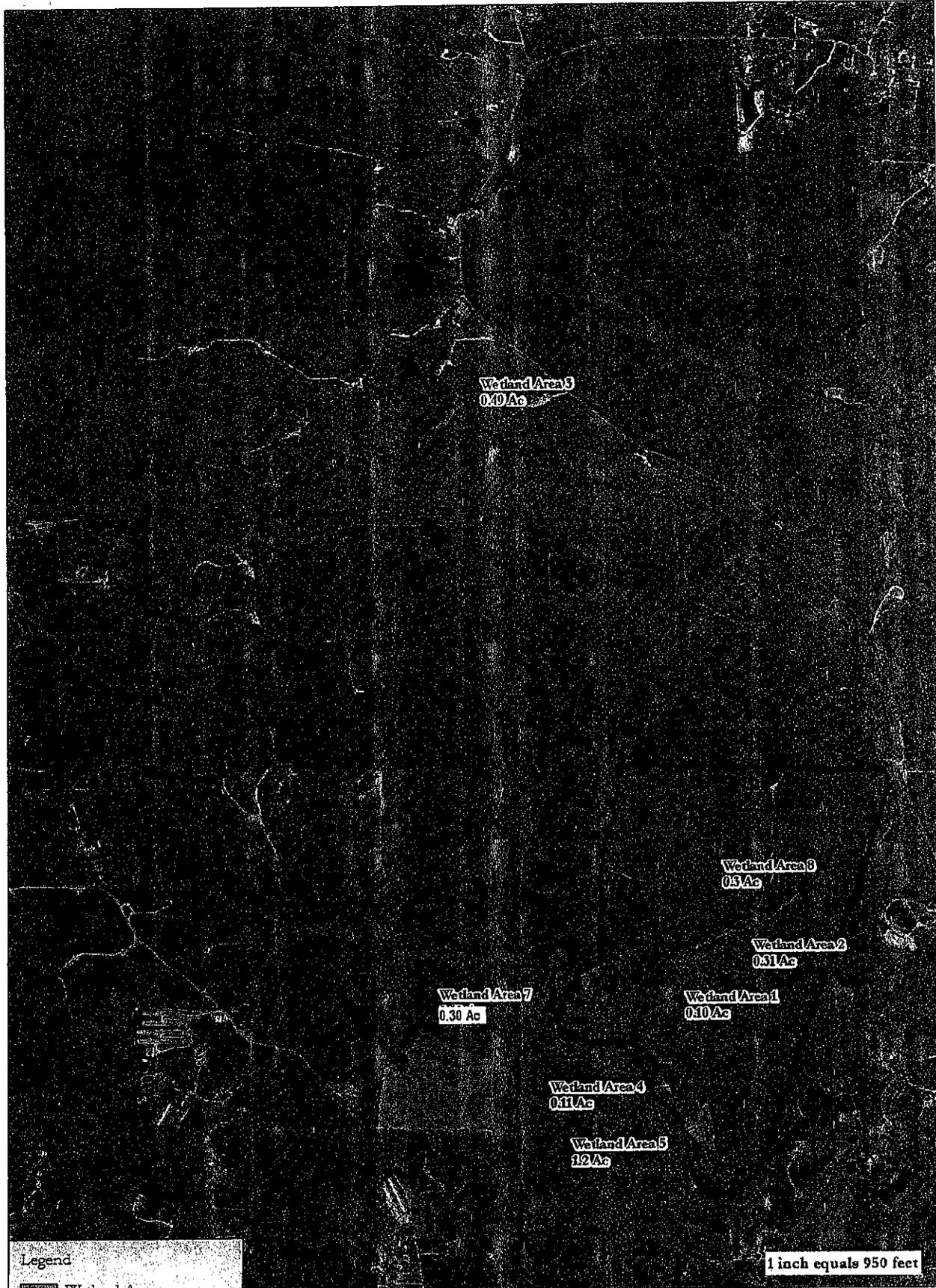
Legend

- ▲ WFP (Segment Start Point)
- Soil Boring and Evaluation Site
- Water Flow Path
- ▭ Permit Area
- ▭ Increments

1 inch equals 400 feet



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7-25-11 - 2 of 3



SAM-2011-00450-CH6
3 of 3
7-25-11

APPROVED

Legend

- Wetland Area
- Permit Area
- Planned Expansion Area

0 330 660 1,320 1,980 2,640 Feet



NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Haley Brothers Coal		File Number: SAM-2011-00830-CHE	Date: 7-21-11
Attached is:			See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)		A
	PROFFERED PERMIT (Standard Permit or Letter of permission)		B
	PERMIT DENIAL		C
	APPROVED JURISDICTIONAL DETERMINATION		D
xx	PRELIMINARY JURISDICTIONAL DETERMINATION		E

SECTION I- The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/CECW/Pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION

If you have questions regarding this decision and/or the appeal process you may contact:
Mr. Casey Ehorn
CESAM-RD-P
U.S. ARMY CORPS OF ENGINEERS
POST OFFICE BOX 2288
MOBILE, ALABAMA 36628-0001
(205) 290-9096

If you only have questions regarding the appeal process you may also contact:
MR. JASON STEELE
REGULATORY APPEAL REVIEW OFFICER
60 FORSYTH STREET SOUTHWES
ATLANTA, GEORGIA 30303-8801
(404) 562-5137

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.	Date:	Telephone number:
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PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): 2/10/2010 -5/1/2010

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:
Haley Brothers Coal, Inc. 414 5th Avenue North West Carbon Hill, Alabama 35549.

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: Mobile District-
Birmingham Field Office - SAM-2011-00736-CHE

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
State: AL County: Walker City: Jasper, Alabama
Center coordinates of site: Lat N33° 57' 17.1", Long. W87° 15' 46.7"

Name of nearest waterbody: Mulberry Fork

Identify amount of waters in the review area (use the attached table to document multiple waterbodies/locations): See Attached sheet for waters in the project area

Non-Wetland Waters: _____ linear feet _____ width (ft) and _____ acres.
Cowardin Class: _____ Stream Flow: _____

Wetlands: _____ acres.
Cowardin Class: _____

Name of any water bodies on the site that have been identified as Section 10 waters: There are no Section 10 waters located within the project boundaries.

Tidal: _____ Non-Tidal: _____

E. REVIEW PERFORMED FOR SITE EVALUATION

Office Determination. Date: _____
Field Determination. Date: 2/10/2010 -5/1/2010

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there "*may be*" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD - checked items should be included in the file:

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant.
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
- ___ Data sheets prepared by the Corps: _____.
- ___ Corps navigable waters' study: _____.
- ___ U.S. Geological Survey Hydrologic Atlas:
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Scale 1:660 Quad Name: Manchester East, DOQ.
- USDA Natural Resources Conservation Service Soil Survey, Walker County Soil Survey/USDS/NRCS
- ___ National wetlands inventory map(s). Cite name: _____.
- ___ State/Local wetland inventory map(s): _____.
- ___ FEMA/FIRM maps: _____.
- ___ 100-year Floodplain Elevation is: _____ (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): Manchester East - 2/10/2010 - 5/1/2010
or Other - Onsite photos taken 11/2009 - 2/11/2011
- ___ Previous determination(s). File No. and Date: _____.
- ___ Other information (please specify): _____.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Casey Elw 7-21-11
Regulatory Project Manager
Signature and Date
(REQUIRED)

Person Requesting Preliminary JD
Signature and Date
(REQUIRED, unless obtaining
the signature is impracticable)

Site number	Latitude	Longitude	Cowardin Class	Estimated amount of aquatic resource in review area	Class of aquatic resource
1	N33 56.33548	W87 15.14008	R6	340	non-section 10
3	N33 56.54217	W87 14.97842	R6	900	non-section 10
4	N33 56.48928	W87 15.14053	R6	740	non-section 10
5	N33 56.6184	W87 15.11773	R6	1380	non-section 10
6	N33 57.0345	W87 14.86423	R6	1560	non-section 10
7	N33 56.8118	W87 14.98782	R4	2170	non-section 10
8	N33 56.94897	W87 14.81017	R6	600	non-section 10
9	N33 56.7826	W87 14.87245	R6	600	non-section 10
13	N33 57.03568	W87 14.91792	R6	280	non-section 10
16	N33 56.8665	W87 15.08893	R6	600	non-section 10
17	N33 56.90315	W87 15.1607	R6	100	non-section 10
19	N33 56.67953	W87 15.43005	R4	760	non-section 10
32	N33 57.04323	W87 15.25895	R6	600	non-section 10
35	N33 56.78678	W87 15.31788	R6	440	non-section 10
Wetland # 1	N33 56 38.1	W87 15 16.2	PSS1	0.30 ac.	non-section 10
Wetland # 2	N33 56 39.2	W87 15 16.0	PSS1	0.31 a.c	non-section 10
Wetland # 4	N33 56 37.8	W87 15 14.9	PSS1	0.11 ac	non-section 10
Wetland # 5	N33 56 40.1	W87 15 14.4	PSS1	1.20 ac	non-section 10
Wetland # 7	N33 56 43.0	W87 15 14.5	PSS1	0.30 ac	non-section 10
Wetland # 8	N33 56 42.6	W87 15 12.4	PSS1	0.30 ac	non-section 10

**HALEY BROTHERS COAL, INC
LITTLE SPRING CREEK MINE**

U. S. ARMY CORPS OF ENGINEERS

NATIONWIDE PERMIT 21

(NWP 21)
NATION WIDE PERMIT # 21

Compensatory MITIGATION PLAN

Prepared by
Delta Natural Resource Services, Inc.
P.O. Box 941
Hartselle, Alabama 35640

Delta Natural Resource Service, Inc.
P.O Box 941
Hartselle, Alabama 35640
Cell # 256-565-1248

July 10, 2011

Mrs. Cindy J. House-Pearson
Lead Team Leader
Birmingham Field Office
Regulatory Division
CESAM-RD-I-N
218 Summit Parkway - Suite 222
Homewood, Alabama 35209

Haley Brothers Coal, Inc.
Task Engineering Management, Inc (contact person)
P.O. Box 660548
Birmingham, Alabama 35266
Contact: Mr. Jerry Williams (w) 205-978-5070

Ref. Pre-Construction Notification (PCN) Haley Brothers Coal, Inc. – Little Spring Creek Mine.

This Pre-Construction Notification and mitigation plan is submitted for Haley Brothers Coal, Inc. Mr. Jerry Williams is the contact person for this project. Contact information is shown above. The company is planning to surface area mine an area in Walker County, Alabama. It is located in Sections 2 & 3, T13S, R7W in Walker County, Alabama. Actual project boundaries are outlined on aerial photographs and topographic maps within this document.

The company is requesting your approval, under the conditions and guidelines of a Nation Wide Permit (NWP) # 21, to impact the aquatic resources identified within the project boundary. Haley Brothers Coal, Inc., with your permission, will mitigate the impacts off-site in an approved mitigation bank. The calculated credits to purchase for impacts to the aquatic resources are listed in the attachment.

This mining operation will extract subsurface coal by using approved, safe, and modern mining procedures and equipment. Typically, the surface area mining process begins with the removal of timber and other vegetation, building access roads, drilling and blasting overburden, overburden removal down to seams of coal, coal extraction, re-grading and re-establishing aquatic resource, and re-establishing desirable vegetation on-site.

All primary and secondary roads will be built as designed by a Professional Engineer and approved by the appropriate regulatory authority.

The project boundary is near Little Spring Creek and drainage water from the project area flows into this creek. These aquatic resources will be protected from the adverse impacts of this mining operation by the design, placement, and construction of several sediment basins above (ground elevation) these resources. There are approximately 10 surface acres of planned sediment basins to control runoff and contain sediment from this mining operation. These basins, planned, constructed and properly maintained will prevent off-site contamination of aquatic resources.

There are 12,250 linear feet or 0.6109 acres of jurisdictional waters on the project site. 9,320 linear feet are intermittent streams and 2,930 linear feet are ephemeral stream. These aquatic resources will be mined through during the coal extraction process.

There are 2.32 areas of wetland within the project boundary. The 2.32 acres of wetlands were identified and delineated. The owner plans to mitigate this aquatic resource on-site in an appropriate manner to enhance the aquatic resources within the boundary and improve wildlife habitat in the surrounding areas.

Before this project is initiated on-site, several regulatory agencies have to approve the purpose, plans, designs and methods of coal mining. These agencies include the Mine Safety & Health Administration (MSHA), Alabama Surface Mining Commission (ASMC), and the Alabama Department of Environmental Management (ADEM). Approvals from these regulatory authorities have been received or they are pending. Mining in the project area will not commence until these agencies (including the COE) have fully approved mining in this area.

Aquatic resources (streams) on the project site were identified, characterized and delineated according to instruction from the Mobile District and the Mobile District Stream SOP. There are 12,250 linear feet or 0.6109 acres of affected jurisdictional streams and 2.32 acres of wetlands on the project site.

The total acres of jurisdictional impacts for this mining project are 2.9 acres including the delineated wetlands acres within the project boundary.

The wetland evaluation for the site was performed using the Routine Wetland Determination Method as outlined in the *COE 1987 Wetland Delineation Manual*.

Task Engineering has obtained concurrence letters from the following authorities: An Archaeological Survey performed by The University of Alabama; U.S Fish and Wildlife service comments; State of Alabama, Department of Conservation and Natural Resources Comments. These agencies have concurred there are no subjects within the project boundaries that fall under their jurisdiction.

We appreciate your assistance and guidance on this project. If you have additional questions please contact me.

Sincerely,

Cleo Stubbs

Registered Professional Soil Classifier # 71

Attachment:

Credit Calculations

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PROJECT OVERVIEW & ENVIRONMENTAL ASSESSMENT

Haley Brothers Coal, Inc. of Jasper, Alabama is planning to surface area mine a site in Walker County, Alabama. This mine site is identified as the Little Spring Creek Mine for company records and permitting by the Alabama Surface Mining Commission. The site is located in Sections 2 & 3, T13S, R7W, in Walker County, Alabama. The project or mining area is approximately 231 acres (*See tab 1 for maps*).

The landscape at this site is mainly a series of moderately wide to narrow undulating ridge caps and moderately steep to very steep side slopes. The 229.3 acre project drains west into Little Spring Creek. This tributary is a perennial stream flowing south into Blackwater Creek. Blackwater Creek drains into the Mulberry Fork of the Black Warrior River. The project area is relatively high in elevation above the two main intermittent streams within the project boundary that flows into Little Spring Creek. The drainage water flows rapidly toward the intermittent stream and into Little Spring Creek. During the mining process, Little Spring Creek will be protected from pollutants by a series of sediment basins designed to control and filter the drainage water.

The planned mining area is approximately 620 feet at the highest point within the project boundary with the lowest point of nearly 470 feet along the southern and eastern part of mining area where it borders Little Spring Creek. Most of the project area is managed as a commercial timber operation. The artificial regenerated timber stand is mainly 15 to 20 year old loblolly pine trees. There are areas of low grade mature hardwood timber stands especially along the main intermittent drainageways. The mature stands have been selectively harvested during the last several months.

The potential to support habitat for upland wildlife and wetland is fair. Most of the upland areas are suitable for wildlife management practices such as: prescribed burning, planting seed producing seedling and establishing game food plots. The intermittent streams on site have some habitat support characteristics such as riffle/pool sequences, runs, and meanders. There are a few habitat structures located along the lower segment of some intermittent streams. The channel bed for the intermittent and ephemeral streams is mainly gravel, coarse fragments and bedrock, solid and broken pieces. Wildlife utilization is fair for this site because the food source is low or absent in pine plantation areas. Also, wind throw has damaged many of the seed producing trees in the hardwood timber stands. Wildlife cover is poor in many places. The number of trees suitable for dens or nesting is somewhat low for the area.

The mining of this project area will occur in increments as designed by the mining engineer. Each increment will be drilled/blasted and excavated according to plans and design. Water quality measures will be implemented to protect off-site aquatic resources including the construction of five (4.69 ac.) sediment basins when appropriate as the mining of the site progresses. A jurisdictional waters determination was made at each basin site location.

There are 12,250 linear feet of jurisdictional waters located in the project area. It includes 9,320 linear feet of ephemeral streams and 2,930 linear feet of intermittent streams. There are 2.32 acres of jurisdictional wetlands identified and delineated within the project boundaries.

The jurisdictional streams identified within the project area are characterized as having bed and bank and other properties associated with jurisdictional waters. There are ephemeral and intermittent streams in the proposed mining/project area. Also, there are several other non-jurisdictional water flow paths located within the project boundary. These water flow paths are erosional features on steep slopes. Water is mainly sheet flow and these erosional features do not have bed and bank.

The mitigation for the proposed impacts to these stream resources will be conducted off-site in an approved stream mitigation bank. The company will provide the U.S. Corps of Engineers (COE) with the proper documents to demonstrate proof of purchase.

The intermittent stream resources in the project area have fair quality with meanders along some segments and occasionally a functioning riffle/pool sequence. The relatively straight ephemeral stream segments have shallow bed and bank. The bed of the ephemeral stream segments are mainly coarse rock fragments, gravel, with solid and broken parent rock present. The habitat for aquatic life is absent and these stream segments are not highly beneficial on-site for other species of wildlife.

Description of Aquatic Resources in the Project Area

There are approximately 14 stream segments observable on topographic sheets within the project boundary and on-site during the field evaluation (*See Tab 1 # for maps showing WFP locations*). They are classified as ephemeral and intermittent. WFP's 7 and 19 are identified as intermittent. A unified description of the intermittent streams is listed in Table A below. The other WFP's are classified as ephemeral streams because of their flow regime during and immediately after normal rainfall, as well as, other characteristics that define an ephemeral stream segment. Some stream segments are degraded because of sedimentation as a result of soil disturbing activities in the watershed including commercial forestry practices such as site preparation, tree planting, tree harvesting and road construction. Soil disturbing activities in the watershed have caused some valley fill. Drainage water flowing in the original channel is 2 to 3 feet below the surface along some segments of the streams. The ephemeral stream segments mainly have moderately stable banks and shallow depth to rock in some areas. They lack riffle/pool sequence, meanders and the necessary curvature to create a highly functional/value stream segment (intermittent segment characteristics). There are 2,930 linear feet or 0.2868 acres of intermittent stream segments. There are 9,320 linear feet or 0.3241 acres of aquatic resources identified as ephemeral streams.

There are 2.32 acres of wetlands identified within the project boundary. The wetlands are adjacent to streams in forested areas and some delineated wetlands are located in open areas on the terrace landscape bordering Spring Creek. Beavers building dams in the drainage channels create the wetlands adjacent to the stream segments. The wetlands on the terrace landscape are located in areas of slow surface runoff and a continuous subsurface discharge.

There are non-jurisdictional water flow paths within the project boundary. They do not exhibit bed and characteristics. The drainage water flows down slope in a sheet configuration similar to water flowing across an upland concave landscape position. Also, observation of these drainage watercourses indicates there are no significant changes in soil and vegetation type from the

adjacent uplands. Typical on-Site photographs of these water flow paths are located under tab 3 of this document.

Table A - Channel ID	Channel Condition
WFP 7	Poor
WFP 19	Poor

Alternative Analysis

Haley Brothers Coal, Inc. is planning to “Surface Area Mine” several acres in Walker County, Alabama. The company is aware of the environmental impacts this project will have on the aquatic resources in the project area and the possibility of off -site impacts. Section 404(b)(1) guidelines states that “no discharge of dredged or fill material shall be permitted if there is a practical alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences”.

Their intent is to properly mine/extract the coal reserves below the surface through safe and environmental acceptable practices. To arrive at the safest and best environmental activities for this mining operation, the company analyzed several options and factors to determine the most practical alternative for this mining operation. Section 404(b) states, “An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes”. The selected alternative will have the least adverse impact on the environment.

The following is a list of alternatives for this operation:

- No action alternative
- Alternative site location for the project is considered.
- Mining methods alternatives.
- Mine the area in such a manner that aquatic resources within the project boundaries will not be dredged or filled.
- Mine the area in such a manner that dredged of fill material will not enter waters of the United States.
- Strategically manage and control dredged and fill material containing potentially harmful contaminants

1. No Action Alternative

The No Action Alternative is the frame work/basis for the evaluation of all other alternatives. The no action alternative is viewed as a natural progression of activities accompanied by man-induced activities such as logging, road building and activities associated with recreation. These activities will impact the aquatic resources in measurable amounts. There will be impacts to the aquatic resources in the project area even if the proposed project is not implemented with the best and most feasible alternative.

2. Alternative Site Location

The process of extracting mineral reserves from the earth is a site-specific operation. Therefore, the project must be located where reasonable amounts of the mineral has been identified and analyzed. Unlike other surface disturbances such as roads, bridges, or residential developments that can be relocated or shifted. The mining of mineral reserves such as coal in this instance, must be physically located where the coal seams have been identified and extraction is economically feasible/practical. Additionally, geologic exploration of the reserves within the project boundary indicates that the area under consideration for the proposed mining operation has a reasonable amount of coal reserves making this location practical and feasible.

3. Mining Methods Alternatives

There are several coal extraction methods employed by companies throughout the region. Each method has specific and general site conditions for successful operation. There is great consideration given to impacts on aquatic resources, adherence to state/federal environmental regulations and policies, economic returns on investment, and safety issues associated with each method of mining. Generally, in this region coal reserves are extracted by surface area mining or underground mining.

Underground Mining

The underground/subsurface coal seams are generally too thin for continuous operation of underground equipment, movement of personnel, and other activities associated with this type of coal mining. Even when one seam is thick enough to underground mine, this often makes other seams un-mineable.

The composition of the roof at this site is not suitable for underground mining at the depth of the coal seams. The overburden above the coal seams is fractured shale rock. The minimum thickness and condition of the surface overburden is unsuitable for safe underground mining of this entire project area.

Surface Area Mining

Surface area mining this coal is the most practical means of extracting these coal reserves. The overburden is not excessively thick. The ratio of coal seam thickness to overburden thickness is financially feasible. The project area will be surface area mined in four increments. The mining will progress from west to east as designed by the mining

engineer. This will facilitate the proper handling and piling of overburden material. The mining design will enable the project site supervisor to implement best management practices, control surface runoff and reduce potential off site contamination.

Contour Mining

This type of mining normally occurs where the overburden is excessively thick in high mountainous areas. In these areas it is impractical to remove the overburden to access the entire the coal seam. Contour mining does not allow for complete coal seam recovery.

It is practical to remove existing overburden at this site by other methods of mining.

4. Mine the area in such a manner that aquatic resource within the project boundaries will Not be dredged or filled

If it were practical the company would mine the project area and not dredge, cut, or fill the streams and wetland resources within the project boundary. There are several hundred feet of intermittent and ephemeral stream resources. Their geomorphic locations are very complex. The main channels are parallel flowing from north to south and they are a short distance apart laterally. Additionally, there are several intersecting ephemeral drainage ways and this reduces the upland areas between ephemeral and intermittent drainage ways. Theoretically, these areas could be mined and the excess overburden transported to off sites areas. The areas between and adjacent to these resources are too small for current surface area mining techniques and technology. Transporting overburden refuse off site is too expensive and this would require additional permitting. Mining in such a checkerboard manner would require many box cuts and thousands of feet of high wall to reclaim and as such is not practical.

5. Mine the area in such a manner that dredged or fill material will not enter waters of the United States

Jurisdictional waters are within the proposed project boundary and there are large perennial streams in close proximity to the project area. State regulations prohibit the mining through of perennial streams. The COE requires a permit to dredge or fill in waters of the United States. After careful review and analysis of the pre-mined data in the project area, it was determined that several feet of jurisdictional waters (intermittent/ephemeral) would be mined through, if permitted. This action is necessary because of the method of mining the company uses, economics of the project area and ability to manage off site contamination. However, the company adjusted the project boundaries to avoid Little Spring Creek and designed water control structures to prevent off site contamination of waters of the United States.

6. Strategically manage and control dredged and fill material containing potentially harmful contaminants

During the geologic exploration and site evaluation phase of this mining process, several drill holes were made across the potential site. These borings provided valuable information such as thickness of overburden to coal seams, amounts of harmful chemical elements contained in the overburden and coal reserves, and the amount of beneficial chemical components contained in overburden layers. After the collected data was analyzed, the design engineers planned what coal

seams would be mined and the seams that would remain un-mined. If analysis of the data indicated overburden or layers were present with exceptionally high levels of contaminants, the project engineer planned and designed containment and control measures. These measures included procedures to properly seal the material beneath impervious layers to prevent acid mine drainage or placing the material in spoil in a location where they do not come into contact with ground water. Managing potentially harmful contaminants through control or avoidance is an important management decision. This reduces total reliance on sediment basins for preventing off site contamination of waters of the United States.

The Selected Alternative and Rational Analysis

There are approximately 229.3 acres within the project boundary. It has several linear feet of jurisdictional waters and a few acres of jurisdictional wetlands. These aquatic resources will be filled and/or mined through during this planned mining process. The analysis indicates it is more practical to mine through these resources and reclaim on site rather than attempt to conduct mining operations around the intermittent streams and small drainage ways. The most practical method of extracting the coal reserves within the proposed project boundary is "Surface Area Mining". Typically, the surface area mining process begins with the removal of timber and other vegetation, building access roads, drilling and blasting overburden, overburden removal down to seams of coal, coal extraction, re-grading and re-establishing aquatic resources and re-establishing desirable vegetation on-site. All primary and secondary roads and sediment basins will be built as designed by a Professional Engineer and approved by the appropriate regulatory authority.

To access the coal reserves below the surface, holes are drilled into the overburden, a calculated amount of explosives are then placed at pre-determined depths and ignited. This fractures the rock and other overburden to create "Spoil." This is either transported to a stockpile area or it is graded into an existing adjacent pit created during previous mining operations. This process is repeated in predetermined lines called "Cuts" until the seams of coal have been removed.

This method is suitable for this site location because: (1) the coal seams' thickness are more suitable for surface area mining, (2) the overburden ratio to coal seam thickness is economical and feasible, (3) managing the removal and placement of overburden on site via increments and cuts as designed by the engineer are safe, economical and practical when considering the topography, type of overburden refuse and parameters associated with offsite disposal, (4) potentially harmful overburden intervals are identifiable and manageable to prevent off site contamination, (5) surface runoff and drainage is contained on site by the design and placement of sediment basins and water control structures.

Avoidance, Minimization, and Net Benefit

Haley Brothers Coal, Inc. and the mining engineer carefully planned all aspects of the mining operation to avoid impacts to aquatic resources in the project area and off site. This included the analysis and evaluation of data taken from core drilling to assist in the avoidance, management and containment of prohibited contaminants if present, evaluating the surface topography for the most efficient placement of sediment basins to avoid off site contamination, and relocating the project boundary if direct impacts are greater than the value of the coal reserves in some areas (south west boundary). Also, the company decided to reduce the size (acres) of the mining

project to lower the total linear feet of streams impacted by the mining operation. This decision will lessen the adverse impact on aquatic resources in the surrounding areas.

The planned mining of the coal reserves in this project area will impact the aquatic resources. Haley Brothers Coal, Inc. will implement practices to minimize/reduce the adverse impacts to aquatic resources on site and off site. The mining process is strategically planned, in part, to control and contain drainage water from the mine site. An approved water quality monitoring plan will be implemented for the project to minimize off site contamination of aquatic resources.

Cumulative Impacts

Cumulative effects are broadly defined by the Council on Environmental Quality (CEQ) guidelines for implementing NEPA as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions”.

This project area is located in the Blackwater Creek Watershed in Walker County, Alabama (3160109130). There are other coal mine operations in the watershed. Some mined areas are current and several acres are abandoned and un-reclaimed. The land use in the watershed is primarily forestry. Approximately 57% of the land base is utilized by commercial forestry operation with low intensity management. Some acreage owned by large timber companies practice high intensity forestry management. A small percentage of the land base is utilized cropland. This activity involves soil tillage and the application of commercial fertilizers. About 0.3% of the area is considered cropland. Some open land in the county is managed as pasture land. This includes hay harvesting and animals grazing the fields. A farm owner may apply commercial fertilizer or organic residue from animal houses to the pasture fields to improve plant growth and health. Approximately 30% of the land area in this watershed is used for pasture land. Mined lands in the watershed area comprise approximately 9% of the identifiable land uses in the county and urban land is approximately 1% of the area. Other land uses in the area include lakes, ponds and other small but important uses of property.

This data indicate a diverse use of the land in the area with a wide disparity in the percentages of each land use type. All of these land use types are likely to continue in the foreseeable future. These activities have adverse impacts to aquatic resources in the vicinity of the land use area and to off-site waters. They produce sedimentation, fertilizer in runoff water, and in some instances animals lounging in the intermittent stream courses. Also, mining activities contribute to the degradation of aquatic resources.

This mining project area will impact several hundred feet of aquatic resources. Some of identified aquatic resources have very low function/value. The implementation of this mining project would: (1) Allow coal for the extraction of coal reserves in a planned, safe, practical, economical manner for needed energy production.

Environmental Justice

Presidential Executive Order 12898, pertaining to environmental justice, requires each federal agency/project to identify “and address as appropriate, disproportionately high and adverse

human health or environmental effects of its programs, policies and activities on minority populations and low-income populations”. Low-income populations are defined as those whose household income is below the threshold as outlined by the Department of Health and Human Services. The population density for the county is 89 people per square mile for a total of 70,713 individuals residing in the county. Approximately 92% percent of the population is white, 6% percent are black, and 0.86 percent is Hispanic or Latino.

The median income for a household in the county is \$29,076.00 and the per capita income is \$15,546.00. Approximately 13 percent of all families and 16 percent of the population are below the poverty level as defined by the Department of Health and Human Services.

Salaries for mining jobs in Alabama are 55 percent higher than the average for the state. There are more than 12,200 individuals directly employed by the mining industry. Additionally, there are approximately 28,000 individuals indirectly employed as a result of mining activities in the state. The total payroll is calculated at \$680 million. This high income economic activity should provide direct and indirect income and employment for many individuals including those now living below the poverty level.

Additionally, this mine site is located in a low density populated area. The roads are well constructed and should not impede the flow of traffic or cause additional danger to other vehicular traffic. Also, because of its location the noise and nuisance of a typical mining operation such as dust is minimized and will not affect adjacent property owners to a great extent.

The Mining Process

The mining of this project area will occur as 2 increments designed by the mining engineer for this project. Each increment will be drilled/blasted and excavated according to approved plans and design. Water quality measures will be implemented to protect off-site aquatic resources including the construction of eleven sediment basins when appropriate as the mining of the site progresses.

The mitigation for the proposed impacts to these stream resources will be conducted on-site. The owner will provide the COE the proper design documents. The documents will include plan view drawings, typical cross section drawings and engineering design, and layout of proposed stream segment reconstruction. Conceptual drawings of restored aquatic resources are contained in this document.

The stream resources in the project area are fair quality. The relative straight intermittent stream segments have low quality riffle/pool sequences, few meanders, and moderately stable bed and bank. The habitat for aquatic life is fair and there is little evidence of fish, turtles or other aquatic life in the streams.

Summary of Adverse Impacts and Mitigation Proposal

The aquatic resources identified within the project boundary will be mined through during the coal extraction process. The company is planning to apply all necessary practices that are

practical to reduce the impacts to aquatic resources on site and off site. This included avoiding aquatic resources where possible, planning, designing, and installing sediment basins, and following a detailed water quality-monitoring plan.

This mitigation document shows:

- There are 12,250 linear feet or 0.6109 acres of jurisdictional waters impacted by this mining operation.
 - 9,320 linear feet or 0.3241 acres are ephemeral streams
 - 2,930 linear feet or 0.6828 acres are intermittent streams
- The mining of this site will begin with the removal of trees and other vegetation. The surface and subsurface material will be removed to access the desired coal seams. During this process the jurisdictional streams identified on the project site will be excavated through.
- *Planned mitigation for impacts to the aquatic resources within the project boundary will be conducted off-site in an approved mitigation bank.*
- During the field review and site assessment there were 2.32 acres of wetlands identified and delineated.
- *Planned mitigation for impacts to these aquatic resources will be conducted off-site in an approved mitigation bank.*

There are no threatened/endangered species identified on the project site. There are no historically significant sites located in the proposed mining area. Concurrence letters from the State of Alabama; Alabama Historical Commission, State of Alabama; Department of Conservation and Natural Resources, United States Department of Interior; Fish and Wildlife Service, are contained in this document (*See tab 2 for concurrence letters*).

SITE SELECTION

The mining of this site for the purpose of extracting coal will impact 12,250 linear feet of moderate to low quality streams. Most of the segments have been impacted by soil disturbing activities in the watershed of the project area. The bed and banks are unstable in some areas; there is sedimentation in areas and shallow depth to rock along the bed of several segments. Mitigation for impacts to these aquatic resources will be conducted off-site in an approved mitigation bank.

SITE PROTECTION INSTRUMENT

Haley Brothers, Coal, Inc. is planning to mitigate the impacts of this mining operation off-site in an approved mitigation bank. Site protection is not required for this decision.

BASE LINE INFORMATION

This proposed Little Spring Creek Mine is located in Sections 2 & 3, T13S, R7W in Walker County, Alabama. The landscape consists mainly of broad undulating upland, narrow sloping ridge tops and moderately sloping to very steep side slopes. The soils on these landscapes are formed in residuum weathered from sandstone and shale of the Appalachian Plateau Physiographic Region. Also, there are small flood plain and terrace landscapes along some segments of the intermittent streams and along the project boundary near Little Spring Creek. Drainage water from the project site flows south into Little Spring Creek, a perennial stream.

The Jurisdictional streams identified and labeled on this project site have bed and bank and other characteristics associated with these stream types (*See tab 3 for CEO approved JD forms and typical photos of stream segments*). There are several water flow paths in the area that are not jurisdictional. Drainage along these areas is mainly sheet flow. Most segments of the ephemeral and intermittent streams have been altered over time to include sediment deposits in the bed of some stream segments and many stream banks are unstable. Therefore, the surface and subsurface hydrology has been altered as a result of surface site activities.

Portions of the project site have been logged within the last several months. The logged areas were mainly Slash Pine forest with some hardwood species on slopes. Some areas along the streams and buffer areas remain un-harvested. This hardwood forest is mainly low grade Post Oak, Red Oak and Sweetgum with a few Red Maples and Yellow Poplar along the stream segments. Overall, suitable habitat for locally adapted aquatic species is fair for this site. Implementing this planned mitigation will greatly enhance the diversity of biota in the project area.

Soil

The Natural Resource Conservation service has prepared a soils map of the area. A review of the soil survey data for Walker County, Alabama indicates the dominant soil types in the project area are Bankhead, Nauvoo, Pruitton Sipsey, Townley, and Wynnville soils. These soils were identified in the project area. Also, soils mapped as inclusions were identified along drainageways. The soils along the drainageways are mostly the State soils series.

Bankhead

The soils in this map unit are moderately well drained and are formed in residuum weathered from sandstone. Permeability is moderately rapid. The landscape where these soils are mapped consists of steep side slopes with extensive rock outcrop areas. The content of coarse fragments is moderate for the soils in this map unit. Slopes range from 15 to 60 percent or more. The available water capacity is low for these soils. The potential for erosion is high. Bankhead loam

is not identified as a hydric soil. It is considered to have hydric inclusions along flood plains of streams.

Pruitton

This soil is mapped on flood plains and stream terraces within the project area. It is very deep, well drained and permeability is moderate. These soils formed in local alluvium and flooding is frequently where they are located on the landscape. The available water capacity is high in the surface and subsoil. The potential for erosion is moderate. Pruitton sandy loam is not identified as a hydric soil. It is considered to have hydric inclusions along flood plains of streams.

Sipsey

This mapped area consists of moderately deep, well-drained soils formed in residuum weathered from sand stone and shale. Permeability is moderate. The landscapes where these soils are mapped consist of broad undulating upland ridges and moderately steep side slopes. Content of coarse fragments ranges from 0 percent to more than 15 percent in some areas. The available water capacity is medium to high throughout the soil. Sipsey loamy sand is not identified as a hydric soil but it may have hydric inclusions.

State loam – (mapped as inclusion along drainageways)

These soils are located along drainageways in the project area. This moderately deep, moderately well drained to somewhat poorly drained, moderately permeable soil, formed from alluvial material from uplands. Available water capacity is medium to high in the subsoil. The content of coarse fragments in the soil profile is 15 percent to 20 percent. State loam is not identified as a hydric soil. It is considered to have hydric inclusions along flood plains of streams.

Results of Field Delineation

Uplands

The upland portions of the project site are non-hydric soils as identified by the county soil survey for the project area and confirmed in the field during this investigation. The dominant vegetation in wooded areas is loblolly pine with various species of shrub understory. The upland vegetation is mainly FAC and FACU. There are areas of low quality hardwood forest on some upland areas. The soils on the upland are well drained with loamy and clayey subsoil. These soils do not contain distinct mottling or colors with low chroma or low value; therefore, they do not meet the COE criteria for hydric soils. Wetland hydrology is not present on upland sites of the project area. The upland areas do not meet the three criteria used to identify an area as wetland: hydrophytic vegetation, hydric soils and wetland hydrology (*See tab 4 for COE Wetland Determination Form*).

Drainage ways

The drainage way landform consists of narrow flow channels for water. These areas are considered as an inclusion on the county soil survey maps. Several inches of recent alluvial material were observed in many areas along the drainage ways. The soils on this landform are moderately well to somewhat poorly drained. A typical profile consists of 6 inches of yellowish brown (10YR 5/4) loam. The next layer is dark yellowish brown (10YR 4/4) silty clay loam. Below this is light yellowish brown (10YR 6/4) silty clay loam. Some layers have 20 % light brownish gray (10YR 6/2) mottles. Most of these soils do not contain distinct (dominant) mottling or colors with low chroma or low value; therefore, they do not meet the COE criteria for hydric soils. The dominant trees are mainly sweetgum (*Liquidambar styraciflua*), Red maple (*Acer rubrum*) and yellow poplar (*Liriodendron tulipifera*). These areas do not meet all three criteria used to identify an area as wetland: hydrophytic vegetation, hydric soils and wetland hydrology. They are dominated by facultative tree species, but lack hydrology and hydric soils. Therefore, they are not wetlands but are waters of the United States where they have bed and banks.

Floodplain and Terrace

This landscape position is mainly along the southern and western boundary of the project area. It is adjacent to Little Spring Creek and a few of its tributaries. The soils are moderately well drained to somewhat poorly drained. These areas are subject to ponding and or flooding during the wet season of the year. The vegetation is mainly bottomland. There are a few acres of open land utilized as game food areas. There are very small and medium size wetlands on this landscape.

DETERMINATION OF CREDITS

The project area was reviewed to locate, identify, and define all jurisdictional waters/stream segments within the project area. The completed jurisdictional form is a list of stream segments that are jurisdictional as a result of the site assessment. Stream segments are identified as water flow paths on the project site map contained in this document (*See tab 1 for site maps*). Also, photographs were taken at points along most stream segment (*See tab 3 for photographs of typical stream attributes*).

Streams were classified utilizing the North Carolina Division of Water Quality for the “*Identification Methods for the Origins of Intermittent and Perennial Streams*”. The primary categories of the system are geomorphology, hydrology, and biological characteristics of a stream to determine if it is classified as an ephemeral, intermittent or a perennial stream. Each of these parameters have several descriptive sub-categories and they are defined as “Absent”, “Weak”, “Moderate” or “Strong” and given a numerical score accordingly. A numerical score of 18 or less indicates that the stream segment is classified as an ephemeral drainage water course. A numerical score of 19 to 29 indicates that the stream segment is classified as an intermittent drainage water course. If the stream segment has a score of 30 or greater, it is classified as an intermittent drainage water course.

To access the potential impacts this mining operation would have on aquatic resources, the Mobile District SOP was referenced and Calculations were made using the document “Adverse

Impacts – Factors for Riverine Systems Worksheet. It identifies and evaluates “Stream Type”, “Priority Area”, “Existing Condition”, “Duration of Impact”, “Dominant Impact” i.e. type of impact, Cumulative Impact” i.e. linear feet of impact is assigned a numerical factor.

The aquatic resources within the project area were evaluated and the required compensation was obtained utilizing the above described methodology.

List of Water Flow Paths in the Project Area that were Inventoried

The tables below list the water flow paths inventoried/identified in the project area for jurisdictional determination.

Table of Inventoried Water Flow Paths

WFP ID	LONG	LAT
1	W87 15.14008	N33 56.33548
3	W87 14.97842	N33 56.54217
4	W87 15.14053	N33 56.48928
5	W87 15.11773	N33 56.6184
6	W87 14.86423	N33 57.0345
7	W87 14.98782	N33 56.8118
8	W87 14.81017	N33 56.94897
9	W87 14.87245	N33 56.7826
13	W87 14.91792	N33 57.03568
16	W87 15.08893	N33 56.8665
17	W87 15.1607	N33 56.90315
19	W87 15.43005	N33 56.67953
32	W87 15.25895	N33 57.04323
35	W87 15.31788	N33 56.78678

The tables below list the water flow paths inventoried/identified in the project area that are Jurisdictional.

**Table of Stream Attributes that are Jurisdictional/Ephemeral
INCREMENT # 1**

WFP ID	EPH. LENGTH	EPH. WIDTH	EPH. ACRES
1	340	1.9	0.0148
3	900	1.5	0.0309
4	740	1.7	0.0288
5	1380	1.7	0.0538
17	100	1.2	0.0027
35	440	1.5	0.0151
TOTAL	3,900		0.1461

**Table of Stream Attributes that are Jurisdictional/Ephemeral
INCREMENT # 2**

WFP ID	EPH. LENGTH	EPH. WIDTH	EPH. ACRES
6	340	1.9	0.0148
8	900	1.5	0.0309
9	740	1.7	0.0288
13	1380	1.7	0.0538
16	100	1.2	0.0027
17	440	1.5	0.0151
32	660	1.2	0.0181
35	140	1.5	0.0048
TOTAL	5,420		0.1780

The tables below list the water flow paths inventoried/identified in the project area that are Jurisdictional.

**Table of Stream Attributes that are Jurisdictional/Intermittent
INCREMENT # 1**

WFP ID	INT. LENGTH	INT. WIDTH	INT. ACRES
7	1510	3.3	0.1333
19	760	4.5	0.0929
TOTAL	2,270		0.2262

**Table of Stream Attributes that are Jurisdictional/Intermittent
INCREMENT # 1**

WFP ID	INT. LENGTH	INT. WIDTH	INT. ACRES
7	660	3.3	0.0606
TOTAL	660		0.0606

The tables below list the wetlands inventoried/identified in the project area that are Jurisdictional.

Delineated Wetlands in the project area

Wetland ID	Acres
Area# 1	0.10
Area # 2	0.30
Area # 4	0.11
Area # 5	1.20
Area # 7	0.30
Area # 8	0.30
Total	2.32 Acres

Total Acres of Impacts Associated with this Project

Aquatic Resource	Acres of Impact
Ephemeral	0.3241
Intermittent	0.2868
Wetlands	2.32
Total	2.9 Acres

**Calculated Credits for Off-Site Mitigation
(Adverse Impact Worksheet)**

Increment # 1

2,270 linear feet of intermittent streams or 9,306 Credits Required
0.1461 acres of ephemeral streams
2.32 acres of wetlands
1.50 Proximity factor

Wetland area	Acres	WRAP	Credits
8	0.3	0.75	0.22
7	0.3	0.50	0.15
5	1.2	0.50	0.60
4	0.11	0.72	0.08
2	0.31	0.75	0.23
1	0.11	0.72	0.07
	2.32		1.39

Calculating:

9,306 CR x 1.50 = 13,959 required credits for the intermittent streams
0.1461 ac. x 1.50 = 0.219 wetland credits for the ephemeral streams
1.39 x 1.50 = 2.08 wetland credits for JD wetlands on-site

Increment # 2

660 linear feet of intermittent streams or 2,640 Credits Required
0.1780 acres of ephemeral streams
1.50 Proximity factor

Calculating:

2,640 x 1.50 = 3,960 required credits for the intermittent streams
0.1780 ac x 1.50 = 0.267 wetland credits for the ephemeral streams

Total Compensation Credits Required for the Intermittent Streams

Increment # 1 – 13,959
Increment # 2 - 2,640
Total 16,599

Total Compensation Credits Required for the Ephemeral Streams

Increment # 1 - 0.219

Increment # 2 - 0.267

Total 0.486

Total Compensation Credits Required for Wetlands

2.08 credits

TOTAL WETLAND CREDITS 2.57

TOTAL STREAM CREDITS 16,599

SECTION A

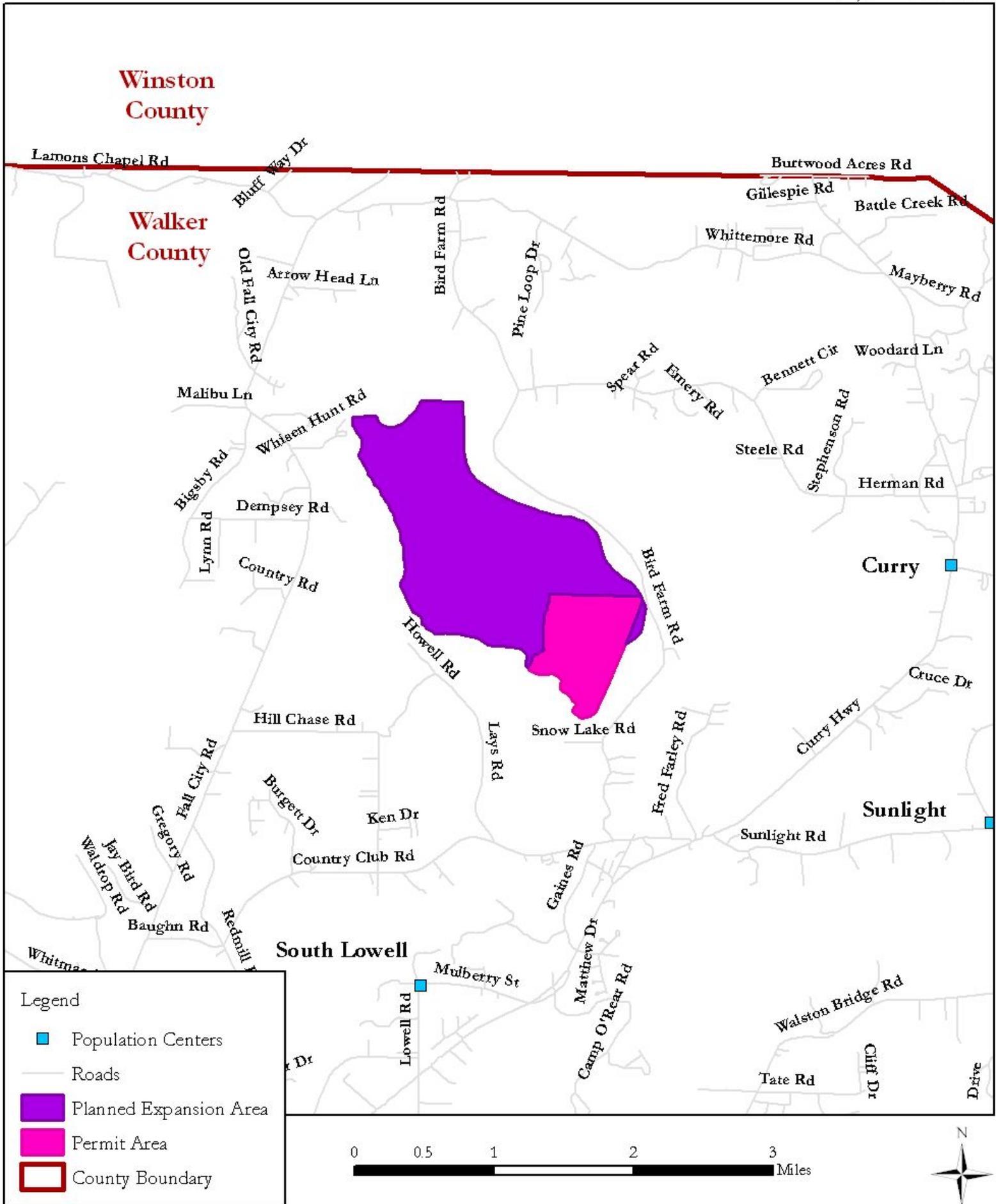
Location Map

NRCS Soils Map

Aerial Plan

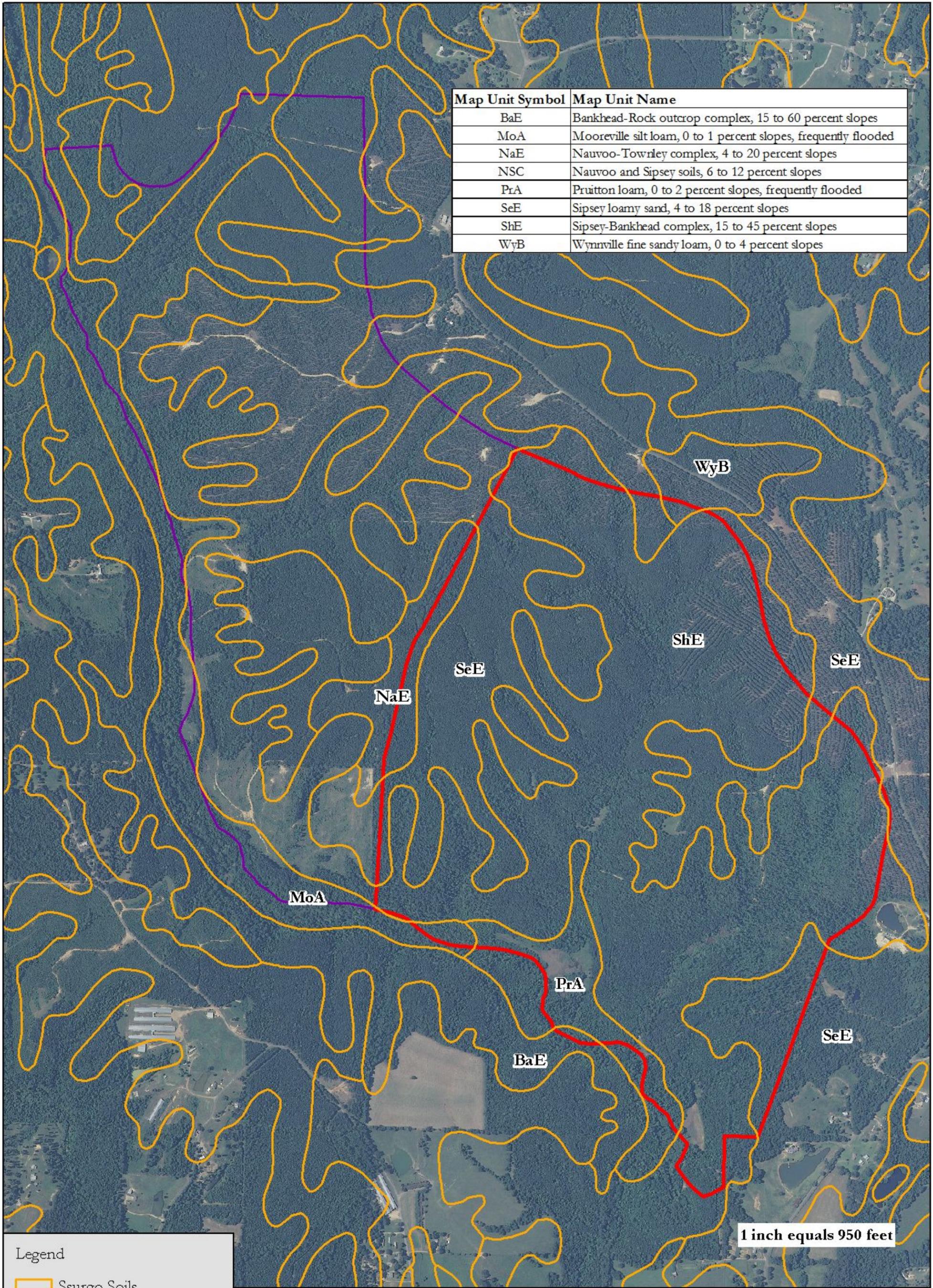
Topo with WFP's

Sediment Basins Location Map



Haley Brothers Coal, Inc. Little Spring Creek Mine

Soils Map



Map Unit Symbol	Map Unit Name
BaE	Bankhead-Rock outcrop complex, 15 to 60 percent slopes
MoA	Mooreville silt loam, 0 to 1 percent slopes, frequently flooded
NaE	Nauvoo-Townley complex, 4 to 20 percent slopes
NSC	Nauvoo and Sipsy soils, 6 to 12 percent slopes
PrA	Pruitton loam, 0 to 2 percent slopes, frequently flooded
SeE	Sipsy loamy sand, 4 to 18 percent slopes
ShE	Sipsy-Bankhead complex, 15 to 45 percent slopes
WyB	Wynville fine sandy loam, 0 to 4 percent slopes

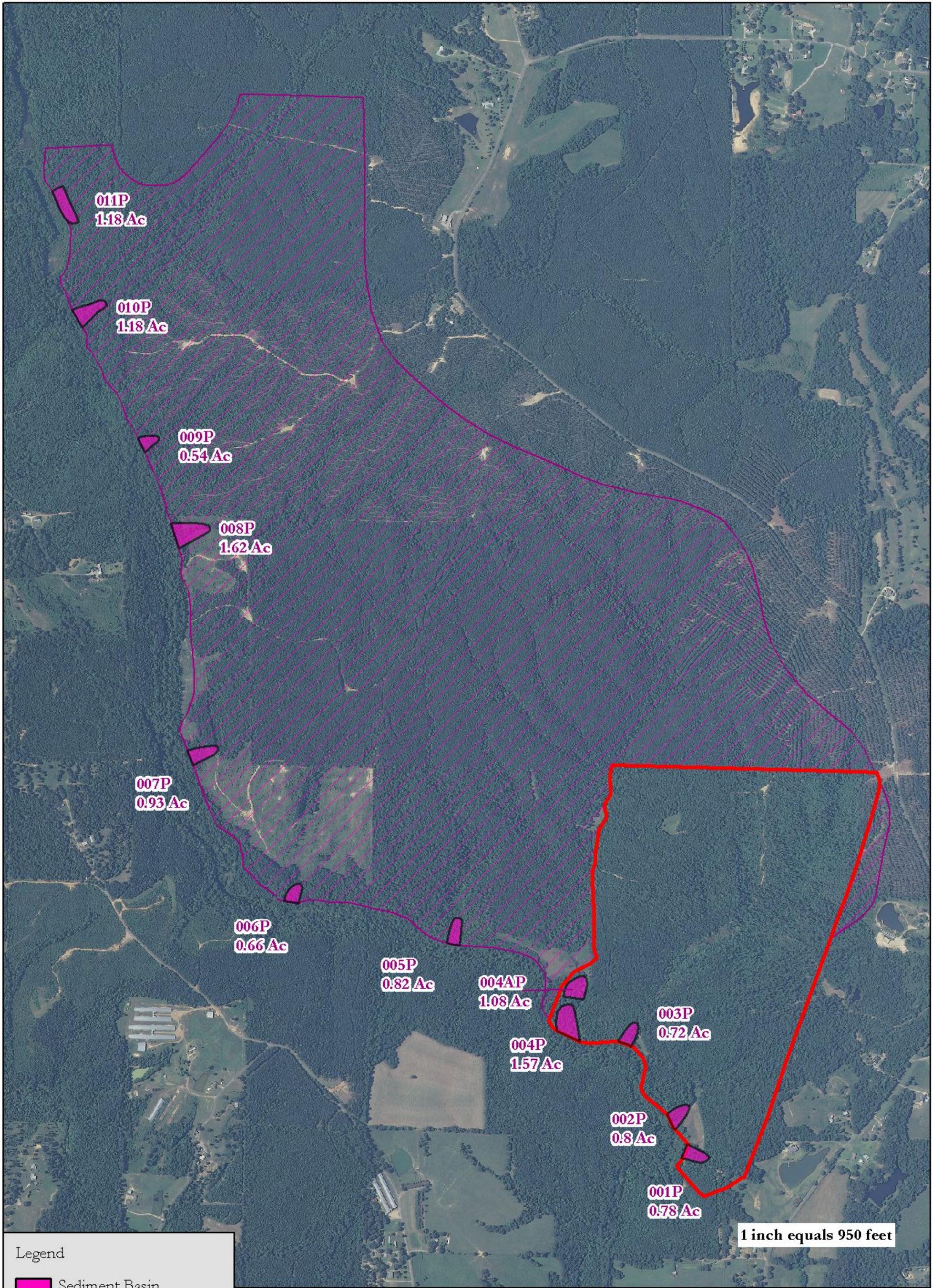
Legend

- Ssurgo Soils
- Permit Area
- Planned Expansion Area



1 inch equals 950 feet





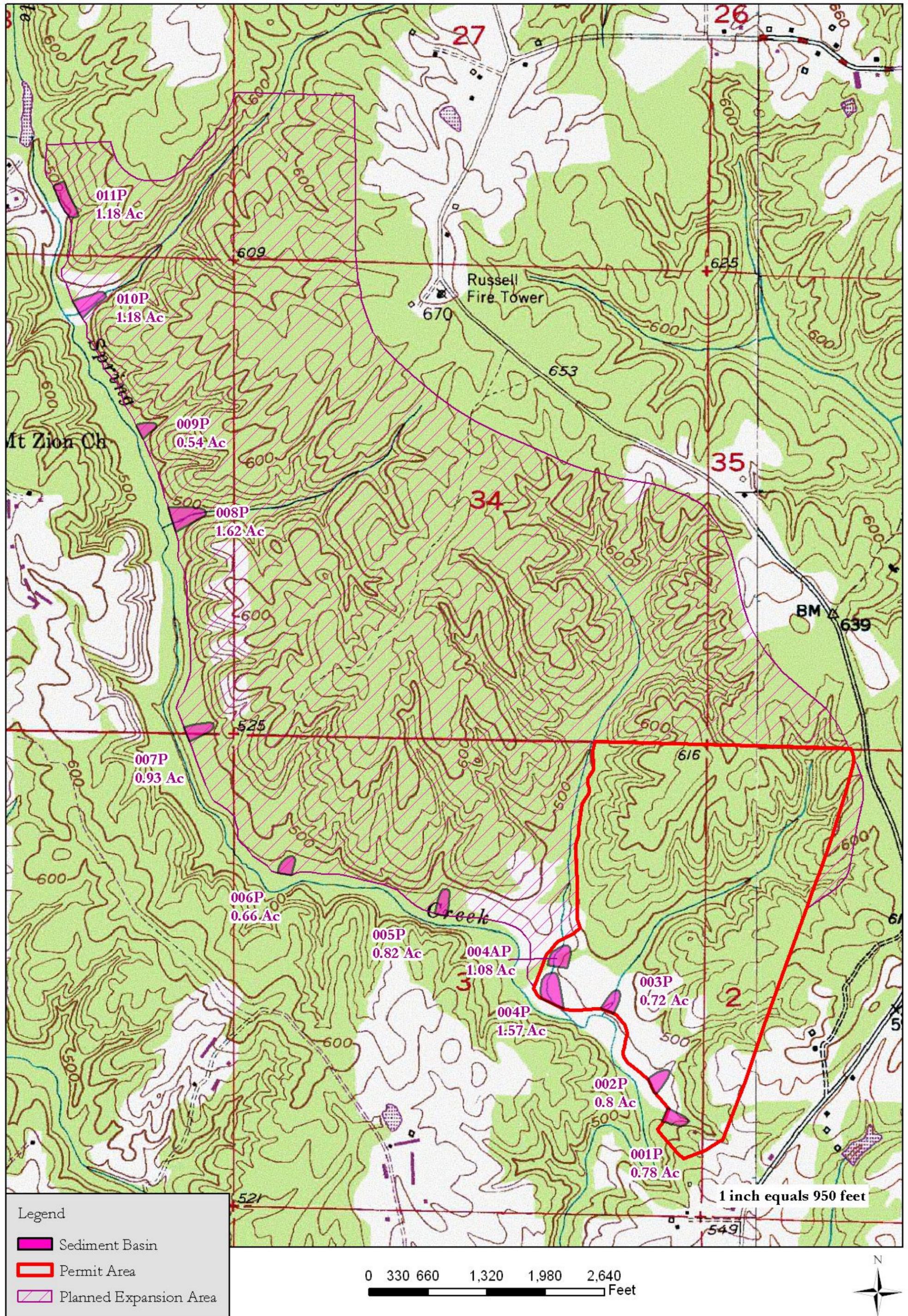
Legend

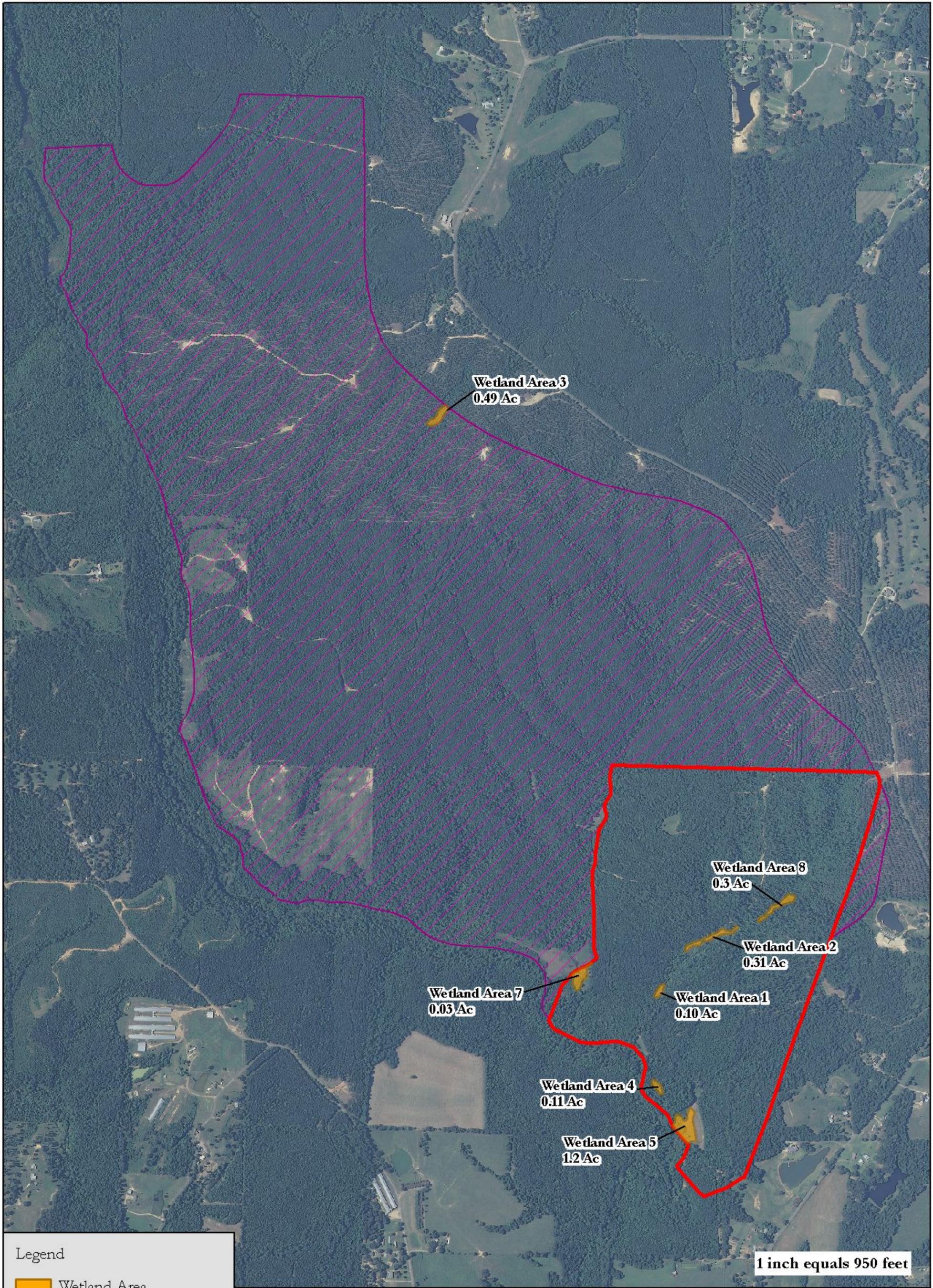
-  Sediment Basin
-  Permit Area
-  Planned Expansion Area

0 330 660 1,320 1,980 2,640
Feet

1 inch equals 950 feet



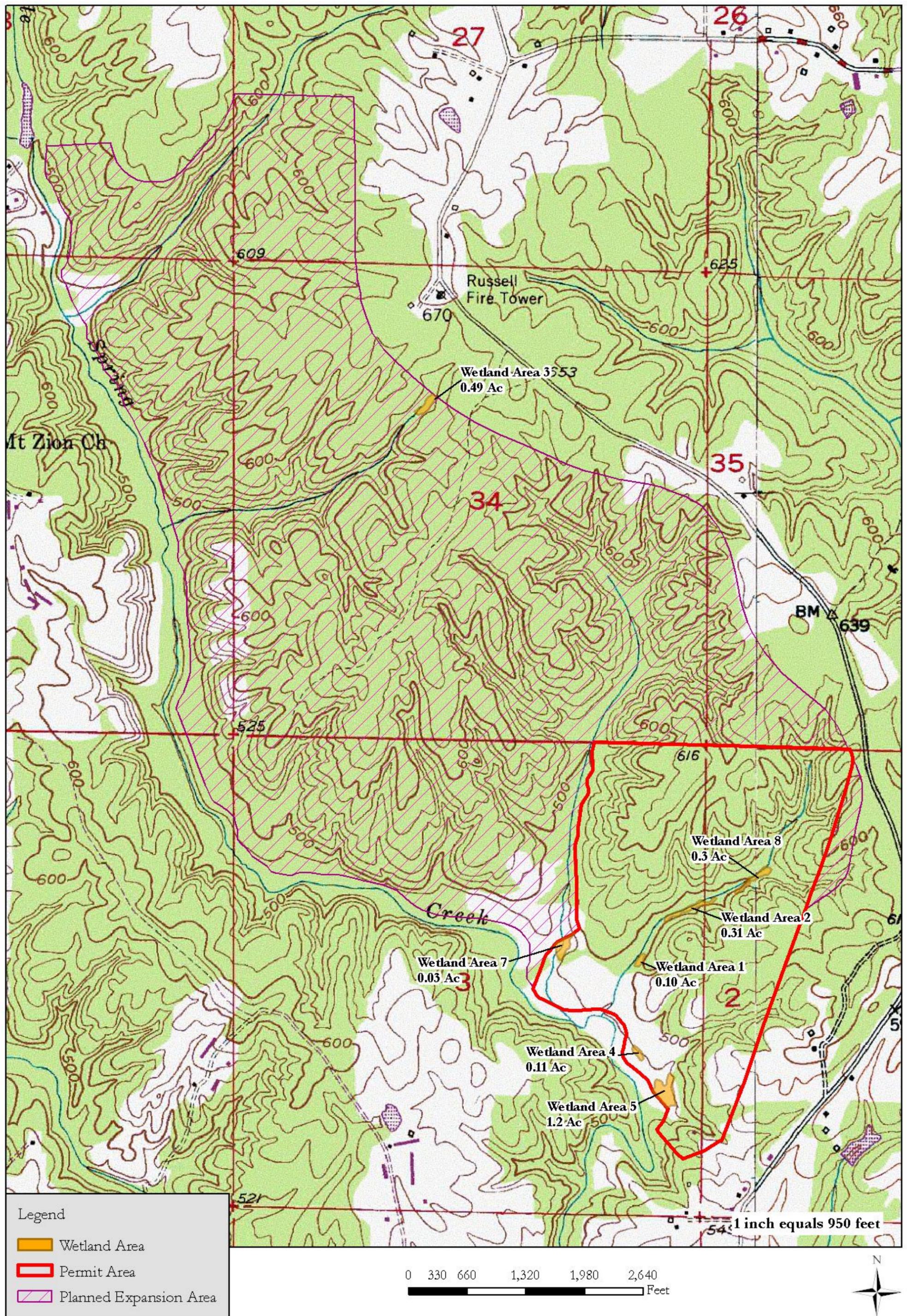




Legend

-  Wetland Area
-  Permit Area
-  Planned Expansion Area





SECTION B

Concurrence Letters

TASK ENGINEERING MANAGEMENT INC.

PO Box 660548
BIRMINGHAM, ALABAMA 35266
(205) 978-5070

July 14, 2010

Ms. Elizabeth Ann Brown
Deputy State Historic Preservation Officer
Alabama Historical Commission
468 South Perry Street
Montgomery, Alabama 36130-0900

LETTER OF TRANSMITTAL

Re: Haley Brothers Coal, Inc.
Little Spring Creek Mine
Submission of Cultural Resource Survey OAR#10-138

Dear Ms. Brown:

On behalf of Haley Brothers Coal, Inc., please find enclosed Cultural Resource Survey OAR#10-138 performed by University of Alabama Office of Archaeological Research on their proposed Little Spring Creek Mine site located in Walker County, Alabama. As part of the permitting process with the Alabama Surface Mining Commission, we respectfully request your review and written comments regarding this assessment.

If you have any questions or need additional information, please call us at (205)978-5070.

Sincerely,



Jerry W. Williams,
Ala. PE #12739



STATE OF ALABAMA
ALABAMA HISTORICAL COMMISSION
468 SOUTH PERRY STREET
MONTGOMERY, ALABAMA 36130-0900

FRANK W. WHITE
EXECUTIVE DIRECTOR

July 29, 2010

TEL: 334-242-3184
FAX: 334-240-3477

Jerry W. Williams
Task Engineering
P.O. Box 660548
Birmingham, Alabama 35266

Re: AHC 10-1053
Cultural Resource Assessment
Little Spring Creek Mine
Walker County, Alabama

Dear Mr. Williams:

Upon review of the cultural resource assessment conducted by the Office of Archaeological Research, we have determined that project activities will have no adverse effect on cultural resources eligible for or listed on the National Register of Historic Places. Therefore, we concur with the proposed project activities.

However, should artifacts or archaeological features be encountered during project activities, work shall cease and our office shall be consulted immediately. Artifacts are objects made, used or modified by humans. These include but are not limited to arrowheads, broken pieces of pottery or glass, stone implements, metal fasteners or tools, etc. Archaeological features are stains in the soil that indicate disturbance by human activity. Some examples are postholes, building foundations, trash pits and even human burials. This stipulation shall be placed on the construction plans to insure contractors are aware of it.

We appreciate your efforts on this project. Should you have any questions, please contact Greg Rhinehart at (334) 230-2662. Please have the AHC tracking number referenced above available and include it with any correspondence.

Truly yours,

Elizabeth Ann Brown
Deputy State Historic Preservation Officer

EAB/GCR/gcr

SECTION C

Approved Jurisdictional Determination Forms

Photos of Typical WFP'S

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): 2/10/2010 -5/1/2010

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:
Haley Brothers Coal, Inc. 414 5th Avenue North West Carbon Hill, Alabama 35549.

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: Mobile District-Birmingham Field Office - SAM-2011-00736-CHE

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:

State: AL County: Walker City: Jasper, Alabama
Center coordinates of site: Lat N33° 57' 17.1", Long. W87° 15' 46.7"

Name of nearest waterbody: Mulberry Fork

Identify amount of waters in the review area (use the attached table to document multiple waterbodies/locations): See Attached sheet for waters in the project area

Non-Wetland Waters: _____ linear feet _____ width (ft) and _____ acres.
Cowardin Class: _____ Stream Flow: _____

Wetlands: _____ acres.
Cowardin Class: _____

Name of any water bodies on the site that have been identified as Section 10 waters: There are no Section 10 waters located within the project boundaries.

Tidal: _____ Non-Tidal: _____

E. REVIEW PERFORMED FOR SITE EVALUATION

Office Determination. Date: _____
Field Determination. Date: 2/10/2010 -5/1/2010

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring “pre-construction notification” (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant’s acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there “*may be*” waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD - checked items should be included in the file:

Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant.

Data sheets prepared/submitted by or on behalf of the applicant/consultant.

Office concurs with data sheets/delineation report.

Office does not concur with data sheets/delineation report.

___ Data sheets prepared by the Corps: _____.

___ Corps navigable waters' study: _____.

___ U.S. Geological Survey Hydrologic Atlas: _____.

USGS NHD data.

USGS 8 and 12 digit HUC maps.

U.S. Geological Survey map(s). Scale 1:660 Quad Name: Manchester East, DOQ.

USDA Natural Resources Conservation Service Soil Survey. Walker County Soil Survey/USDS/NRCS

___ National wetlands inventory map(s). Cite name: _____.

___ State/Local wetland inventory map(s): _____.

___ FEMA/FIRM maps: _____.

___ 100-year Floodplain Elevation is: _____ (National Geodetic Vertical Datum of 1929)

Photographs: Aerial (Name & Date): Manchester East - 2/10/2010 - 5/1/2010
or Other - Onsite photos taken 11/2009 - 2/11/2011

___ Previous determination(s). File No. and Date: _____.

___ Other information (please specify): _____.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Regulatory Project Manager
Signature and Date
(REQUIRED)

Person Requesting Preliminary JD
Signature and Date
(REQUIRED, unless obtaining
the signature is impracticable)

Site number	Latitude	Longitude	Cowardin Class	Estimated amount of aquatic resource in review area	Class of aquatic resource
1	N33 56.33548	W87 15.14008	R6	340	non-section 10
3	N33 56.54217	W87 14.97842	R6	900	non-section 10
4	N33 56.48928	W87 15.14053	R6	740	non-section 10
5	N33 56.6184	W87 15.11773	R6	1380	non-section 10
6	N33 57.0345	W87 14.86423	R6	1560	non-section 10
7	N33 56.8118	W87 14.98782	R4	2170	non-section 10
8	N33 56.94897	W87 14.81017	R6	600	non-section 10
9	N33 56.7826	W87 14.87245	R6	600	non-section 10
13	N33 57.03568	W87 14.91792	R6	280	non-section 10
16	N33 56.8665	W87 15.08893	R6	600	non-section 10
17	N33 56.90315	W87 15.1607	R6	100	non-section 10
19	N33 56.67953	W87 15.43005	R4	760	non-section 10
32	N33 57.04323	W87 15.25895	R6	600	non-section 10
35	N33 56.78678	W87 15.31788	R6	440	non-section 10
Wetland # 1	N33 56 38.1	W87 15 16.2	PSS1	0.30 ac.	non-section 10
Wetland # 2	N33 56 39.2	W87 15 16.0	PSS1	0.31 a.c	non-section 10
Wetland # 4	N33 56 37.8	W87 15 14.9	PSS1	0.11 ac	non-section 10
Wetland # 5	N33 56 40.1	W87 15 14.4	PSS1	1.20 ac	non-section 10
Wetland # 7	N33 56 43.0	W87 15 14.5	PSS1	0.30 ac	non-section 10
Wetland # 8	N33 56 42.6	W87 15 12.4	PSS1	0.30 ac	non-section 10

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 3 mid reach

Date of Photograph – February - March 2010

Location of photograph – mid reach in commercial forested area

Precipitation event – 1 to 2 days since significant rainfall

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 4 lower reach

Date of Photograph – February – March 2010

Location of photograph – lower reach in commercial forested area

Precipitation event – < 1 day since significant rainfall - there has been excessive rainfall during fall and winter.

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 5 lower reach

Date of Photograph – February - March 2010

Location of photograph – Lower reach in commercial forested area

Precipitation event – 1 to 2 days since significant rainfall – there has been excessive fall and winter rainfall.

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 5 upper reach

Date of Photograph – February - March 2010

Location of photograph – upper reach in commercial forested area

Precipitation event – 1 to 2 days since significant rainfall - there has been excessive rainfall during fall and winter.

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 6 lower reach

Date of Photograph – February – March 2010

Location of photograph – lower reach in commercial forested area

Precipitation event – 1 day since significant rainfall – there has been excessive rainfall during fall and winter.

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 6 upper reach

Date of Photograph – February - March 2010

Location of photograph – upper reach in commercial forested area

Precipitation event – 1 day since significant rainfall – there has been excessive rainfall during fall and winter.

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 7 lower reach

Date of Photograph – February - March 2010

Location of photograph –lower reach in commercial forested area with small buffer along stream.

Precipitation event –1 day since significant rainfall- there has been excessive rainfall during fall and winter.

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 8 lower reach

Date of Photograph – February – March 2010

Location of photograph – lower reach in commercial forested area

Precipitation event – 1 to 2 days since significant rainfall – there has been excessive rainfall during fall and winter.

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 9 mid reach

Date of Photograph – February - March 2010

Location of photograph – mid reach in commercial forested area

Precipitation event – 1 day since significant rainfall – there has been excessive rainfall during fall and winter.

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 17 lower reach

Date of Photograph – February - March 2010

Location of photograph – Lower reach in commercial forested area

Precipitation event – 1 2 days since significant rainfall – there has been excessive rainfall during fall and winter.

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 17 upper reach

Date of Photograph – February - March 2010

Location of photograph – upper reach in commercial forested area

Precipitation event – 1 to 2 days since significant rainfall

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 19 upper reach

Date of Photograph – February - March 2010

Location of photograph – upper reach in commercial forested area

Precipitation event – 1 to 2 days since significant rainfall – there has been excessive rainfall during fall and winter.

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 22 mid reach

Date of Photograph – February - 2010

Location of photograph – mid reach in commercial forested area

Precipitation event – 1 to 2 days since significant rainfall

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 23 mid reach

Date of Photograph – February – March 2010

Location of photograph – mid reach in commercial forested area

Precipitation event – 1 to 2 days since significant rainfall

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 24 mid reach

Date of Photograph – February – March 2010

Location of photograph – mid reach in commercial forested area

Precipitation event – 1 to 2 days since significant rainfall- there has been excessive rainfall during fall and winter.

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 31 lower reach

Date of Photograph – February – March 2010

Location of photograph – Lower reach in commercial forested area

Precipitation event – 1 day since significant rainfall – there has been excessive rainfall during fall and winter.

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 31 upper reach

Date of Photograph – February - March 2010

Location of photograph – upper reach in commercial forested area

Precipitation event – 1 to 2 days since significant rainfall – there has been excessive rainfall during fall and winter.

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 36 lower reach

Date of Photograph – February 2010

Location of photograph – lower reach in commercial forested area

Precipitation event – 1 to 2 days since significant rainfall – there has been excessive rainfall during fall and winter.

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 36 upper reach

Date of Photograph – February - March 2010

Location of photograph – mid reach in commercial forested area

Precipitation event – 1 to 2 days since significant rainfall

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 38 mid reach

Date of Photograph – February - March 2010

Location of photograph – mid reach in commercial forested area

Precipitation event – 1 to 4 days since significant rainfall

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 39 lower reach

Date of Photograph – February March 2010

Location of photograph – mid reach in commercial forested area

Precipitation event – 1 to 2 days since significant rainfall – there has been excessive rainfall during fall and winter .

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 41 mid reach

Date of Photograph – February - March 2010

Location of photograph – mid reach in commercial forested area

Precipitation event – 1 day since significant rainfall – there has been excessive rainfall during fall and winter.

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 46 lower reach

Date of Photograph – February March 2010

Location of photograph – mid reach in commercial forested area with small buffer

Precipitation event – 1 to 2 days since significant rainfall – there has been excessive rainfall during fall and winter.

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 48

Date of Photograph – February March 2010

Location of photograph – mid reach in commercial forested area

Precipitation event – 1 to 2 days since significant rainfall – there has been excessive rainfall during fall and winter.

**Haley Brothers Coal, Inc.
Little Spring Creek Mine
Walker County, Alabama**



Photo ID WFP # 49 mid reach

Date of Photograph – February – March 2010

Location of photograph – mid reach in commercial forested area

Precipitation event – 1 to 2 days since significant rainfall

SECTION D

Official Wetland Determination Forms

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>WALKER COUNTY</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? No Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 1</u> Plot ID: <u>OP 1</u> WP # <u>100</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Pinus taeda</u>	<u>T</u>	FAC	9. _____	_____	Pick One
2. <u>Liquidambar styraciflua</u>	<u>T</u>	FAC	10. _____	_____	Pick One
3. <u>Liriodendron tulipifera</u>	<u>T</u>	FAC	11. _____	_____	Pick One
4. <u>Smilax glauca</u>	<u>V</u>	FAC	12. _____	_____	Pick One
5. <u>Lonicera japonica</u>	<u>V</u>	FAC	13. _____	_____	Pick One
6. <u>Acer rubrum</u>	<u>T</u>	FAC	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 85%

Remarks: Observation point is located in pine forest along small drainage way. Trees are managed as commercial forest low intensity management.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____(in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: <u>≥ 25</u> (in.)	
Remarks: <u>This observation point is located adjacent to ephemeral drainageway in small floodplain. The hydrologh has minor alteration as a result of timber management, but hydroogy is mainly natural.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Mooreville loam/variant</u>		Drainage Class: <u>MWD</u> Field Observations Confirm Mapped Type? <u>No</u>			
Taxonomy (Subgroup): <u>Fluvaquentic Dystrudepts</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ <u>Contrast</u>	Texture, Concretions, <u>Structure, etc.</u>
<u>0 - 8</u>	<u>A</u>	<u>10YR 3/3</u>	<u>_____</u>	<u>_____</u>	<u>L</u>
<u>8 - 17</u>	<u>BW1</u>	<u>10YR 5/4</u>	<u>10YR 4/4, 4/2</u>	<u>c2d</u>	<u>L</u>
<u>17 - 26</u>	<u>BW2</u>	<u>10YR 5/6</u>	<u>10YR 6/2, 10YR 4/4</u>	<u>f2d, f3d</u>	<u>SL</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input checked="" type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input checked="" type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>This observation point is located in small floodplain area. There are a few hydric indicators in the soil profile; however, the soil is not hydric.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>No</u> Wetland Hydrology Present? <u>Yes</u> Hydric Soils Present? <u>No</u>	Is this Sampling Point Within a Wetland? <u>No</u>
Remarks: <u>The observation point is located in a small floodplain of an ephemeral drainage way. The area has a few wetland characteristics but it does meet the three criteria for a wetland.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>WALKER COUNTY</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? No Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 2</u> Plot ID: <u>OP 2</u> WP # <u>102</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Pinus taeda</u>	<u>T</u>	FAC	9. _____	_____	Pick One
2. <u>Liquidambar styraciflua</u>	<u>T</u>	FAC	10. _____	_____	Pick One
3. <u>Liriodendron tulipifera</u>	<u>T</u>	FAC	11. _____	_____	Pick One
4. <u>Smilax glauca</u>	<u>V</u>	FAC	12. _____	_____	Pick One
5. <u>Lonicera japonica</u>	<u>V</u>	FAC	13. _____	_____	Pick One
6. <u>Acer rubrum</u>	<u>T</u>	FAC	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 85%

Remarks: Observation point is located in pine forest along small drainage way with a narrow hardwood buffer. Trees are managed as commercial forest low intensity management.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____(in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: <u>≥ 25</u> (in.)	
Remarks: <u>This observation point is located adjacent to ephemeral drainageway in small floodplain. The hydrologh has minor alteration as a result of timber management, but hydroogy is mainly natural.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Mooreville loam/variant</u>		Drainage Class: <u>MWD</u> Field Observations Confirm Mapped Type? <u>No</u>			
Taxonomy (Subgroup): <u>Fluvaquentic Dystrudepts</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ <u>Contrast</u>	Texture, Concretions, <u>Structure, etc.</u>
<u>0-7</u>	<u>A</u>	<u>10YR 3/3</u>	<u>_____</u>	<u>_____</u>	<u>L</u>
<u>7-12</u>	<u>BW1</u>	<u>10YR 5/4</u>	<u>10YR 4/4, 4/2</u>	<u>c2d</u>	<u>L</u>
<u>12 - 25</u>	<u>BW2</u>	<u>10YR 5/6</u>	<u>10YR 6/2, 10YR 4/4</u>	<u>f2d, f3d</u>	<u>SL</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input checked="" type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input checked="" type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>This observation point is located in small floodplain area. There are a few hydric indicators in the soil profile; however, the soil is not hydric.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>No</u> Wetland Hydrology Present? <u>Yes</u> Hydric Soils Present? <u>No</u>	Is this Sampling Point Within a Wetland? <u>No</u>
Remarks: <u>The observation point is located in a small floodplain of an ephemeral drainage way. The area has a few wetland characteristics but it does meet the three criteria for a wetland.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>WALKER COUNTY</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? Yes Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 3</u> Plot ID: <u>OP 3</u> WP # 109

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Pinus taeda</u>	<u>T</u>	FAC	9. _____	_____	Pick One
2. <u>Liquidambar styraciflua</u>	<u>T</u>	FAC	10. _____	_____	Pick One
3. <u>Liriodendron tulipifera</u>	<u>T</u>	FAC	11. _____	_____	Pick One
4. _____	_____	Pick One	12. _____	_____	Pick One
5. _____	_____	Pick One	13. _____	_____	Pick One
6. _____	_____	Pick One	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 75%

Remarks: Observation point is located in small concave landscape area. Loblolly pine is the dominant vegetation. Trees are managed as commercial forest low intensity

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____(in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: ≥ 25 (in.)	
Remarks: <u>This observation point is located in a small concave/depressional area. Surface runoff is rapid and the soils are moderately well drained. The hydrology has minor alteration as a result of timber management but hydrology is mainly natural.</u>	

SOILS

Map Unit Name (Series and Phase): <u>State loam/variant</u>		Drainage Class: <u>MWD</u> Field Observations Confirm Mapped Type? <u>No</u>			
Taxonomy (Subgroup): <u>Typic Hapludult</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	<u>Matrix Color</u> (Munsell Moist)	<u>Mottle Colors</u> (Munsell Moist)	<u>Mottle Abundance/</u> <u>Contrast</u>	<u>Texture, Concretions,</u> <u>Structure, etc.</u>
<u>0 - 8</u>	<u>A</u>	<u>10YR 3/3</u>	<u>_____</u>	<u>_____</u>	<u>L</u>
<u>8 -20</u>	<u>Bt1</u>	<u>7.5 YR 5/4</u>	<u>10YR 5/6</u>	<u>c2d</u>	<u>L</u>
<u>20 - 28</u>	<u>Bt2</u>	<u>7.5YR 5/6</u>	<u>10YR 6/2</u>	<u>f2d</u>	<u>SICL</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input checked="" type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input checked="" type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>This observation point is located in a small concave area. There are a few hydric indicators in the soil profile; however, the soil is not hydric.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>No</u>	Is this Sampling Point Within a Wetland? <u>No</u>
Wetland Hydrology Present? <u>Yes</u>	
Hydric Soils Present? <u>No</u>	
Remarks: <u>The observation point is located in a small concave area. It has a few wetland characteristics, but it does meet the three criteria for a wetland.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Walker County, Alabama</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? Yes Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 4</u> Plot ID: <u>OP 4</u> WP # <u>112</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Pinus taeda</u>	<u>T</u>	FAC	9. _____	_____	Pick One
2. <u>Liquidambar styraciflua</u>	<u>T</u>	FAC	10. _____	_____	Pick One
3. <u>Liriodendron tulipifera</u>	<u>T</u>	FAC	11. _____	_____	Pick One
4. <u>Acer rubrum</u>	<u>T</u>	FAC	12. _____	_____	Pick One
5. <u>Smilax glauca</u>	<u>V</u>	FAC	13. _____	_____	Pick One
6. _____	_____	Pick One	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 75%

Remarks: Observation point is located adjacent to large intermittent stream. Vegetation is mixed hardwood/pine. The forest is mature with sparse understory.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input checked="" type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input checked="" type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____(in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: <u>≥ 25</u> (in.)	
Remarks: <u>Observation point is in floodplain of intermittent stream and there is evidence of frequent over flow. There is wetland hydrology present at this location.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Pruiton loam/variant</u>		Drainage Class: <u>MWD</u> Field Observations Confirm Mapped Type? <u>Yes</u>			
Taxonomy (Subgroup): <u>Fluventic Dystrudepts</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	<u>Matrix Color</u> (Munsell Moist)	<u>Mottle Colors</u> (Munsell Moist)	<u>Mottle Abundance/</u> <u>Contrast</u>	<u>Texture, Concretions,</u> <u>Structure, etc.</u>
<u>0 - 9</u>	<u>A</u>	<u>10YR4/3</u>	<u>_____</u>	<u>_____</u>	<u>SIL</u>
<u>9 -20</u>	<u>Bw1</u>	<u>7.5 YR 5/4</u>	<u>10YR 5/6</u>	<u>c2d</u>	<u>SIL</u>
<u>20 - 28</u>	<u>Bw2</u>	<u>7.5YR 5/6</u>	<u>10YR 6/2</u>	<u>f2d</u>	<u>SICL</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input checked="" type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input checked="" type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>This observation point is located along the floodplain of an intermittent drainage way. The soil has hydric properties, but it is not a hydric soil.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>No</u> Wetland Hydrology Present? <u>Yes</u> Hydric Soils Present? <u>No</u>	Is this Sampling Point Within a Wetland? <u>No</u>
Remarks: <u>Observation point is located in an area with wetland hydrology. It does not have hydric soils present.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Walker County, Alabama</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? No Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 5</u> Plot ID: <u>OP 5 wetland # 1</u> WP # 115

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Arundo donax</u>	<u>GR</u>	FACW	9. _____	_____	Pick One
2. <u>Scirpus cyperinus</u>	<u>GR</u>	OBL	10. _____	_____	Pick One
3. <u>Alnus serrulata</u>	<u>GR</u>	FACW	11. _____	_____	Pick One
4. <u>Cyperus rivularis</u>	<u>GR</u>	FACW	12. _____	_____	Pick One
5. _____	<u>V</u>	FAC	13. _____	_____	Pick One
6. _____	_____	Pick One	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 90%

Remarks: Observation point is located adjacent to large intermittent stream. Area is ponded with wetland vegetation.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input checked="" type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input checked="" type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input checked="" type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>6</u> (in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: _____ (in.)	
Remarks: <u>Observation point is located in ponded area along intermittent stream. Area has wetland hydrology.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Mantachie/variant-ponded</u>		Drainage Class: <u>PD</u> Field Observations Confirm Mapped Type? <u>No</u>			
Taxonomy (Subgroup): <u>Fluventic Endoaquepts</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	<u>Matrix Color</u> (Munsell Moist)	<u>Mottle Colors</u> (Munsell Moist)	<u>Mottle Abundance/</u> <u>Contrast</u>	<u>Texture, Concretions,</u> <u>Structure, etc.</u>
<u>0 - 7</u>	<u>A</u>	<u>10YR4/2</u>	_____	_____	<u>L</u>
<u>7-18</u>	<u>Bg1</u>	<u>10YR 6/2</u>	<u>10YR 5/6</u>	<u>c2d</u>	<u>L</u>
<u>18 -28</u>	<u>Bg2</u>	<u>10YR 6/1</u>	<u>10YR 4/4</u>	<u>f2d</u>	<u>L</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input checked="" type="checkbox"/> Aquic Moisture Regime <input checked="" type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors		<input checked="" type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>This observation point is located along the floodplain of an intermittent drainage way. The area is ponded, and the soil has dominant hydric properties.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> Wetland Hydrology Present? <u>Yes</u> Hydric Soils Present? <u>Yes</u>	Is this Sampling Point Within a Wetland? <u>Yes</u>
Remarks: _____	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Walker County, Alabama</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? No Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 6</u> Plot ID: <u>OP 6 wetland # 2</u> WP # <u>132</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Arundo donax</u>	<u>GR</u>	FACW	9. _____	_____	Pick One
2. <u>Scirpus cyperinus</u>	<u>GR</u>	OBL	10. _____	_____	Pick One
3. <u>Alnus serrulata</u>	<u>GR</u>	FACW	11. _____	_____	Pick One
4. <u>Cyperus rivularis</u>	<u>GR</u>	FACW	12. _____	_____	Pick One
5. <u>Scirpus americanus</u>	<u>GR</u>	OBL	13. _____	_____	Pick One
6. _____	_____	Pick One	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 90%

Remarks: Observation point is located adjacent to large intermittent stream. Area is ponded with wetland vegetation.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input checked="" type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input checked="" type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input checked="" type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>6</u> (in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: _____ (in.)	
Remarks: <u>Observation point is located in ponded area along intermittent stream. Area has wetland hydrology.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Mantachie/variant-ponded</u>		Drainage Class: <u>PD</u> Field Observations Confirm Mapped Type? <u>No</u>			
Taxonomy (Subgroup): <u>Fluventic Endoaquepts</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	<u>Matrix Color</u> (Munsell Moist)	<u>Mottle Colors</u> (Munsell Moist)	<u>Mottle Abundance/</u> <u>Contrast</u>	<u>Texture, Concretions,</u> <u>Structure, etc.</u>
<u>0 - 7</u>	<u>A</u>	<u>10YR4/2</u>	_____	_____	<u>L</u>
<u>7-18</u>	<u>Bg1</u>	<u>10YR 6/2</u>	<u>10YR 5/6</u>	<u>c2d</u>	<u>L</u>
<u>18 -28</u>	<u>Bg2</u>	<u>10YR 6/1</u>	<u>10YR 4/4</u>	<u>f2d</u>	<u>L</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input checked="" type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input checked="" type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input checked="" type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>This observation point is located along the floodplain of an intermittent drainage way. The area is ponded, and the soil has dominant hydric properties.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> Wetland Hydrology Present? <u>Yes</u> Hydric Soils Present? <u>Yes</u>	Is this Sampling Point Within a Wetland? <u>Yes</u>
Remarks: _____	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>WALKER COUNTY</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? Yes Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 7</u> Plot ID: <u>OP 7</u> WP # 110

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Pinus taeda</u>	<u>T</u>	FAC	9. _____	_____	Pick One
2. <u>Liquidambar styraciflua</u>	<u>T</u>	FAC	10. _____	_____	Pick One
3. <u>Smilax glauca</u>	<u>T</u>	FAC	11. _____	_____	Pick One
4. <u>Andropogon virginicus</u>	<u>GR</u>	FAC	12. _____	_____	Pick One
5. <u>Rhus copallinum</u>	<u>SH</u>	NI	13. _____	_____	Pick One
6. _____	_____	Pick One	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 85%

Remarks: Observation point is located in a pine forest on an upland landscape. Commercial forest has been recently harvested, and management includes some chemical weed control.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____(in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: <u>≥ 25</u> (in.)	
Remarks: <u>Observation is on an upland landscape position and the surface runoff is moderate to rapid. The hydrology is not wetland.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Sipsey loam</u>		Drainage Class: <u>WD</u> Field Observations Confirm Mapped Type? <u>Yes</u>			
Taxonomy (Subgroup): <u>Typic Hapludult</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	<u>Matrix Color</u> (Munsell Moist)	<u>Mottle Colors</u> (Munsell Moist)	<u>Mottle Abundance/</u> <u>Contrast</u>	<u>Texture, Concretions,</u> <u>Structure, etc.</u>
<u>0 - 5</u>	<u>A</u>	<u>10YR 3/3</u>	<u>_____</u>	<u>_____</u>	<u>L</u>
<u>5 -12</u>	<u>Bt1</u>	<u>10YR 5/6</u>	<u>7.5 YR 5/6</u>	<u>c2d</u>	<u>SCL</u>
<u>12 - 20</u>	<u>Bt2</u>	<u>7.5 YR 5/6</u>	<u>10YR 4/4</u>	<u>f2d</u>	<u>SCL</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>This observation point is on landscape and the soils are well drained. Hydric properties are not observed within the soil profile.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> Wetland Hydrology Present? <u>No</u> Hydric Soils Present? <u>No</u>	Is this Sampling Point Within a Wetland? <u>No</u>
Remarks: _____	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>WALKER COUNTY</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? Yes Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 8 wetland 8</u> Plot ID: <u>OP 8</u> WP # 198

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Nyssa sylvatica</u>	<u>T</u>	FAC	9. _____	_____	Pick One
2. <u>Liquidambar styraciflua</u>	<u>T</u>	FAC	10. _____	_____	Pick One
3. <u>Liriodendron tulipifera</u>	<u>T</u>	FAC	11. _____	_____	Pick One
4. <u>Smilax glauca</u>	<u>V</u>	FAC	12. _____	_____	Pick One
5. <u>Lonicera japonica</u>	<u>V</u>	FAC	13. _____	_____	Pick One
6. <u>Acer rubrum</u>	<u>T</u>	FAC	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 90%

Remarks: Observation point is along ephemeral/intermittent stream and adjacent to commercial pine forest on nearby uplands.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input checked="" type="checkbox"/> Water Marks <input checked="" type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____(in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: <u>≥ 25</u> (in.)	
Remarks: <u>This observation point is located adjacent to ephemeral drainageway in small floodplain. The hydrologh has minor alteration as a result of timber management, but hydroogy is mainly natural.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Mooreville loam/variant</u>		Drainage Class: <u>SWP</u> Field Observations Confirm Mapped Type? <u>No</u>			
Taxonomy (Subgroup): <u>Fluvaquentic Dystrudepts</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ <u>Contrast</u>	Texture, Concretions, <u>Structure, etc.</u>
<u>0-7</u>	<u>A</u>	<u>10YR 3/3</u>	<u>_____</u>	<u>_____</u>	<u>L</u>
<u>7-12</u>	<u>BW1</u>	<u>10YR 5/4</u>	<u>10YR 4/4, 4/2</u>	<u>c2d</u>	<u>L</u>
<u>12 - 25</u>	<u>BW2</u>	<u>10YR 5/6</u>	<u>10YR 6/2, 10YR 4/4</u>	<u>f2d, f3d</u>	<u>SL</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input checked="" type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input checked="" type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>This observation point is located in small floodplain area. There are hydric indicators in the soil profile. The soil is hydric.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> Wetland Hydrology Present? <u>Yes</u> Hydric Soils Present? <u>Yes</u>	Is this Sampling Point Within a Wetland? <u>Yes</u>
Remarks: _____	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Walker County, Alabama</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? Yes Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 9</u> Plot ID: <u>OP 9</u> WP # <u>223</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Pinus taeda</u>	<u>T</u>	FAC	9. _____	_____	Pick One
2. <u>Liquidambar styraciflua</u>	<u>T</u>	FAC	10. _____	_____	Pick One
3. <u>Liriodendron tulipifera</u>	<u>T</u>	FAC	11. _____	_____	Pick One
4. _____	_____	Pick One	12. _____	_____	Pick One
5. _____	_____	Pick One	13. _____	_____	Pick One
6. _____	_____	Pick One	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 75%

Remarks: Observation point is located adjacent to ephemeral drain. Vegetation is mixed hardwood/pine adjacent to commercial pine forest.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input checked="" type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input checked="" type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____(in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: <u>≥ 25</u> (in.)	
Remarks: <u>Observation point is in floodplain of ephemeral stream, and there is evidence of frequent over flow. There is wetland hydrology present at this location.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Pruiton loam/variant</u>		Drainage Class: <u>MWD</u> Field Observations Confirm Mapped Type? <u>Yes</u>			
Taxonomy (Subgroup): <u>Fluventic Dystrudepts</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	<u>Matrix Color</u> (Munsell Moist)	<u>Mottle Colors</u> (Munsell Moist)	<u>Mottle Abundance/</u> <u>Contrast</u>	<u>Texture, Concretions,</u> <u>Structure, etc.</u>
<u>0 - 9</u>	<u>A</u>	<u>10YR4/3</u>	<u>_____</u>	<u>_____</u>	<u>SIL</u>
<u>9 -20</u>	<u>Bw1</u>	<u>7.5 YR 5/4</u>	<u>10YR 5/6</u>	<u>c2d</u>	<u>SIL</u>
<u>20 - 28</u>	<u>Bw2</u>	<u>7.5YR 5/6</u>	<u>10YR 6/2</u>	<u>f2d</u>	<u>SICL</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input checked="" type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input checked="" type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>This observation point is located along the floodplain of an ephemeral drainage way. The soil has hydric properties, but it is not a hydric soil.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> Wetland Hydrology Present? <u>Yes</u> Hydric Soils Present? <u>No</u>	Is this Sampling Point Within a Wetland? <u>No</u>
Remarks: <u>Observation point is located in an area with wetland hydrology. It does not have hydric soils present.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Walker County, Alabama</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? Yes Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 10</u> Plot ID: <u>OP 10</u> WP # <u>232</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Pinus taeda</u>	<u>T</u>	FAC	9. _____	_____	Pick One
2. <u>Liquidambar styraciflua</u>	<u>T</u>	FAC	10. _____	_____	Pick One
3. <u>Liriodendron tulipifera</u>	<u>T</u>	FAC	11. _____	_____	Pick One
4. _____	_____	Pick One	12. _____	_____	Pick One
5. _____	_____	Pick One	13. _____	_____	Pick One
6. _____	_____	Pick One	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 90%

Remarks: Observation point is located in concave landscape position. The vegetation is mainly loblolly pine in the commercially managed forest.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input checked="" type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____(in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: <u>≥ 25</u> (in.)	
Remarks: <u>Observation point is located in upland drainage head. There is wetland hydrology.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Pruiton loam/variant</u>		Drainage Class: <u>MWD</u> Field Observations Confirm Mapped Type? <u>Yes</u>			
Taxonomy (Subgroup): <u>Fluventic Dystrudepts</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	<u>Matrix Color</u> (Munsell Moist)	<u>Mottle Colors</u> (Munsell Moist)	<u>Mottle Abundance/</u> <u>Contrast</u>	<u>Texture, Concretions,</u> <u>Structure, etc.</u>
<u>0 - 5</u>	<u>A</u>	<u>10YR4/3</u>	<u>_____</u>	<u>_____</u>	<u>SIL</u>
<u>5 -16</u>	<u>Bw1</u>	<u>7.5 YR 5/4</u>	<u>10YR 5/6</u>	<u>c2d</u>	<u>SIL</u>
<u>16- 28</u>	<u>Bw2</u>	<u>7.5YR 5/6</u>	<u>10YR 6/2</u>	<u>f2d</u>	<u>SICL</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input checked="" type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input checked="" type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>This observation point is located in concave landscape and the hydrology is wetland. The soil has hydric properties but it is not a hydric soil.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> Wetland Hydrology Present? <u>Yes</u> Hydric Soils Present? <u>No</u>	Is this Sampling Point Within a Wetland? <u>No</u>
Remarks: <u>Observation point is located in an area with wetland hydrology. It does not have hydric soils present.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Walker County</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? Yes Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 11</u> Plot ID: <u>OP 11</u> WP # 189

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Pinus taeda</u>	<u>T</u>	FAC	9. _____	_____	Pick One
2. <u>Liquidambar styraciflua</u>	<u>T</u>	FAC	10. _____	_____	Pick One
3. <u>Smilax glauca</u>	<u>T</u>	FAC	11. _____	_____	Pick One
4. <u>Andropogon virginicus</u>	<u>GR</u>	FAC	12. _____	_____	Pick One
5. <u>Rhus copallinum</u>	<u>SH</u>	NI	13. _____	_____	Pick One
6. _____	_____	Pick One	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 85%

Remarks: : Observation point is located in a pine forest on an upland landscape. The commercial forest has been recently harvested and management includes some chemical weed control.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____(in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: <u>≥ 25</u> (in.)	
Remarks: <u>Observation is on an upland landscape position and the surface runoff is moderate to rapid. The hydrology is not wetland.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Sipsey loam</u>		Drainage Class: <u>WD</u> Field Observations Confirm Mapped Type? <u>Yes</u>			
Taxonomy (Subgroup): <u>Typic Hapludult</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ <u>Contrast</u>	Texture, Concretions, <u>Structure, etc.</u>
<u>0 - 5</u>	<u>A</u>	<u>10YR 3/3</u>	<u>_____</u>	<u>_____</u>	<u>L</u>
<u>5 - 12</u>	<u>Bt1</u>	<u>10YR 5/6</u>	<u>7.5 YR 5/6</u>	<u>c2d</u>	<u>SCL</u>
<u>12 - 20</u>	<u>Bt2</u>	<u>7.5 YR 5/6</u>	<u>10YR 4/4</u>	<u>f2d</u>	<u>SCL</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>This observation point is on landscape, and the soils are well drained. Hydric properties are not observed within the soil profile.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> Wetland Hydrology Present? <u>No</u> Hydric Soils Present? <u>No</u>	Is this Sampling Point Within a Wetland? <u>No</u>
Remarks: _____	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Walker County, Alabama</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? No Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 12</u> Plot ID: <u>OP 12 wetland # 7</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Carex lurida</u>	<u>GR</u>	OBL	9. _____	_____	Pick One
2. <u>Rumex crispus</u>	<u>GR</u>	FAC	10. _____	_____	Pick One
3. <u>Carex gigantean</u>	<u>GR</u>	OBL	11. _____	_____	Pick One
4. <u>Juncus effuses</u>	<u>GR</u>	FACW	12. _____	_____	Pick One
5. _____	_____	Pick One	13. _____	_____	Pick One
6. _____	_____	Pick One	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 100%

Remarks: Observation point is located in a concave/flat area on the terrace of Little Spring Creek. Dominant vegetative species is wetland type plants.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input checked="" type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input checked="" type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input checked="" type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>1</u> (in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: _____ (in.)	
Remarks: <u>Observation point is located along terrace/floodplain of Little Spring Creek. Area has wetland hydrology.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Mantachie/variant-ponded</u>		Drainage Class: <u>PD</u> Field Observations Confirm Mapped Type? <u>No</u>			
Taxonomy (Subgroup): <u>Fluventic Endoaquepts</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	<u>Matrix Color</u> (Munsell Moist)	<u>Mottle Colors</u> (Munsell Moist)	<u>Mottle Abundance/</u> <u>Contrast</u>	<u>Texture, Concretions,</u> <u>Structure, etc.</u>
<u>0 - 7</u>	<u>A</u>	<u>10YR4/2</u>	<u>_____</u>	<u>_____</u>	<u>L</u>
<u>7-18</u>	<u>Bg1</u>	<u>10YR 6/2</u>	<u>10YR 5/6</u>	<u>c2d</u>	<u>L</u>
<u>18 -28</u>	<u>Bg2</u>	<u>10YR 6/1</u>	<u>10YR 4/4</u>	<u>f2d</u>	<u>L</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input checked="" type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input checked="" type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input checked="" type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>This observation point is located along the floodplain of Little Spring Creek. The area is ponded/floods and the soil has dominant hydric properties.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> Wetland Hydrology Present? <u>Yes</u> Hydric Soils Present? <u>Yes</u>	Is this Sampling Point Within a Wetland? <u>Yes</u>
Remarks: _____	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>WALKER COUNTY</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? No Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 13</u> Plot ID: <u>OP 13</u> WP # <u>242</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Pinus taeda</u>	<u>T</u>	FAC	9. _____	_____	Pick One
2. <u>Liquidambar styraciflua</u>	<u>T</u>	FAC	10. _____	_____	Pick One
3. <u>Liriodendron tulipifera</u>	<u>T</u>	FAC	11. _____	_____	Pick One
4. <u>Smilax glauca</u>	<u>V</u>	FAC	12. _____	_____	Pick One
5. <u>Lonicera japonica</u>	<u>V</u>	FAC	13. _____	_____	Pick One
6. <u>Acer rubrum</u>	<u>T</u>	FAC	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 85%

Remarks: Observation point is located adjacent to an intermittent stream. It is in the floodplain of this stream. The area floods frequently. The creek is incised.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input checked="" type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input checked="" type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input checked="" type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____ (in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: <u>≥ 25</u> (in.)	

Remarks: This observation point is located in the floodplain of Little Spring Creek. The hydrology has minor alteration as a result of timber management, but hydrology is mainly natural.

SOILS

Map Unit Name (Series and Phase): <u>Mooreville loam/variant</u>		Drainage Class: <u>MWD</u> Field Observations Confirm Mapped Type? <u>No</u>			
Taxonomy (Subgroup): <u>Fluvaquentic Dystrudepts</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ <u>Contrast</u>	Texture, Concretions, <u>Structure, etc.</u>
<u>0 - 8</u>	<u>A</u>	<u>10YR 3/3</u>	<u>_____</u>	<u>_____</u>	<u>L</u>
<u>8 -17</u>	<u>BW1</u>	<u>10YR 5/4</u>	<u>10YR 4/4, 4/2</u>	<u>c2d</u>	<u>L</u>
<u>17 - 26</u>	<u>BW2</u>	<u>10YR 5/6</u>	<u>10YR 6/2, 10YR 4/4</u>	<u>f2d, f3d</u>	<u>SL</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input checked="" type="checkbox"/> Concretions <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Organic Streaking in Sandy Soils <input checked="" type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Gleyed or Low-Chroma Colors <input type="checkbox"/> Other (Explain in Remarks)					
Remarks: <u>This observation point is located near Little Spring Creek. There are a few hydric indicators in the soil profile; however, the soil is not hydric.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> Wetland Hydrology Present? <u>Yes</u> Hydric Soils Present? <u>No</u>	Is this Sampling Point Within a Wetland? <u>No</u>
Remarks: <u>The observation point is located on a terrace landscape positioned near Little Spring Creek. The area has a few wetland characteristics but it does meet the three criteria for a wetland.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>WALKER COUNTY</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? No Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 14</u> Plot ID: <u>OP 14</u> WP # 288

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Pinus taeda</u>	<u>T</u>	FAC	9. _____	_____	Pick One
2. <u>Liquidambar styraciflua</u>	<u>T</u>	FAC	10. _____	_____	Pick One
3. <u>Liriodendron tulipifera</u>	<u>T</u>	FAC	11. _____	_____	Pick One
4. <u>Smilax glauca</u>	<u>V</u>	FAC	12. _____	_____	Pick One
5. <u>Lonicera japonica</u>	<u>V</u>	FAC	13. _____	_____	Pick One
6. <u>Acer rubrum</u>	<u>T</u>	FAC	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 85%

Remarks: Observation point is located adjacent to an intermittent stream. It is in the floodplain of this stream. The area floods frequently. The creek is incised.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input checked="" type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input checked="" type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input checked="" type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____(in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: <u>≥ 25</u> (in.)	
Remarks: <u>This observation point is located in the floodplain of Little Spring Creek. The hydrology has minor alteration as a result of timber management, but hydrology is mainly natural.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Mooreville loam/variant</u>		Drainage Class: <u>MWD</u> Field Observations Confirm Mapped Type? <u>No</u>			
Taxonomy (Subgroup): <u>Fluvaquentic Dystrudepts</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ <u>Contrast</u>	Texture, Concretions, <u>Structure, etc.</u>
<u>0 - 9</u>	<u>A</u>	<u>10YR 3/3</u>	<u>_____</u>	<u>_____</u>	<u>L</u>
<u>9 - 16</u>	<u>BW1</u>	<u>10YR 5/6</u>	<u>10YR 4/4, 4/2</u>	<u>c2d</u>	<u>L</u>
<u>16 - 26</u>	<u>BW2</u>	<u>10YR 4/4</u>	<u>10YR 6/2, 10YR 5/4</u>	<u>f2d, f3d</u>	<u>CL</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input checked="" type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input checked="" type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>This observation point is located in small floodplain area. There are a few hydric indicators in the soil profile; however, the soil is not hydric.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> Wetland Hydrology Present? <u>Yes</u> Hydric Soils Present? <u>No</u>	Is this Sampling Point Within a Wetland? <u>No</u>
Remarks: <u>The observation point is located in a small floodplain of an intermittent drainage way. The area has a few wetland characteristics, but it does meet the three criteria for a wetland.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>WALKER COUNTY</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? No Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 15</u> Plot ID: <u>OP 15</u> WP # 295

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Pinus taeda</u>	<u>T</u>	FAC	9. _____	_____	Pick One
2. <u>Liquidambar styraciflua</u>	<u>T</u>	FAC	10. _____	_____	Pick One
3. <u>Liriodendron tulipifera</u>	<u>T</u>	FAC	11. _____	_____	Pick One
4. <u>Smilax glauca</u>	<u>V</u>	FAC	12. _____	_____	Pick One
5. _____	_____	Pick One	13. _____	_____	Pick One
6. _____	_____	Pick One	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 95%

Remarks: : Observation point is located in pine forest along small drainage way. Trees are managed as commercial forest low intensity management.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____(in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: <u>≥ 25</u> (in.)	
Remarks: <u>This observation point is located adjacent to ephemeral drainageway in small floodplain. The hydrologh has minor alteration as a result of timber management, but hydroogy is mainly natural.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Mooreville loam/variant</u>		Drainage Class: <u>MWD</u> Field Observations Confirm Mapped Type? <u>No</u>			
Taxonomy (Subgroup): <u>Fluvaquentic Dystrudepts</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ <u>Contrast</u>	Texture, Concretions, <u>Structure, etc.</u>
<u>0 - 9</u>	<u>A</u>	<u>10YR 3/3</u>	<u>_____</u>	<u>_____</u>	<u>L</u>
<u>9 - 15</u>	<u>BW1</u>	<u>10YR 5/4</u>	<u>10YR 4/4, 4/2</u>	<u>c2d</u>	<u>L</u>
<u>15 - 25</u>	<u>BW2</u>	<u>10YR 5/6</u>	<u>10YR 6/2, 10YR 4/4</u>	<u>f2d, f3d</u>	<u>SL</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input checked="" type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input checked="" type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>This observation point is located in small floodplain area. There are a few hydric indicators in the soil profile; however, the soil is not hydric.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> Wetland Hydrology Present? <u>Yes</u> Hydric Soils Present? <u>No</u>	Is this Sampling Point Within a Wetland? <u>No</u>
Remarks: <u>The observation point is located in a small floodplain of an ephemeral drainage way. The area has a few wetland characteristics, but it does meet the three criteria for a wetland.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>WALKER COUNTY</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? No Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 16</u> Plot ID: <u>OP 16</u> WP # <u>301</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Pinus taeda</u>	<u>T</u>	FAC	9. _____	_____	Pick One
2. <u>Liquidambar styraciflua</u>	<u>T</u>	FAC	10. _____	_____	Pick One
3. <u>Smilax glauca</u>	<u>T</u>	FAC	11. _____	_____	Pick One
4. <u>Andropogon virginicus</u>	<u>GR</u>	FAC	12. _____	_____	Pick One
5. <u>Rhus copallinum</u>	<u>SH</u>	NI	13. _____	_____	Pick One
6. _____	_____	Pick One	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 95 %

Remarks: Observation point is located in pine forest on upland landscape. Commercial forest has been recently harvested and management includes some chemical weed control.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____(in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: <u>≥ 25</u> (in.)	

Remarks: Observation is on upland landscape position and the surface runoff is moderate to rapid. The hydrology is not wetland.

SOILS

Map Unit Name (Series and Phase): <u>Sipsey loam</u>		Drainage Class: <u>WD</u> Field Observations Confirm Mapped Type? <u>Yes</u>			
Taxonomy (Subgroup): <u>Typic Hapludult</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ <u>Contrast</u>	Texture, Concretions, <u>Structure, etc.</u>
<u>0 - 6</u>	<u>A</u>	<u>10YR 3/3</u>	_____	_____	<u>L</u>
<u>6 - 14</u>	<u>Bt1</u>	<u>7 YR 5/6</u>	<u>10 YR 5/6</u>	<u>c2d</u>	<u>SCL</u>
<u>14 - 20</u>	<u>Bt2</u>	<u>5 YR 5/6</u>	<u>10YR 4/4</u>	<u>f2d</u>	<u>SCL</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>This observation point is on landscape, and the soils are well drained. Hydric properties are not observed within the soil profile.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> Wetland Hydrology Present? <u>No</u> Hydric Soils Present? <u>No</u>	Is this Sampling Point Within a Wetland? <u>No</u>
Remarks: _____	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>WALKER COUNTY</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? Yes Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 17</u> Plot ID: <u>OP 17</u> WP # 340

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Pinus taeda</u>	<u>T</u>	FAC	9. _____	_____	Pick One
2. <u>Liquidambar styraciflua</u>	<u>T</u>	FAC	10. _____	_____	Pick One
3. <u>Smilax glauca</u>	<u>T</u>	FAC	11. _____	_____	Pick One
4. <u>Carya cordiformis</u>	<u>T</u>	FAC	12. _____	_____	Pick One
5. <u>Rhus copallinum</u>	<u>SH</u>	NI	13. _____	_____	Pick One
6. _____	_____	Pick One	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 95 %

Remarks: Observation point is located in pine forest on upland landscape. Commercial forest has been recently harvested and management includes some chemical weed control.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____(in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: <u>≥ 25</u> (in.)	
Remarks: <u>Observation is on upland landscape position and the surface runoff is moderate to rapid. The hydrology is not wetland.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Sipsey loam</u>		Drainage Class: <u>WD</u> Field Observations Confirm Mapped Type? <u>Yes</u>			
Taxonomy (Subgroup): <u>Typic Hapludult</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ <u>Contrast</u>	Texture, Concretions, <u>Structure, etc.</u>
<u>0 - 6</u>	<u>A</u>	<u>10YR 3/3</u>	_____	_____	<u>L</u>
<u>6 - 14</u>	<u>Bt1</u>	<u>7 YR 5/6</u>	<u>10 YR 5/6</u>	<u>c2d</u>	<u>SCL</u>
<u>14 - 20</u>	<u>Bt2</u>	<u>5 YR 5/6</u>	<u>10YR 4/4</u>	<u>f2d</u>	<u>SCL</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>This observation point is on landscape, and the soils are well drained. Hydric properties are not observed within the soil profile.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> Wetland Hydrology Present? <u>No</u> Hydric Soils Present? <u>No</u>	Is this Sampling Point Within a Wetland? <u>No</u>
Remarks: _____	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>WALKER COUNTY</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? No Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 18</u> Plot ID: <u>OP 18</u> WP # 278

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Pinus taeda</u>	<u>T</u>	FAC	9. _____	_____	Pick One
2. <u>Liquidambar styraciflua</u>	<u>T</u>	FAC	10. _____	_____	Pick One
3. <u>Liriodendron tulipifera</u>	<u>T</u>	FAC	11. _____	_____	Pick One
4. <u>Smilax glauca</u>	<u>V</u>	FAC	12. _____	_____	Pick One
5. <u>Lonicera japonica</u>	<u>V</u>	FAC	13. _____	_____	Pick One
6. <u>Acer rubrum</u>	<u>T</u>	FAC	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 85%

Remarks: Observation point is located in pine forest along small drainage way with a narrow hardwood buffer. Trees are managed as commercial forest low intensity management.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____(in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: <u>≥ 25</u> (in.)	
Remarks: <u>This observation point is located adjacent to ephemeral drainageway in small floodplain. The hydrologh has minor alteration as a result of timber management but hydroogy is mainly natural.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Mooreville loam/variant</u>		Drainage Class: <u>MWD</u> Field Observations Confirm Mapped Type? <u>No</u>			
Taxonomy (Subgroup): <u>Fluvaquentic Dystrudepts</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ <u>Contrast</u>	Texture, Concretions, <u>Structure, etc.</u>
<u>0-8</u>	<u>A</u>	<u>10YR 4/3</u>	<u>_____</u>	<u>_____</u>	<u>L</u>
<u>7-12</u>	<u>BW1</u>	<u>10YR 5/4</u>	<u>10YR 4/4, 4/2</u>	<u>c2d</u>	<u>L</u>
<u>12 - 25</u>	<u>BW2</u>	<u>7.5 YR 5/6</u>	<u>10YR 6/2, 10YR 4/4</u>	<u>f2d, f3d</u>	<u>SICL</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input checked="" type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input checked="" type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>This observation point is located in a small floodplain area of an ephemeral. There are a few hydric indicators in the soil profile; however, the soil is not hydric.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> Wetland Hydrology Present? <u>Yes</u> Hydric Soils Present? <u>No</u>	Is this Sampling Point Within a Wetland? <u>No</u>
Remarks: <u>The observation point is located in a small floodplain of an ephemeral drainage way. The area has a few wetland characteristics, but it does meet the three criteria for a wetland.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>WALKER COUNTY</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? Yes Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 19</u> Plot ID: <u>OP 19</u> WP # 280

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Pinus taeda</u>	<u>T</u>	FAC	9. _____	_____	Pick One
2. <u>Liquidambar styraciflua</u>	<u>T</u>	FAC	10. _____	_____	Pick One
3. <u>Liriodendron tulipifera</u>	<u>T</u>	FAC	11. _____	_____	Pick One
4. <u>Smilax glauca</u>	<u>V</u>	FAC	12. _____	_____	Pick One
5. <u>Lonicera japonica</u>	<u>V</u>	FAC	13. _____	_____	Pick One
6. <u>Acer rubrum</u>	<u>T</u>	FAC	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 85%

Remarks: Observation point is located in pine forest along small drainage way with a narrow hardwood buffer. Trees are managed as commercial forest low intensity management.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____(in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: <u>≥ 25</u> (in.)	
Remarks: <u>This observation point is located adjacent to ephemeral drainageway in small floodplain. The hydrologh has minor alteration as a result of timber management, but hydroogy is mainly natural.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Mooreville loam/variant</u>		Drainage Class: <u>MWD</u> Field Observations Confirm Mapped Type? <u>No</u>			
Taxonomy (Subgroup): <u>Fluvaquentic Dystrudepts</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ <u>Contrast</u>	Texture, Concretions, <u>Structure, etc.</u>
<u>0-8</u>	<u>A</u>	<u>10YR 4/3</u>	<u>_____</u>	<u>_____</u>	<u>L</u>
<u>7-12</u>	<u>BW1</u>	<u>10YR 5/4</u>	<u>10YR 4/4, 4/2</u>	<u>c2d</u>	<u>L</u>
<u>12 - 25</u>	<u>BW2</u>	<u>7.5 YR 5/6</u>	<u>10YR 6/2, 10YR 4/4</u>	<u>f2d, f3d</u>	<u>SICL</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input checked="" type="checkbox"/> Concretions <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Organic Streaking in Sandy Soils <input checked="" type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Gleyed or Low-Chroma Colors <input type="checkbox"/> Other (Explain in Remarks)					
Remarks: <u>This observation point is located in a small floodplain area of an ephemeral. There are a few hydric indicators in the soil profile; however, the soil is not hydric.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> Wetland Hydrology Present? <u>Yes</u> Hydric Soils Present? <u>No</u>	Is this Sampling Point Within a Wetland? <u>No</u>
Remarks: <u>The observation point is located in a small floodplain of an ephemeral drainage way. The area has a few wetland characteristics, but it does meet the three criteria for a wetland.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>WALKER COUNTY</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? Yes Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 20</u> Plot ID: <u>OP 20</u> WP # <u>271</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Pinus taeda</u>	<u>T</u>	FAC	9. _____	_____	Pick One
2. <u>Liquidambar styraciflua</u>	<u>T</u>	FAC	10. _____	_____	Pick One
3. <u>Smilax glauca</u>	<u>T</u>	FAC	11. _____	_____	Pick One
4. <u>Andropogon virginicus</u>	<u>GR</u>	FAC	12. _____	_____	Pick One
5. <u>Rhus copallinum</u>	<u>SH</u>	NI	13. _____	_____	Pick One
6. _____	_____	Pick One	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 85%

Remarks: Observation point is located in pine forest on upland landscape. Commercial forest has been recently harvested and management includes some chemical weed control.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____(in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: <u>≥ 25</u> (in.)	
Remarks: <u>Observation is on upland landscape position and the surface runoff is moderate to rapid. The hydrology is not wetland.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Sipsey loam</u>		Drainage Class: <u>WD</u> Field Observations Confirm Mapped Type? <u>Yes</u>			
Taxonomy (Subgroup): <u>Typic Hapludult</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ <u>Contrast</u>	Texture, Concretions, <u>Structure, etc.</u>
<u>0 - 4</u>	<u>A</u>	<u>10YR 3/3</u>	<u>_____</u>	<u>_____</u>	<u>L</u>
<u>4 - 113</u>	<u>Bt1</u>	<u>10YR 5/6</u>	<u>7.5 YR 5/6</u>	<u>c2d</u>	<u>SCL</u>
<u>13 - 20</u>	<u>Bt2</u>	<u>7.5 YR 5/6</u>	<u>10YR 4/4</u>	<u>f2d</u>	<u>SCL</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>This observation point is on upland landscape and the soils are well drained. Hydric properties are not observed within the soil profile.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> Wetland Hydrology Present? <u>No</u> Hydric Soils Present? <u>No</u>	Is this Sampling Point Within a Wetland? <u>No</u>
Remarks: _____	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>WALKER COUNTY</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? Yes Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 21</u> Plot ID: <u>OP 21</u> WP # 249

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Pinus taeda</u>	<u>T</u>	FAC	9. _____	_____	Pick One
2. <u>Liquidambar styraciflua</u>	<u>T</u>	FAC	10. _____	_____	Pick One
3. <u>Smilax glauca</u>	<u>T</u>	FAC	11. _____	_____	Pick One
4. <u>Liriodendron tulipifera</u>	<u>T</u>	FAC	12. _____	_____	Pick One
5. _____	_____	Pick One	13. _____	_____	Pick One
6. _____	_____	Pick One	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 95 %

Remarks: Observation point is located along small floodplain of an ephemeral drainage feature. The area is mainly pine mixed with scattered hardwood species on lower slope.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____(in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: <u>≥ 25</u> (in.)	
Remarks: <u>Observation is located along a small ephemeral drainage feature. The area receives excess overflow of drainage water during heavy rainfall. The area has wetland hydrology.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Pruiton loam/variant</u>		Drainage Class: <u>MWD</u> Field Observations Confirm Mapped Type? <u>No</u>			
Taxonomy (Subgroup): <u>Fluventic Dystrudepts</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ <u>Contrast</u>	Texture, Concretions, <u>Structure, etc.</u>
<u>0 - 7</u>	<u>A</u>	<u>10YR 3/3</u>	_____	_____	<u>L</u>
<u>7 - 15</u>	<u>Bw1</u>	<u>10YR 5/6</u>	_____	_____	<u>L</u>
<u>15 - 20</u>	<u>Bw2</u>	<u>7.5 YR 5/6</u>	_____	_____	<u>SCL</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input checked="" type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>This observation point is located on small floodplain of ephemeral drainage feature. There are redox properties in parts of the soil profile.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> Wetland Hydrology Present? <u>Yes</u> Hydric Soils Present? <u>No</u>	Is this Sampling Point Within a Wetland? <u>No</u>
Remarks: _____	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>WALKER COUNTY</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? No Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 22</u> Plot ID: <u>OP 22</u> WP # 269

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Pinus taeda</u>	<u>T</u>	FAC	9. _____	_____	Pick One
2. <u>Liquidambar styraciflua</u>	<u>T</u>	FAC	10. _____	_____	Pick One
3. <u>Smilax glauca</u>	<u>T</u>	FAC	11. _____	_____	Pick One
4. <u>Liriodendron tulipifera</u>	<u>T</u>	FAC	12. _____	_____	Pick One
5. _____	_____	Pick One	13. _____	_____	Pick One
6. _____	_____	Pick One	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 95 %

Remarks: Observation point is located along small floodplain of an ephemeral drainage feature. The area is mainly pine mixed with scattered hardwood species on lower slope.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____ (in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: <u>≥ 25</u> (in.)	
Remarks: <u>Observation is located along a small ephemeral drainage feature. The area receives excess overflow of drainage water during heavy rainfall. The area has wetland hydrology.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Pruiton loam/variant</u>		Drainage Class: <u>MWD</u> Field Observations Confirm Mapped Type? <u>No</u>			
Taxonomy (Subgroup): <u>Fluventic Dystrudepts</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ <u>Contrast</u>	Texture, Concretions, <u>Structure, etc.</u>
<u>0 - 7</u>	<u>A</u>	<u>10YR 3/3</u>	_____	_____	<u>L</u>
<u>7 - 15</u>	<u>Bw1</u>	<u>10YR 5/6</u>	_____	_____	<u>L</u>
<u>15 - 20</u>	<u>Bw2</u>	<u>7.5 YR 5/6</u>	_____	_____	<u>SCL</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input checked="" type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>This observation point is located on small floodplain of ephemeral drainage feature. There are redox properties in parts of the soil profile.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> Wetland Hydrology Present? <u>Yes</u> Hydric Soils Present? <u>No</u>	Is this Sampling Point Within a Wetland? <u>No</u>
Remarks: _____	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>WALKER COUNTY</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? Yes Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 23</u> Plot ID: <u>OP 23</u> WP # <u>261</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Quercus phellos</u>	<u>T</u>	FAC	9. _____	_____	Pick One
2. <u>Liquidambar styraciflua</u>	<u>T</u>	FAC	10. _____	_____	Pick One
3. <u>Liriodendron tulipifera</u>	<u>T</u>	FAC	11. _____	_____	Pick One
4. <u>Smilax glauca</u>	<u>V</u>	FAC	12. _____	_____	Pick One
5. <u>Lonicera japonica</u>	<u>V</u>	FAC	13. _____	_____	Pick One
6. <u>Acer rubrum</u>	<u>T</u>	FAC	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 85%

Remarks: Observation point is located on a terrace landscape adjacent position adjacent to Little Spring Creek. The area is mainly hardwood forest.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input checked="" type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input checked="" type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input checked="" type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____(in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: <u>≥ 25</u> (in.)	
Remarks: <u>This observation point is located in the floodplain of Little Spring Creek. The hydrology has minor alteration as a result of timber management but hydrology is mainly natural.</u>	

SOILS

Map Unit Name
(Series and Phase): Mooreville loam/variant

Drainage Class: MWD
Field Observations
Confirm Mapped Type? No

Taxonomy (Subgroup): Fluvaquentic Dystrudepts

Profile Description:

Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Contrast	Texture, Concretions, Structure, etc.
0 - 8	<u>A</u>	<u>10YR 3/3</u>	_____	_____	<u>L</u>
8 - 17	<u>BW1</u>	<u>10YR 5/4</u>	<u>10YR 4/4, 4/2</u>	<u>c2d</u>	<u>L</u>
17 - 26	<u>BW2</u>	<u>10YR 5/6</u>	<u>10YR 6/2, 10YR 4/4</u>	<u>f2d, f3d</u>	<u>SL</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Hydric Soil Indicators:

- | | |
|---|---|
| <input type="checkbox"/> Histosol | <input checked="" type="checkbox"/> Concretions |
| <input type="checkbox"/> Histic Epipedon | <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils |
| <input type="checkbox"/> Sulfidic Odor | <input type="checkbox"/> Organic Streaking in Sandy Soils |
| <input checked="" type="checkbox"/> Aquic Moisture Regime | <input type="checkbox"/> Listed on Local Hydric Soils List |
| <input type="checkbox"/> Reducing Conditions | <input type="checkbox"/> Listed on National Hydric Soils List |
| <input type="checkbox"/> Gleyed or Low-Chroma Colors | <input type="checkbox"/> Other (Explain in Remarks) |

Remarks: This observation point is located in small floodplain area. There are a few hydric indicators in the soil profile; however, the soil is not hydric.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes
Wetland Hydrology Present? Yes
Hydric Soils Present? No

Is this Sampling Point Within a Wetland? No

Remarks: The observation point is located in a small floodplain of an intermittent drainage way. The area has a few wetland characteristics, but it does meet the three criteria for a wetland.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>WALKER COUNTY</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? No Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 24</u> Plot ID: <u>OP 24</u> WP # 246

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Pinus taeda</u>	<u>T</u>	FAC	9. _____	_____	Pick One
2. <u>Liquidambar styraciflua</u>	<u>T</u>	FAC	10. _____	_____	Pick One
3. <u>Liriodendron tulipifera</u>	<u>T</u>	FAC	11. _____	_____	Pick One
4. <u>Smilax glauca</u>	<u>V</u>	FAC	12. _____	_____	Pick One
5. _____	_____	Pick One	13. _____	_____	Pick One
6. _____	_____	Pick One	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 95%

Remarks: Observation point is located in a small buffer area adjacent upland pine forst. Trees are managed as commercial forest low intensity management.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____(in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: <u>≥ 25</u> (in.)	
Remarks: <u>TThis observation point is located adjacent to ephemeral drainageway in small floodplain. The hydrologh has minor alteration as a result of timber management, but hydroogy is mainly natural.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Mooreville loam/variant</u>		Drainage Class: <u>MWD</u> Field Observations Confirm Mapped Type? <u>No</u>			
Taxonomy (Subgroup): <u>Fluvaquentic Dystrudepts</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ <u>Contrast</u>	Texture, Concretions, <u>Structure, etc.</u>
<u>0 - 9</u>	<u>A</u>	<u>10YR 3/3</u>	<u>_____</u>	<u>_____</u>	<u>L</u>
<u>9 - 15</u>	<u>BW1</u>	<u>10YR 5/4</u>	<u>10YR 4/4, 4/2</u>	<u>c2d</u>	<u>L</u>
<u>15 - 25</u>	<u>BW2</u>	<u>10YR 5/6</u>	<u>10YR 6/2, 10YR 4/4</u>	<u>f2d, f3d</u>	<u>SL</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input checked="" type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input checked="" type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>This observation point is located in small floodplain area. There are a few hydric indicators in the soil profile; however, the soil is not hydric.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> Wetland Hydrology Present? <u>Yes</u> Hydric Soils Present? <u>No</u>	Is this Sampling Point Within a Wetland? <u>No</u>
Remarks: <u>The observation point is located in a small floodplain of an ephemeral drainage way. The area has a few wetland characteristics, but it does meet the three criteria for a wetland.</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Walker County, Alabama</u> Applicant/Owner: <u>Haley Brothers Coal, Inc.-Little Spring Creek</u> Investigator: <u>Cleo Stubbs</u>	Date: <u>2/25/2010 -4/20/2010</u> County: <u>Walker</u> State: <u>Alabama</u>
Do Normal Circumstances exist on the site? No Is the site significantly disturbed (Atypical Situation)? No Is the area a potential Problem Area? No (If needed, explain on reverse.)	Community ID: _____ Transect ID: <u>OP 40</u> Plot ID: <u>OP 40 wetland # 5</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Carex lurida</u>	<u>GR</u>	OBL	9. _____	_____	Pick One
2. <u>Rumex crispus</u>	<u>GR</u>	FAC	10. _____	_____	Pick One
3. <u>Carex gigantean</u>	<u>GR</u>	OBL	11. _____	_____	Pick One
4. <u>Juncus effuses</u>	<u>GR</u>	FACW	12. _____	_____	Pick One
5. _____	_____	Pick One	13. _____	_____	Pick One
6. _____	_____	Pick One	14. _____	_____	Pick One
7. _____	_____	Pick One	15. _____	_____	Pick One
8. _____	_____	Pick One	16. _____	_____	Pick One

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 100%

Remarks: Observation point is located in a concave/flat area on the terrace of Little Spring Creek. Dominant vegetative species is wetland type plants.

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input checked="" type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input checked="" type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input checked="" type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>1</u> (in.) Depth to Free Water in Pit: _____ (in.) Depth to Saturated Soil: _____ (in.)	
Remarks: <u>Observation point is located along terrace/floodplain of Little Spring Creek. Area has wetland hydrology.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Mantachie/variant-ponded</u>		Drainage Class: <u>PD</u> Field Observations Confirm Mapped Type? <u>No</u>			
Taxonomy (Subgroup): <u>Fluventic Endoaquepts</u>					
Profile Description:					
Depth (Inches)	<u>Horizon</u>	<u>Matrix Color</u> (Munsell Moist)	<u>Mottle Colors</u> (Munsell Moist)	<u>Mottle Abundance/</u> <u>Contrast</u>	<u>Texture, Concretions,</u> <u>Structure, etc.</u>
<u>0 - 7</u>	<u>A</u>	<u>10YR4/2</u>	<u>_____</u>	<u>_____</u>	<u>L</u>
<u>7-18</u>	<u>Bg1</u>	<u>10YR 6/2</u>	<u>10YR 5/6</u>	<u>c2d</u>	<u>L</u>
<u>18 -28</u>	<u>Bg2</u>	<u>10YR 6/1</u>	<u>10YR 4/4</u>	<u>f2d</u>	<u>L</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input checked="" type="checkbox"/> Concretions <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Organic Streaking in Sandy Soils <input checked="" type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Listed on Local Hydric Soils List <input checked="" type="checkbox"/> Reducing Conditions <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Gleyed or Low-Chroma Colors <input type="checkbox"/> Other (Explain in Remarks)					
Remarks: <u>This observation point is located along the floodplain of Little Spring Creek. The area is ponded/floods, and the soil has dominant hydric properties.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <u>Yes</u> Wetland Hydrology Present? <u>Yes</u> Hydric Soils Present? <u>Yes</u>	Is this Sampling Point Within a Wetland? <u>Yes</u>
Remarks: _____	

SECTION E

Worksheet Calculations

Adverse Impact Worksheet

Wetland Rapid Assessment Worksheet (WRAP)

ADVERSE IMPACT

FACTORS FOR RIVERINE SYSTEMS WORKSHEET (INC. # 1)

(Little Spring Creek)

Stream Type Impacted	Intermittent 0.1			1 st or 2 nd Order Perennial Stream 0.8			> 2 nd Order Perennial Stream 0.4		
Priority Area	Tertiary 0.1			Secondary 0.4			Primary 0.8		
Existing Condition	Impaired 0.1			Somewhat Impaired 0.8			Fully Functional 1.6		
Duration	Temporary 0.05			Recurrent 0.1			Permanent 0.3		
Dominant Impact	Shade/Clear 0.05	Utility Crossing 0.15	Below Grade Culvert 0.3	Armor 0.5	Detention /Weir 0.75	Morpho-logic Change 1.5	Impoundment (dam) 2.0	Pipe >100' 2.2	Fill 2.5
Cumulative Impact Factor	<100' 0	100'-200' 0.05	201-500' 0.1	501-1000' 0.2	> 1000 linear feet (LF) 0.1 reach 500 LF of impact (example: scaling factor for 5,280 LF of impacts = 1.1)				

Factor	WFP 7	WFP 19					
Stream Type Impacted	0.1	0.1					
Priority Area	0.1	0.1					
Existing Condition	0.8	0.8					
Duration	0.3	0.3					
Dominant Impact	2.5	2.5					
Cumulative Impacts Factor	0.35	0.2					
Sum of Factors M=	4.15	4.0					
Linear Feet of Stream Impacted in Reach LF=	1, 510	760					
M X LF	6,266	3,040					

Total Mitigation Credits Required = (M x LF) 9, 306.

ADVERSE IMPACT

FACTORS FOR RIVERINE SYSTEMS WORKSHEET (INC. # 2)

(Little Spring Creek)

Stream Type Impacted	Intermittent 0.1			1 st or 2 nd Order Perennial Stream 0.8			> 2 nd Order Perennial Stream 0.4		
Priority Area	Tertiary 0.1			Secondary 0.4			Primary 0.8		
Existing Condition	Impaired 0.1			Somewhat Impaired 0.8			Fully Functional 1.6		
Duration	Temporary 0.05			Recurrent 0.1			Permanent 0.3		
Dominant Impact	Shade/ Clear 0.05	Utility Crossing 0.15	Below Grade Culvert 0.3	Armor 0.5	Detention /Weir 0.75	Morpho- logic Change 1.5	Impound- ment (dam) 2.0	Pipe >100' 2.2	Fill 2.5
Cumulative Impact Factor	<100' 0	100'-200' 0.05	201-500' 0.1	501-1000' 0.2	> 1000 linear feet (LF) 0.1 reach 500 LF of impact (example: scaling factor for 5,280 LF of impacts = 1.1)				

Factor	WFP 7						
Stream Type Impacted	0.1						
Priority Area	0.1						
Existing Condition	0.8						
Duration	0.3						
Dominant Impact	2.5						
Cumulative Impacts Factor	0.20						
Sum of Factors M=	4.0						
Linear Feet of Stream Impacted in Reach LF=	660						
M X LF	2,640						

Total Mitigation Credits Required = (M x LF) = 2,640 .

Wetland Rapid Assessment Procedure

Check One: Existing Condition Proposed Condition **(WRAP)**

Applicant Number	Project Name	Date	Evaluator	Wetland Type
	Little Spring Mine	2/15/2010	Stubbs	Streamside/Adjacent

Land Use	FLUCCS Code	Description	Wetland Acreage
Woodland	640	Wetlands adjacent to an intermittent drainage way and the area floods frequently.	Area # 1- 0.10 Ac.

Wildlife Utilization (WU)	Wetland Canopy (O/S)	Wetland Ground Cover (GC)
2.0	2	2.5

Field Hydrology (HYD)	WQ Input & Treatment (WQ)*
2.5	2.0

Habitat Support/Buffer			
Buffer Type	(Score) X	(% of area)	= Sub Totals
Woodland	2.0	100	2.00
(LU) TOTALS			2.00

Land Use Category (LU)

Pretreatment Category (PT)

Land Use Category	(Score) X	(% of area)	= Sub Totals
Woodland	2.0	100	2.00
(LU) TOTALS			2.00

Pretreatment Category	(Score) X	(% of area)	= Sub Totals
Woodland	2.0	100	2.00
(PT) TOTALS			2.00

WRAP Score 0.722

Wildlife Utilization (WU): The area is located adjacent to an intermittent stream segment. There is evidence of wildlife utilization by mammals and reptiles. Additionally, habitat is suitable for aquatic species because there is evidence of good hydrology and habitat cover.
Wetland Canopy (O/S): There is a moderate amount of desirable wetland overstory. The wetland canopy is providing habitat support. There are dens and nesting areas for a variety of wildlife species.
Wetland Ground Cover (GC): There is an adequate amount of desirable plant species providing ground cover for this wetland area. There is minimal or no disturbance to ground cover observed within the wetland area.
Habitat Support: Adjacent upland buffer is greater than 300 wide. It is a mixed hardwood/pine forest that provides habitat support such as food source, nesting, roosting and dens areas.
Field Hydrology: Hydrologic regime adequate to maintain a viable wetland system. The wetlands exhibit a natural hydroperiod and there is very little soil/vegetation disturbance of the wetland area.
WQ Inputs & Treatment (WQ): The vegetation adjacent to the wetland area is mainly a pine/hardwood forest with leaf ground cover and an adequate amount of small shrubs and saplings.

*The value of WQ is obtained by adding the TOTAL scores of Land Use Category and Pretreatment category then dividing by 2

Wetland Rapid Assessment Procedure

Check One: Existing Condition Proposed Condition **(WRAP)**

Applicant Number	Project Name	Date	Evaluator	Wetland Type
	Little Spring Creek Mine	2/15/2010	Stubbs	Streamside/Adjacent

Land Use	FLUCCS Code	Description	Wetland Acreage
Woodland	640	Wetlands adjacent to intermittent drainage way and the area floods frequently.	Area # 2- 0.31 Ac.

Wildlife Utilization (WU)	Wetland Canopy (O/S)	Wetland Ground Cover (GC)
2.5	2	2.5

Field Hydrology (HYD)	WQ Input & Treatment (WQ)*
2.5	2.0

Habitat Support/Buffer			
Buffer Type	(Score) X	(% of area)	= Sub Totals
Woodland	2.0	100	2.0
(LU) TOTALS			2.00

Land Use Category (LU)

Pretreatment Category (PT)

Land Use Category	(Score) X	(% of area)	= Sub Totals
Woodland	2.0	100	2.0
(LU) TOTALS			2.0

Pretreatment Category	(Score) X	(% of area)	= Sub Totals
Woodland	2.0	100	2.0
(PT) TOTALS			2.0

WRAP Score 0.750

Wildlife Utilization (WU): The area is located adjacent to an intermittent stream segment. There is evidence of wildlife utilization by mammals and reptiles. Additionally, habitat is suitable for aquatic species of wildlife because there is evidence of good hydrology and instream habitat structures are present.
Wetland Canopy (O/S): There is a moderate amount of desirable wetland overstory. The wetland canopy is providing habitat support. There are dens and nesting areas for a variety of wildlife species.
Wetland Ground Cover (GC): There is an adequate amount of desirable plant species providing ground cover for this wetland area. There is minimal or no disturbance to ground cover observed within the wetland area.
Habitat Support: Adjacent upland buffer is greater than 300 wide. It is a mixed hardwood/pine forest that provides habitat support such as food source, nesting, roosting and dens areas.
Field Hydrology: Hydrologic regime adequate to maintain a viable wetland system. The wetlands exhibit a natural hydroperiod and there is very little soil/vegetation disturbance of the wetland area.
WQ Inputs & Treatment (WQ): The vegetation adjacent to the wetland area is mainly a pine/hardwood forest with good leaf ground cover and an adequate amount of small shrubs and saplings.

*The value of WQ is obtained by adding the TOTAL scores of Land Use Category and Pretreatment category then dividing by 2

Wetland Rapid Assessment Procedure

Check One: Existing Condition Proposed Condition **(WRAP)**

Applicant Number	Project Name	Date	Evaluator	Wetland Type
	Little Spring Creek Mine	2/15/2010	Stubbs	Streamside/Adjacent

Land Use	FLUCCS Code	Description	Wetland Acreage
Cropland/food plot	640	Wetland area is mainly isolated with a small portion adjacent to an ephemeral stream.	Area # 5 - 1.20 Ac.

Wildlife Utilization (WU)	Wetland Canopy (O/S)	Wetland Ground Cover (GC)
1.5	0.5	0.5

Field Hydrology (HYD)	WQ Input & Treatment (WQ)*
2.5	2.0

Habitat Support/Buffer			
Buffer Type	(Score) X	(% of area)	= Sub Totals
Woodland	2.0	100	2.0
			2.0

Land Use Category (LU)

Pretreatment Category (PT)

Land Use Category	(Score) X	(% of area)	= Sub Totals
Woodland	2.0	100	2.0
(LU) TOTALS			2.0

Pretreatment Category	(Score) X	(% of area)	= Sub Totals
Woodland	2.0	2.0	2.0
(PT) TOTALS			2.0

WRAP Score 0.500

Wildlife Utilization (WU): There is evidence of wildlife utilization but wildlife activity is limited because the wetland area in an open cultivated field. There is very little close buffer on the north side to provide escape and cover for wildlife utilizing the area.
Wetland Canopy (O/S): The area does not have adequate wetland canopy cover. It is mainly can open field with grasses and a few shrubs. There are a few wetlands shrubs/trees on the southern side of the wetland that provides minimal wetland canopy for wetland.
Wetland Ground Cover (GC): The wetland ground is mainly annuals in this wetland. They are mainly undesirable plants that provide very little functional support to the wetland area. The field has been cultivated recently and natural OBL plants are sparsely populated in the area.
Habitat Support: The buffer areas are not adjacent to most of the delineated wetlands. There are open areas between the wetlands and a continuous buffer corridor and that diminishes wildlife utilization and habitat use.
Field Hydrology: Hydrologic regime is adequate to maintain a viable wetland system. The wetlands exhibit a natural hydroperiod. The delineated wetland area is located on a stream terrace and receives drainage water from several acres of upland watershed.
WQ Inputs & Treatment (WQ): The area adjacent to the wetland and the wetlands are plowed fields with bare soils. There are woodlands with some filtering of water flowing into the wetlands

*The value of WQ is obtained by adding the TOTAL scores of Land Use Category and Pretreatment category then dividing by 2

Wetland Rapid Assessment Procedure

Check One: Existing Condition Proposed Condition **(WRAP)**

Applicant Number	Project Name	Date	Evaluator	Wetland Type
	Little Spring Creek Mine	2/15/2010	Stubbs	Streamside/Adjacent

Land Use	FLUCCS Code	Description	Wetland Acreage
Cropland/food plot	640	Wetland area is mainly isolated with a small portion adjacent to an ephemeral stream.	Area # 7 – 0.30 Ac.

Wildlife Utilization (WU)	Wetland Canopy (O/S)	Wetland Ground Cover (GC)
1.5	0.5	0.5

Field Hydrology (HYD)	WQ Input & Treatment (WQ)*
2.5	2.0

Habitat Support/Buffer			
Buffer Type	(Score) X	(% of area)	= Sub Totals
Woodland	2.0	100	2.0
(LU) TOTALS			2.0

Land Use Category (LU)

Pretreatment Category (PT)

Land Use Category	(Score) X	(% of area)	= Sub Totals
Woodland	2.0	2.0	2.0
(LU) TOTALS			2.0

Pretreatment Category	(Score) X	(% of area)	= Sub Totals
Woodland	2.0	2.0	2.0
(PT) TOTALS			2.0

WRAP Score 0.500

Wildlife Utilization (WU): There is evidence of wildlife utilization but wildlife activity is limited because the wetland area in an open cultivated field. There is very little close buffer on the north side to provide escape and cover for wildlife utilizing the area.
Wetland Canopy (O/S): The area does not have adequate wetland canopy cover. It is mainly an open field with grasses and a few shrubs. There are a few wetland shrubs/trees on the southern side of the wetland that provides minimal wetland canopy for wetland.
Wetland Ground Cover (GC): The wetland ground is mainly annuals in this wetland. They are mainly undesirable plants that provide very little functional support to the wetland area. The field has been cultivated recently and natural OBL plants are sparsely populated in the area.
Habitat Support: The buffer areas are not adjacent to most of the delineated wetlands. There are open areas between the wetlands and a continuous buffer corridor and that diminishes wildlife utilization and habitat use.
Field Hydrology: Hydrologic regime is adequate to maintain a viable wetland system. The wetlands exhibit a natural hydroperiod. The delineated wetland area is located on a stream terrace and receives drainage water from several acres of upland watershed.
WQ Inputs & Treatment (WQ): The area adjacent to the wetland and the wetlands are plowed fields with bare soils. There are woodlands with some filtering of water flowing into the wetland area.

*The value of WQ is obtained by adding the TOTAL scores of Land Use Category and Pretreatment category then dividing by 2

Wetland Rapid Assessment Procedure

Check One: Existing Condition Proposed Condition **(WRAP)**

Applicant Number	Project Name	Date	Evaluator	Wetland Type
	Little Spring Creek Mine	2/15/2010	Stubbs	Streamside/Adjacent

Land Use	FLUCCS Code	Description	Wetland Acreage
Woodland	640	Wetlands adjacent to intermittent drainage way and the area floods frequently.	Area # 8- 0.30 Ac.

Wildlife Utilization (WU)	Wetland Canopy (O/S)	Wetland Ground Cover (GC)
2.5	2	2.5

Field Hydrology (HYD)	WQ Input & Treatment (WQ)*
2.5	2.0

Habitat Support/Buffer			
Buffer Type	(Score) X	(% of area)	= Sub Totals
Woodland	2.0	100	2.0
(LU) TOTALS			2.00

Land Use Category (LU)

Pretreatment Category (PT)

Land Use Category	(Score) X	(% of area)	= Sub Totals
Woodland	2.0	100	2.0
(LU) TOTALS			2.0

Pretreatment Category	(Score) X	(% of area)	= Sub Totals
Woodland	2.0	100	2.0
(PT) TOTALS			2.0

WRAP Score 0.750

Wildlife Utilization (WU): The area is located adjacent to an intermittent stream segment. There is evidence of wildlife utilization by mammals and reptiles. Additionally, habitat is suitable for aquatic species of wildlife because there is evidence of good hydrology and instream habitat structures are present.
Wetland Canopy (O/S): There is a moderate amount of desirable wetland overstory. The wetland canopy is providing habitat support. There are dens and nesting areas for a variety of wildlife species.
Wetland Ground Cover (GC): There is an adequate amount of desirable plant species providing ground cover for this wetland area. There is minimal or no disturbance to ground cover observed within the wetland area.
Habitat Support: Adjacent upland buffer is greater than 300 wide. It is a mixed hardwood/pine forest that provides habitat support such as food source, nesting, roosting and dens areas.
Field Hydrology: Hydrologic regime adequate to maintain a viable wetland system. The wetlands exhibit a natural hydroperiod and there is very little soil/vegetation disturbance of the wetland area.
WQ Inputs & Treatment (WQ): The vegetation adjacent to the wetland area is mainly a pine/hardwood forest with good leaf ground cover and an adequate amount of small shrubs and saplings.

*The value of WQ is obtained by adding the TOTAL scores of Land Use Category and Pretreatment category then dividing by 2