United States Department of the Interior

Bureau of Land Management

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NARLEY MINE NO. 3 COAL LEASE
RESOURCE MANAGEMENT PLAN AMENDMENT,
LAND USE ANALYSIS
and
ENVIRONMENTAL ASSESSMENT
for
Federal Coal Lease in Jefferson County, Alabama

DOI-BLM-ES-0020-2012-0039-EA

LEASE BY APPLICATION ALES-055199

BEST COAL, INC.
NARLEY MINE NO. 3

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Consultation Letters

- United States Department of Interior Fish and Wildlife Service (USFWS)
- State Historic Preservation Officer (SHPO),
- Native American Consultation Letters
- Alabama Department of Conservation and Natural Resources (ADCNR)
- United States Army Corps of Engineers (ACOE)

Reports

1. P.E. LaMoreaux and Associates 2003 Phase I Cultural Resource Report
2. P.E. LaMoreaux and Associates 2009 Phase I Cultural Resource Report
3. USA, Mount Olive, AL Air Quality 9/13/2012
4. Emergency Land Lease Application & Resource Recovery Plan – ALES - 055199
5. Determination of the Probable Hydrologic Consequences
6. Biological Habitat Assessment
7. NPDES Permit AL0075752
8. ACOE Nationwide Permit 21 Mitigation Plan
9. Biological Habitat Assessment – Trouble Creek
10. P.E. LaMoreaux and Associates 2012 Phase I Cultural Resource Report
11. Biological Habitat Assessment - Indiana Bat
12. Coal Unsuitability Analysis and Report

LIST OF ACRONYMS & ABBREVIATIONS

ACHP	Advisory Council on Historic Preservation
ACOE	U.S. Army Corps of Engineers
ADCNR	Alabama Department of Conservation and Natural Resources
ADEM	Alabama Department of Environmental Management
AHC	Alabama Historic Commission
ASMC	Alabama Surface Mining Commission
BLM	U.S. Department of the Interior, Bureau of Land Management
BMP	Best Management Practices
CFR	Code of Federal Regulations
CEQ	Council of Environmental Quality
EA	Environmental Assessment
EPA	Environmental Protection Agency
FLPMA	Federal Land Policy and Management Act
GHG	Greenhouse Gases
LBA	Lease-by-Application
LUA	Land Use Analysis
MLA	Mineral Leasing Act of 1920, as amended.
MEC	McGehee Engineering Corp
N	North
NAA	No Action Alternative
NAS	No Action Scenario
NEPA	National Environmental Policy Act
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NW	Northwest
OSMRE	U.S. Department of the Interior, Office of Surface Mining Reclamation and Enforcement
OHV	Off-Highway Vehicle
PA	Proposed Action
PAP	Permit Application Package
PDS	Proposed Development Scenario
PELA	P.E. LaMoreaux & Associates, Inc.
PERC	PERC Engineering Co., Inc.

RMP	Resource Management Plan
RMPA	Resource Management Plan Amendment
SMCRA	Surface Mining Control and Reclamation Act of 1977, as amended
SHPO	State Historic Preservation Officer
SE	Southeast
SW	Southwest
USDA	U.S. Department of Agriculture
USDOI	U.S. Department of the Interior
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

CHAPTER I – INTRODUCTION

The Narley Mine No. 3 Coal Lease Resource Management Plan Amendment, Land Use Analysis and Environmental Assessment (RMPA-LUA-EA) presents an analysis of the environmental, social, and economic effects of the Proposed Action (PA), which is to offer the coal mineral rights of approximately 160 acres of property for leasing by the U.S. Department of the Interior Bureau of Land Management (BLM). The No Action Alternative is to take no further action to evaluate or offer the 160 acres of coal mineral rights for leasing.

The Narley Mine RMPA-LUA-EA is tied to the analyses presented in the following programmatic document: *Alabama and Mississippi Proposed RMP and Final Environmental Impact Statement*, May 2008. A surface mining amendment is being prepared specifically for the proposed Narley Mine RMPA-LUA-EA leasing action.

The analysis was initiated by the BLM in response to an application submitted by Randy Johnson, the previous owner of Best Coal, Inc. of Alabama, to the BLM Eastern States Office requesting to lease the subject property. However, the ownership of Best Coal, Inc. has since changed hands, and the current owners are Randy and Kenny Robinson of Pinson, Alabama. A description of the federal coal leasing process, decisions to be made, and authorizing actions are described in Sections 1.4 and 1.5.

The BLM, under the Secretary of the Interior, is the federal agency responsible for leasing federally-administered coal, and the Federal Coal Leasing Amendments Act (FLPMA) of 1976 requires that coal leases be issued in conformance with a comprehensive land use plan. The 2008 Alabama and Mississippi Resource Management Plan (RMP) included management direction for federal mineral resources in Alabama, including Jefferson County, Alabama. However, the RMP did not include the surface mining of coal. Therefore, the BLM is proposing to amend the 2008 Alabama and Mississippi RMP, to include the Narley Mine No. 3 competitive coal lease application. This RMPA would incorporate the 160 acres, more or less, of previously unleased coal for surface mining, into the RMP.

The U.S. Department of the Interior Office of Surface Mining Reclamation and Enforcement (OSMRE) is a cooperating agency. Best Coal, Inc. contracted PERC Engineering Co., Inc., (PERC) and McGehee Engineering Corp (MEC) to prepare this analysis under the review of BLM.

This analysis can be used as a basis for making a decision on the PA as it relates to the suitability for leasing and the subsequent mining of the federal coal contained in the subject property. The analysis in no way guarantees that the subject federal coal will be leased.

Proposed Action

The PA is for BLM to offer the approximately 160 acres of federal coal for competitive leasing in response to the Best Coal, Inc. application for leasing under the Lease-by-Application (LBA) process contained in title 43 Code of Federal Regulations (CFR) parts 3425. The subject

property would be offered with BLM's standard terms and conditions and special coal lease stipulations identified by the BLM and any stipulations accepted by BLM from other federal and not-federal groups for the protection of natural resources consistent with applicable laws, BLM policies, and the *Alabama and Mississippi Proposed RMP and Final Environmental Impact Statement.*

If the PA is selected and the subject property is leased, the proposed development scenario (PDS) associated with the PA would involve surface mining of the federal coal. The PDS is based on the requirements in 43CFR 3420.1-4(e), which consists of four screens. The screens identify areas acceptable for further consideration for leasing. The four screens are: (1) Development Potential, (2) Unsuitability, (3) Multiple-Use Trade-off, and (4) Surface Owner Consultation. The subject area passes all four screens. The Narley Mine No. 3 is located adjacent to and south of the current Narley Mine complex.

The No Action Alternative (NAA) is to not lease the federal coal. If the NAA is selected, the associated No Action Scenario (NAS) would involve mining private coal reserves that adjoin the subject property, in accordance with an existing Alabama Surface Mining Commission (ASMC) operating permit and permit revision and private leases. Protection zones (coal barriers) under the NAS are more extensive. The NAS would render the federally owned coal non-recoverable for the foreseeable future. Privately owned coal resources on adjoining properties will have been mined by the ongoing operations of the lease applicant, making the limited amount of federally owned coal less desirable for mining and, for practical purposes, this resource would be bypassed.

Purpose and Need

This Narley Mine No. 3 Coal Lease RMPA-LUA-EA is prepared to provide the BLM's Authorized Officer with the information necessary to make a decision regarding whether the PA, leasing federal minerals, will have a significant impact on the human environment.

A number of sources set requirements for, and provide guidance in, the preparation of a RMPA-LUA-EA: National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA [40 CFR § 1500-1508], the Department of the Interior (USDOI) regulations for implementing NEPA [43 CFR § 46], Departmental Manual 516, BLM's NEPA Handbook, related instruction memoranda, laws, and selected requirements of federal regulations relating to coal leasing/land use planning (43 CFR §1610 and §4300). This RMPA-LUA-EA includes a discussion of the PA, reasonable alternatives, public participation in the RMPA-LUA-EA, an estimate of recoverable coal, discussion of the existing environment, and an analysis of anticipated impacts from the PA and alternatives, and mitigating measures to lessen the severity of impacts. The BLM is preparing this document as the USDOI's delegated agency for leasing federal minerals.

The federal government maintains a policy to encourage private industry to explore and develop federal minerals to satisfy the national and local needs. Under this policy, mineral development may occur along with other resource uses, provided operations are conducted in a manner that protects other natural resources, environmental quality, life and property.

General Location

The Narley Mine No. 3 and the approximately 160 acres of federally owned coal are located approximately five miles north of Mt. Olive, Alabama, on Glovers Bend Road, in Jefferson County, Alabama. The proposed lease location is described as: The SW 1/4 of the NW 1/4, the N 1/2 of the SW 1/4 and the SE 1/4 of the SW 1/4 of Section 24, Township 15 South, Range 4 West. The proposed site location is shown below (Figure 1) and is also illustrated in Appendix I - D.

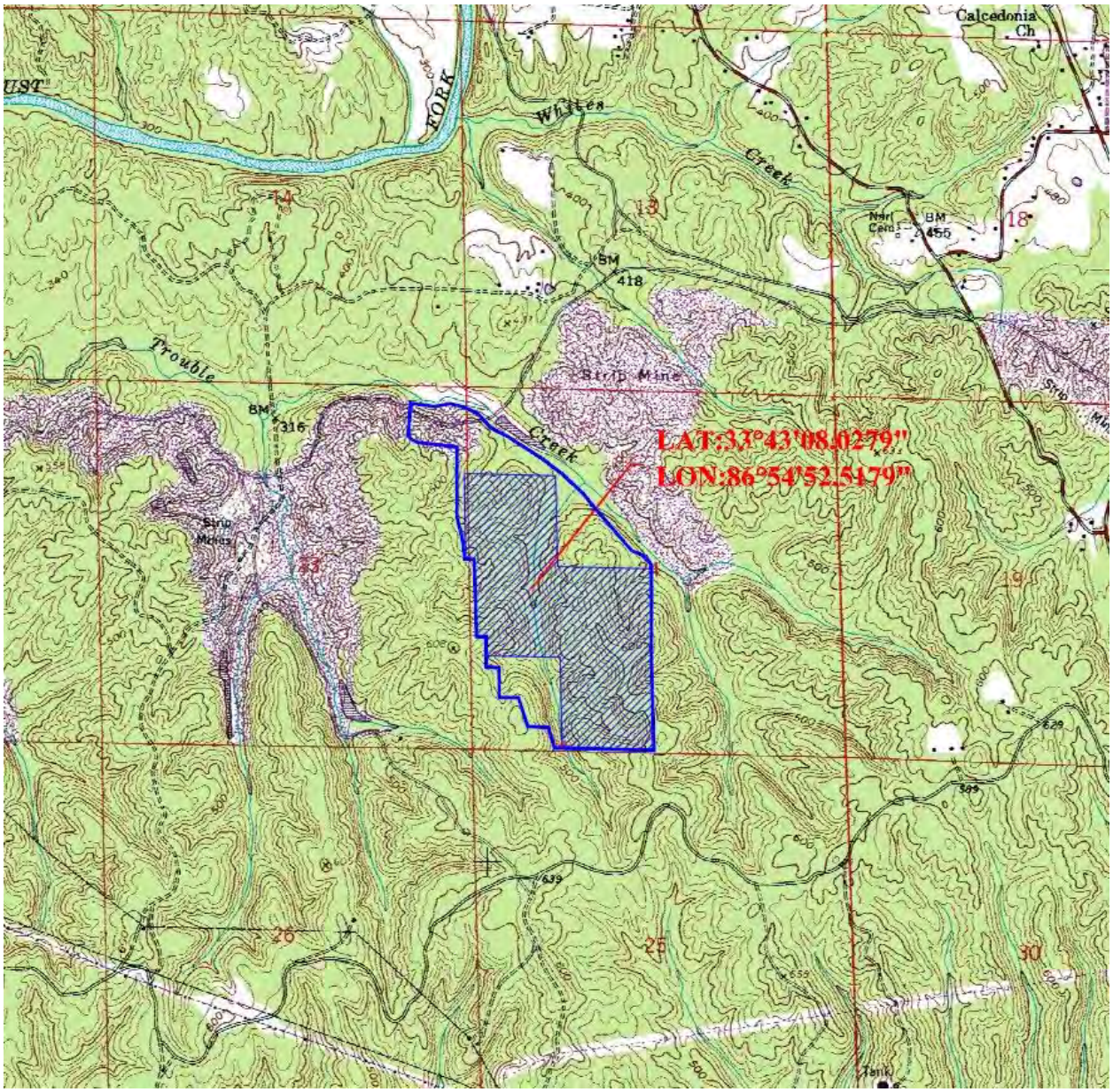


Figure 1. Project Area Map. *(Not to scale)*

Conformance with Land Use Plan/Analysis

A comprehensive land use plan is prepared for a large area of federal coal, while a LUA is prepared where there is no federal interest in the surface or the coal deposits are insufficient to justify the costs of a comprehensive land use plan (43 CFR §3420.1-4). Additionally, the filing of a LBA by an entity needing federal coal to maintain an existing mining operation is appropriately considered through the LUA process.

The LUA process, as authorized by the FLPMA, consists of an EA or impact statement, public participation as required by 43 CFR §1610.2, the consultation and consistency determination required by 43 CFR 1610.3, the protest procedure prescribed by 43 CFR 1610.5-2, an estimate of the amount of recoverable coal, and a decision on whether to allow coal leasing. A LUA meets the planning requirements of section 202 of the FLPMA.

BLM has addressed coal and other mineral resources in their Alabama and Mississippi RMP dated August 2008. Supplemental to the RMP, an EA in conformance with 40 CFR 1508.9 has been prepared which provides sufficient evidence and analysis to determine whether the impacts would be significant. The EA complies with NEPA. It includes brief discussions of the need for the proposal, of alternatives as required by NEPA section 102(2)(E), of the environmental impacts of the PA and of alternatives, and a listing of agencies and persons consulted (40 CFR 1508.9(b)).

Initiation of the Environmental Assessment Process

On December 7, 2007, Best Coal, Inc. made application for a federal coal lease (ALES-55199) with BLM's Eastern States Office (See Report 4). The application was received by the Southeastern States Field Office on January 18, 2008. The lease application is for approximately 160 acres of federal coal located in Jefferson County, Alabama, Huntsville Meridian, Township 15 South, Range 4 West.

Best Coal, Inc. proposes to mine the federal coal, as well as adjacent private coal. The BLM geologic and engineering report estimates 868,423 recoverable tons (See Report 4) of federal coal from the New Castle, Mary Lee, and Blue Creek seams of the Mary Lee Coal Group.

This proposed mining area would be an extension to the south for the existing Narley Mine surface operation and would utilize existing surface facilities. It would extend the life of the existing Narley Mine by six years, as well as bring federal coal and adjacent private coal to the marketplace.

This EA was prepared for Best Coal, Inc. by PERC and MEC with consultation and review by BLM and can be used as a basis for making a decision on the proposal as it relates to the suitability for lease and subsequent mining of the coal that it contains.

Public and other Agency Involvement

Issues were identified through the scoping process at the beginning of the project. Scoping is a process used in the early stages of preparing an EA to identify significant environmental issues deserving of study and deemphasizing insignificant issues, narrowing the scope of the environmental assessment. General public participation in this process began with the publication in the *Federal Register* of the Notice of Intent (NOI) to prepare a RMPA and associated EA. The public was invited to participate in this planning process with the identification of planning issues and criteria. The information received would be useful in meeting the requirements of the Federal Coal Management Program defined in 43 CFR 3420, including the application of coal planning screens. The NOI for the RMPA was published on July 26, 2013 (78 FR45265). No comments were received.

With completion of the RMPA/LUA/EA, BLM will publish a notice announcing the availability of the RMPA/LUA/EA and intent to conduct a public meeting to accept comments on the proposed sale, adequacy of the environmental assessment, fair market value determination and maximum economic recovery. The date will be set once the notice of intent for the public meeting is finalized. Notice of the public meeting will be published in a local newspaper as well.

Best Coal, Inc., acting through PERC and MEC, contracted with various entities and individuals to perform the studies necessary for evaluation of the subject property for its suitability for the mining of the coal contained therein by surface mining methods. These documents are contained in the appendix of this report and are incorporated by reference. The RMP and LUA are incorporated by reference. The public notice for the filing of the permit application is available in the ASMC Permit Application P-3954 – Part I (See Appendix II –Consultation Letters – ASMC).

In addition to the public involvement prescribed by 43 CFR 1610.2, consultation (Appendix II) has occurred with ASMC, U. S. Department of Interior Fish and Wildlife Service (USFWS), the Alabama Department of Conservation and Natural Resources (ADCNR), the State of Alabama Historical Commission (AHC), the U.S. Army Corps of Engineers (ACOE), and the Region 4 Office of the Environmental Protection Agency (EPA). The objective of this coordination with other agencies is to solicit input concerning the PA, alternatives, and mitigation measures for direct, indirect, and cumulative impacts.

PERC Engineering's report Probable Hydrologic Consequences of Permit Application P-3954 was consulted in the preparation of this RMPA-LUA-EA (See Report 5).

Land Use Planning – General Requirements

It is the federal government's policy to encourage private industry to explore and develop federal minerals and to help satisfy local and national needs. The BLM has two options in land use planning: the land use plan or the land use analysis (LUA). An LUA is typically prepared when there is no federal interest in the surface OR the coal deposits are insufficient to justify the cost of a land use plan. In this instance, the coal is insufficient to require an extensive land use plan. Regardless of whether a land use plan or an LUA is selected, it is BLM's goal (with regard to

natural resources) to: identify unleased coal lands that are acceptable for further consideration for coal leasing and development and to identify those lands that are not suitable (see 43 CFR 3461); identify areas unsuitable for surface mining of coal (43 CFR 1610.7-1) under the criteria set forth in 43 CFR 3461.5; identify acceptable lands areas suitable for development by all mining methods or by only certain stipulated mining methods, such as surface or underground mining (see 43 CFR 3461); identify any special conditions that must be met during more detailed planning, lease sale, or post-lease activities, including measures required to protect other resource values (see 43 CFR 3461); estimate the amount of coal recoverable by either surface or underground mining operations or both (43 CFR 3420.1-4(d)) (only those areas that have development potential may be identified as acceptable for further consideration for leasing); identify areas that have development potential for coal leasing according to the screening process outlined in 43 CFR 3420.1-4(e); and identify areas to be withdrawn from further consideration for leasing to protect other resource values and land uses that are locally, regionally, or nationally important or unique and that are not included in the unsuitability criteria discussed in 43 CFR 3461.5.

As part of the RMPA-LUA-EA process, the following four screens are reviewed as required in 43 CFR 3420.1-4(e). These screens identify areas acceptable for further consideration for leasing. The four coal screens are (1) Development Potential, (2) Unsuitability, (3) Multiple-Use Trade-off, and (4) Surface Owner Consultation.

Screen #1, Development Potential: This screen defines areas with high or medium coal development potential. Areas with no or low potential would be screened-out from further consideration for leasing.

Screen #2, Unsuitability: This screen identifies resources or land uses with special value, as listed in the Unsuitability Criteria found at 43 CFR 3461.5. Only those lands passing through Screen #1 are considered in Screen #2. Lands found to be acceptable for further consideration for leasing in Screen #2, pass on to Screen #3.

Screen #3, Multiple-Use Trade-off: This screen reviews multiple resource values and uses of those lands passing through Screen #2. It is devised to protect non-coal resource values or land uses that are locally, regionally or nationally important or unique and are not addressed by Screen #2. An interdisciplinary team of resource specialists considers and addresses the potential impacts. Particular emphasis is placed on protecting air and water quality, wetlands, riparian areas and sole-source aquifers. Stipulations may be developed should any negative impacts require mitigation.

Screen #4, Surface Owner Consultation: This screen requires private surface owner consultation when surface mining methods are proposed on private surface. In areas where a significant number of private surface owners express preference against surface mining, these areas would be screened-out from further consideration for leasing.

Land Use Planning – Federal Tract

As required by Title 43 Part 3425.2, all lands considered for lease sales must be included in a comprehensive land use plan or a land use analysis. The 160-acre tract covered by this RMPA/LUA/EA was not specifically covered by the *Alabama and Mississippi Proposed RMP and Final Environmental Impact Statement* (RMP), dated August 2008. Although the RMP covers below ground coal, it is silent on surface coal mining. This RMPA/LUA/EA tiers off of the RMP and specifically addresses the impacts of this leasing action. Actions authorized on BLM lands will comply with the mitigation requirements defined by the ACOE Section 404 permit requirements and will be conducted in conformance with the various regulations in the Clean Water Act, the State regulations, and the FLPMA to achieve the water quality classifications and standards for surface and ground waters developed by the States.

The proposed lease area has good quality coal and the areas adjacent have been mined or they are included in current active mines. The purpose of the PA of issuing a lease to recover federally owned coal is to prevent the by-pass of 160 acres of federally owned coal. If the coal is not recovered by the current applicant who is mining in the immediate area, it is unlikely that another company will try to lease and permit this small area. This is especially unlikely since the privately owned coal adjacent to this proposed lease will have been mined. Therefore, the subject acreage passed through the first screen (Development Potential) since a high development potential exists based on the core-hole data collected from privately-owned tracts adjacent to the proposed coal lease acreage.

Based on the unsuitability criteria listed in 43 CFR 3461.5, no resources or land uses with special value were found in the second screen (Unsuitability). The land was found to be acceptable for further consideration for leasing in Screen #2 and passed on to Screen #3.

The entire LBA area is addressed in Screen #3, the multiple land use screen, to determine what lands can be further considered for leasing. This screen will be carried out by this RMPA-LUA-EA by addressing site-specific resource values or uses and/or the NEPA environmental analysis contained within.

Consultation (Appendix II – Consultation Letters) has occurred with ASMC, USFWS, ADCNR, AHC, ACOE, and the EPA. The objective of this coordination with other agencies is to solicit input concerning the PA, alternatives, and mitigation measures for direct, indirect, and cumulative impacts.

Since surface mining is being considered, Screen #4 is applicable. The federal mineral is located under private ownership of William A. Cousins so the fourth screen (Surface Owner Consultation) does apply to this surface mine. Best Coal, Inc. has leased the surface land from Mr. Cousins and is currently mining on Mr. Cousins' property at the other Narley Mine, ASMC Permit P-3850. Upon completion of this RMPA-LUA-EA, the decisions to be made are whether the area is acceptable for further consideration for leasing and whether the lands are to be offered for lease. The final decision will be made by BLM and will address whether the importance of developing the coal resources is such that other resources may be temporarily and/or

permanently reduced to allow for coal leasing and mining. Should the leasing and mining be allowed, agency-developed stipulations may be attached to the coal lease.

Relationship to Statutes, Regulations, or Other Plans

The PA is authorized by the Mineral Leasing Act of 1920, as amended (30 U.S.C. 181 et seq.), the Mineral Leasing Act for Acquired Lands of 1947, as amended (30 U.S.C. 351-359 et seq.), and the FLPMA of 1976, as amended (90 Stat. 1083-1092). Best Coal is applying for this tract pursuant to 43 CFR 3425. This RMPA-LUA-EA is prepared in accordance with 43 CFR 3420.1-4 and 43 CFR 3425.3(a).

The Surface Mining Control and Reclamation Act of 1977 (SMCRA), as amended, gives OSMRE the primary responsibility to administer programs that regulate surface coal mining operations and the surface effects of underground coal mining. Under Section 503 of SMCRA, Alabama developed, and the Secretary of the Interior approved, the State's permanent regulatory program authorizing the ASMC to regulate surface coal mining operations and the surface effects of underground coal mining on private and state lands within Alabama. In July 1985 Alabama, under Section 523(c) of SMCRA, entered into a cooperative agreement with the Secretary of the Interior authorizing ASMC to regulate surface coal mining operations and the surface effects of underground coal mining on federal lands within the state. Federal coal lease holders in Alabama must submit a permit application package (PAP) to ASMC for proposed mining and reclamation operations on federal lands in the state. ASMC reviews the PAP to ensure that it complies with the approved permanent program and other statutes. If the PAP does comply, ASMC issues the applicant a permit to conduct coal-mining operations. OSMRE and other federal agencies review the PAP to ensure that it contains the necessary information for compliance with the coal lease, the Mineral Leasing Act of 1920, as amended (MLA), NEPA as amended, SMCRA, and other applicable federal laws and their attendant regulation. OSMRE recommends to the Assistant Secretary of the Interior for Land and Minerals Management that the mining plan be approved, approved with conditions, or disapproved. Before making the recommendation, OSMRE obtains input from other federal agencies, including the surface management agency, if any. However, mining disturbance on federal coal land cannot begin until the Assistant Secretary approves the mining plan.

ASMC enforces the performance standards and permit requirements during the mine's operation and has primary authority in environmental emergencies. OSMRE retains oversight responsibility for the approved State program.

The Alabama coal program addresses subsidence control and hydrologic impacts. These topics are covered in the Rules of the ASMC, Chapter 880-X-8E, Surface Mining Permit Applications – Requirements for Information on Environmental Resources; Chapter 880-X-8F, Surface Mining Permit Applications—Requirements for Reclamation and Operation Plan; and Chapter 880-X-10C, Performance Standards Surface Mining Activities.

CHAPTER II – PROPOSED ACTION AND ALTERNATIVES

Proposed Action and Alternatives

A survey was conducted on the federal coal lease property by MEC. The PA is to issue a federal coal lease for the subject acreage in:

Township 15 South, Range 4 West		
Section 24,	SW ¼ NW ¼,	40.00 Acres
	NE ¼ SW ¼,	39.86 Acres
	NW ¼ SW ¼,	39.97 Acres
	SE ¼ SW ¼,	39.82 Acres

The total is approximately 159.65 acres of federal coal.

The subject acreage is located in rural north central Alabama, northern Jefferson County (See Appendix I - H - Aerial Photo Map). The surface is privately owned and the land use is managed forest/woodlands. There are no residences located within the proposed lease acreage or the proposed permit area.

Best Coal, Inc. proposes to surface mine the federal coal and private coal to a maximum depth of 187 feet (See Report 4). Surface mining, including auger mining, would provide the maximum economic recovery of the coal resource.

Additional Information

Other coal mining has also occurred in the area. The Republic Steel Sayre Underground Mine operated in the Mary Lee seam during the 1950's, 1960's and 1970's. That mine is adjacent to the 160-acre federal tract on the west side. Pre-SMCRA surface mining occurred both north and west of this 160-acre tract. Surface works to the west encountered the Sayre Underground Mine. ASMC Permit P-3850 (Narley Mine), joins the proposed federal lease area on the north and east boundary. Mine operations at Narley Mine began in the spring of 2004 and are currently on-going with plans to move onto the proposed federal lease area as soon as all documents and permits are approved. The proposed federal lease area and adjacent private coal would be included in ASMC Permit P-3954 (Narley Mine No. 3). The permit application has been submitted with the understanding that a federal lease must be granted for access to the coal.

Best Coal, Inc. currently holds ASMC Permit P-3932 (Jagger Mine) which is near the proposed federal lease area. Nearby mine areas are shown on the previously mined map in Appendix I - G. The environmental analysis performed as a part of this emergency lease includes the cumulative impacts of the adjacent pre-law surface mining. The emergency lease application was submitted on December 7, 2007 as shown in Report 4. To qualify for an emergency lease certain qualifications must be met as stated in the 43 CFR 3425.1-4. Narley Mine No. 3 meets these qualifications due to the fact that the federal coal will be needed within 3 years to maintain an existing mining operation (43 CFR 3425.1-4.1.i.A).

Proposed Action Stages of Implementation

(1) Exploration – An exploration program installed monitoring wells and drilled overburden sample holes on property adjacent to the 160-acre tract. Data from exploration activity are used in the ASMC permit application which was submitted March 3, 2011, and was assigned number P-3954.

(2) Construction – The existing Narley Mine, ASMC Permit P-3850, encompasses a portion of the Narley Mine No. 3 project area and contains a part of the 160-acre tract of federal mineral. The Narley Mine project area that is contiguous to the Narley Mine No. 3 boundary has operations such as road building and sediment basin construction that will be expanded to Narley Mine No. 3. For example, sediment basin 001 will be utilized by both Narley Mine and Narley Mine No. 3 as shown in Appendix "F".

(3) Mining – Excavation to recover the New Castle and Mary Lee seams will be a southerly continuation of mine pits from Permit P-3850. The federal mineral interest would extend the life of this Best Coal operation an estimated six years and provide a more efficient mine plan for the surrounding area of private land resulting in maximized recovery of the coal resource. If the entire tract is not surface mined, then auger mining may be implemented from the final open pit.

(4) Processing and Transportation – The Narley Mine has an on-site coal yard that crushes and sizes the coal prior to trucking it to Alabama Power steam electricity-generating plants. No coal-cleaning waste is generated from this process. Coal from the Narley No. 3 mine will be handled the same way, either at the Narley Mine coal yard or at an on-site coal processing and shipping facility.

(5) Reclamation – Reclamation activity will be inspected by ASMC staff at least once a month to ensure compliance with the ASMC Permit P-3954. Rough grading will follow the coal extraction process within six months and re-vegetation of disturbed areas will be completed immediately, as defined by the ASMC, after grading is completed. ASMC Administrative Code Chapter 880-X-10C Performance Standards, Surface Mining Activities address requirements for reclamation activities. Auger mining activities are addressed in 880-X-10F and bonding requirements to ensure reclamation is completed in the event of bankruptcy by the operator are addressed in 880-X-9A.

Alternative 1 - No Action

The no action alternative would deny the applicant a lease to recover the federally owned coal and would render the federally owned coal unlikely to be recovered in the foreseeable future. Privately owned coal resources on adjoining properties will have been mined by the ongoing operations of the applicant, making the limited amount of federally owned coal less desirable for mining.

Other Action Alternatives Considered

Issuing the federal coal lease for coal recovery by surface mining methods is the PA and the only other action alternative considered. While one of the coal seams was mined by underground means in the past, the seams are too thin and limited in aerial extent to be economically recovered by underground mining methods.

CHAPTER III - AFFECTED ENVIRONMENT

Chapter 3 describes the existing conditions of the environmental components that could be affected by the PA and alternatives if implemented.

General Description/Current Land Use

The Best Coal, Inc., Narley Mine site is approximately five miles north of Mt. Olive, Alabama, on Glovers Bend Road. The entire area to be affected over the life of the operation is within Jefferson County. The approximate elevation of the mine plan area is 600 feet above mean sea level. The proposed lease area is located in Section 24, Township 15 South, Range 4 West, Jefferson County, Alabama, and is shown on the Brookside, Alabama, United States Geological Survey 7.5 minute quadrangle map. The area of interest for this federal lease application is the SW 1/4 of the NW 1/4, the N 1/2 of the SW 1/4 and the SE 1/4 of the SW 1/4 of Section 24, Township 15 South, Range 4 West. The federal lease area consists of approximately 160 acres while the entire project boundary is approximately 228 acres. North-south ridge lines on the west and east boundaries control the surface drainage pattern for the 160-acre tract. Runoff is directed to an unnamed stream that crosses near the center of the 160-acre tract before entering Trouble Creek just north of this tract.

Timberland is the only land use within the lease area. Lands bordering the lease area are also timberland. Determinations of existing land use were based on field inspection, aerial photography and information contained in the Jefferson County land use map prepared by the U.S. Department of Agriculture Soil Conversation Service.

The lease area under application is immediately adjacent to lands currently held under private lease by Best Coal, Inc. The company mines adjacent land under ASMC Permit P-3850 (Narley Mine). Projections of coal quality and quantity from those lands indicate that the federal lease area contains coal reserves suitable for surface mining if the area is worked in succession with the adjoining private lease area.

Critical and Non-Critical Resource Elements

Table 1 lists resource elements considered in this EA and identifies which elements are critical (those that either must be discussed or for which a no-impact declaration is made), which are non-critical, and which may be affected by the proposed leasing action. A “No” entry under the Potentially Affected column is considered a “no-impact” declaration for that element. Table 1 elements marked as not potentially affected either have not been identified in or near the project area or are not affected by the PA. They are not addressed further in this EA.

Table 1. Critical and Non-Critical Elements Potentially Affected

Critical Element	Potentially Affected		Non-Critical Element	Potentially Affected	
	Yes	No		Yes	No
Air Quality	X		Fire		X
Areas of Critical Environmental Concern		X	Physiography & Geology	X	
Cultural Resources	X		Health and Safety	X	
Environmental Justice	X		Noise	X	
Floodplains	X		Socioeconomic Values	X	
Invasive Non-Native Species	X		Soils	X	
Migratory Birds	X		Sensitive Species	X	
Native American Religious Concerns	X		Vegetation	X	
Prime and Unique Farmlands	X		Visual Resources	X	
Threatened, Endangered, & Sensitive Species	X		Wildlife, Aquatic & Terrestrial	X	
Wastes, Hazardous or Solid	X		Energy Policy		X
Water Quality (Surface and Ground)	X				
Wetlands	X				
Wild and Scenic Rivers		X			
Wilderness		X			

Physiography /Geology

The lease area is located within the Warrior Coal Basin as shown in Appendix I - A. Pennsylvanian-age strata underlie surface earth materials or are exposed in outcrops in this region. The Warrior Basin is the southernmost of a series of Pennsylvanian basins of the Appalachian Plateau. Here, the Pottsville Formation consists of thin to thick bedded sandstones, siltstones, shales, clays, and coal seams. Structurally, the Warrior Basin is formed by a large gentle syncline that extends from north-central Mississippi in the west to north-central Alabama in the east. The syncline is tilted to the southwest with a regional dip of 30 to 200 feet per mile. Toward the interior of the Warrior Basin, the regional southwest dip of Pottsville strata is modified by a series of three synclines and two anticlines. Of these, the major structures are the Warrior and Coalburg synclines and the Sequatchie anticline. Fold axes are parallel to the Appalachian system in a northeast-southwest direction and plunge to the southwest with the regional dip. Strata that outcrop in the immediate vicinity of the mine site include siltstones, shales, sandstones, underclays, and coal associated with the Mary Lee Coal Group. According to *Depositional Settings of the Pottsville Formation in the Black Warrior Basin*, the Mary Lee Group is approximately 40 to 130 feet above the Black Creek Coal Group and from 140 to 400 feet below the Pratt Coal Group as can be seen in Appendix I - B.

The proposed mine will recover coal from the New Castle, Mary Lee, and Blue Creek seams of the Mary Lee Coal Group. Coal beds outcrop at various elevations above mean sea level in the lease area: New Castle at approximately 490 feet, Mary Lee at approximately 445 feet, and Blue Creek at approximately 430 feet. Core samples for on the lease request area are not available, so drill data from the adjacent mine area were projected onto the lease request area.

This site is on a northwest-southeast trending ridge that is approximately 200 feet above the receiving streams. Overburden above the New Castle seam is about 150 feet thick in the mine plan area. Bedrock consists of, in descending order, five feet of sandstone and shale, 120 feet of sandy shale, and 19 feet of shale. The New Castle seam is about one foot thick. About 46 feet of interburden separates the New Castle and Mary Lee seams. These strata are five feet of shale and then 39 feet of sandy shale. The Mary Lee seam is about three feet thick. About 16 feet of sandy shale interburden separates the Mary Lee and Blue Creek seams. Blue Creek coal is split into two six-inch beds with six feet of sandy shale between them. The lower Blue Creek seam is underlain by about six feet of shale followed by sandy shale. Rock types and their thicknesses come from the lithologic description for borehole BCN3DH-1 that was drilled within the proposed permit area. Because of the dipping beds, strata may vary in thickness across the lease request area. The lithologic description of the hole drilled for monitoring well BCN3MW-2, for example, has 228 feet of overburden above the New Castle seam; only about 19 feet of New Castle overburden was logged where monitoring well BCN3MW-8 was installed.

Coal to be recovered by the proposed mining operation is high volatile bituminous. This type of coal is well suited for industrial use and steam generation. Representative analyses of coal from each of the seams are shown below.

Seam	Sample		As Received				Dry Basis			
Name	I.D.	Date	% Moisture	% Ash	Btu / lb	% Sulfur	% Ash	Btu / lb	% Sulfur	MAF
New Castle	73-85604	10/6/2007	3.00	14.53	13,282	2.32	14.98	12,765	2.39	15,014
New Castle	351-0703319-001	10/5/2007	3.28	13.64	12,683	1.80	14.11	13,113	1.86	15,266
		Average	3.14	14.09	12,983	2.06	14.55	12,939	2.13	15,140
Mary Lee	73-86245	10/18/2006	4.38	16.96	11,948	0.80	17..74	12,495	0.84	15,190
Mary Lee	351-0703571	10/19/2007	2.69	19.36	12,184	0.97	19.90	12,521	0.99	15,632
		Average	3.54	18.16	12,066	0.89	19.90	12,508	0.92	15,411
Blue Creek	73-86952	10/30/2006	5.19	15.97	11,958	1.07	16.84	12,613	1.13	15,167
Blue Creek	351-0703731-007	10/29/2007	6.73	12.03	12,374	1.07	12.90	13,267	1.14	15,232
		Average	5.96	14.00	12,166	1.07	14.87	12,940	1.14	15,200

Air Quality

The Narley Mine No. 3 and the approximately 160 acres of federally owned coal are located approximately five miles north of Mt. Olive, Alabama. The climate at Mount Olive is subtropical with an annual average temperature of 62.1 °F. Rainfall is generally well distributed throughout the year. Total annual precipitation averages 54.7 inches. The Gulf of Mexico heavily influences the climate by supplying the region with warm, moist air, which results in long, hot summers. Prevailing winds from the south also help in contributing to this. Thunderstorms occur about 60 days each year, and most occur in the summer. Tornadoes strike occasionally near the area but are normally short and cause variable damage.

Mount Olive is within the Metropolitan Birmingham Intrastate Air Quality Control Region. According to the air quality database from the Environmental Protection Agency (EPA), in 2009 Mount Olive was above the national average in nitrogen dioxide, average particulate matter and carbon monoxide, but below national average in total suspended particulate, lead, ozone, and sulfur dioxide. The "Average Air Quality (AQI)" of Mount Olive is 47.3, which is just above the national average of 38. However, the county still falls within the "Good" air quality range, which is from 0 to 50 (See Report 3).

The Federal Clean Air Act, as amended in 1990, defines EPA's responsibilities for protecting and improving the nation's air quality and the stratospheric ozone layer. The Federal Clean Air Act delegates the authority to states to regulate certain activities that may affect air quality. In Alabama, these laws are administered at the state level by ADEM, which is the agency responsible for managing air quality regulations and permitting.

On September 22, 2009, the U.S. EPA issued a final regulation (40 CFR 98) for the mandatory reporting of greenhouse gases (GHG), which became effective on October 30, 2009. The rule applies to direct GHG emitters and suppliers. GHG emissions relevant to combustion sources include CO_2, methane (CH_4), and nitrous oxide (N_2O). Emissions of these gases are reported as CO_2 – equivalent (CO_{2e}) emissions. The CO_{2e} conversions are based on the global warming potential (greenhouse effect) of the GHG pollutant versus CO_2 and are as follows:

GHG Pollutant vs. CO_2

Pollutant	***CO_2 Equivalent Emissions***
CO_2	1
CH4	21
N2O	310

Under the PA, the lease area would be mined using the same methods as those being used at the existing Narley Mine. GHG emissions are commonly classified into three categories as defined by the Intergovernmental Panel on Climate Change: Direct (or Scope 1 emissions), Indirect Energy (Scope 2), and Other Indirect (Scope 3). Direct emissions occur on the premises of a facility, or are related to fleet vehicles associated with or based at the facility. They include on-site combustion emissions, vented and fugitive emissions, process-related emissions, and emissions from facility vehicles. Indirect energy emissions occur when a facility purchases or imports energy from sources located off-site (e.g., steam, heat, or electricity from the power grid). Other Indirect emissions include all other sources that an organization chooses to account for. These are sources of emissions that are not entirely within the control of the organization, such as employee commuting, air travel, subcontractor activity, and off-site treatment and disposal of process waste. Only direct and indirect sources of GHG emissions were considered for this inventory since these are the primary activities associated with Narley Mine No. 3.

The potential direct GHG-emitting sources at Narley Mine No. 3 consist of combustion sources (equipment) and coal mining (methane releases). Potential impacts associated with the

equipment emissions will be mitigated through the use of mining equipment that exceeds the federal standards for pollution control. Indirect GHG-emitting sources include the electricity usage to power equipment. Although coal mining is a potential GHG-emitting source, all tests conducted at the Narley Mine No. 3 indicate undetectable levels of methane from the seam. Therefore, methane emissions from coal mining activities have not been included in the GHG inventory.

Cultural Resources

P.E. LaMoreaux & Associates, Inc. (PELA) performed a Phase 1 Cultural Resource Assessment in 2003, 2009, and 2012 within the boundary of the proposed area of potential effects. PELA determined that the project activities would have no adverse effects on cultural resources listed on or eligible for the National Register of Historic Places (NRHP) (See Reports 1, 2, and 10). The SHPO has issued letters of concurrence with the Best Coal – Narley Mine No. 3 project area based on the findings of these studies (See Appendix II – Consultation Letters - SHPO).

Farmlands (Prime or Unique)

The primary soil within the project boundary is the Montevallo – Nauvoo Association, Steep, 2% - 55%. Other soils present within the subject area are classified as Palmerdale Complex, Steep, 15% - 60%; and Nauvoo fine sandy loam, 8% - 15%. None of these soils are classified as prime farmland soils according to the *Soil Survey of Jefferson County, Alabama* published by the U.S. Department of Agriculture Soil Conservation Service. Therefore, there is no potential for use of the area as crop farmland due to the relatively steep slopes and erosive nature of the soils (Appendix I - C - Soil Map).

Native American Religious Concerns

No cultural resources have been documented, and no known sites associated with Native American religious practices or traditional cultural places have been identified within the boundaries of the proposed area of potential effects. The BLM has conducted consultation with those Native American Tribes/Nations who had prehistoric claims in the region for this undertaking. No Tribes/Nations had any concerns.

The following tribes were contacted by BLM: Alabama Coushatta Tribe, Alabama Quassarte Tribe, Cherokee Nation, Chickasaw Nation, Choctaw Nation, Coushatta Tribe, Jena Band Choctaw, Keetoowah Band Cherokee, Kialagee Tribe, Muscogee Creek Nation, Poarch Creek Tribe, Seminole Nation, Seminole Tribe and Thlopthlocco Tribe. The Alabama Coushatta, Chickasaw Nation, Seminole Tribe and Keetoowah Band Cherokee all wish to be notified if remains or other issues covered by the Native American Graves Protection and Repatriation Act arise from this action. (See Appendix II – Native American Consultation Letters)

Threatened, Endangered, and Candidate Species

A written request for concurrence on the project activities and identification of federally listed species and critical habitat in the project area was submitted to the Daphne Ecological Services

Office of the USFWS on September 28, 2012 by MEC. The USFWS responded on October 17, 2012, requesting additional information regarding the project. The comments by USFWS consisted of providing 11 species that may occur within the proposed project area. In addition, a request was made for a more detailed description of the proposed project, including a site plan, map of operations, site erosions control plan, and a habitat assessment performed by a qualified biologist. The requested information was provided to the USFWS by MEC on March 20, 2013 (See Appendix II – Consultation Letters – USFWS).

Wes Lamon of MEC, a qualified biologist, reviewed the USFWS threatened, endangered, proposed, and candidate species list for Jefferson County to determine whether such species might occur in the project vicinity. In addition, the Alabama Natural Heritage Section database that contains numerous records of sensitive species in Alabama was queried to provide a list of any special status species and habitats in or near the project area (See Table 2). MEC then preformed a biological habitat assessment on the proposed Narley Mine No. 3 project area on September 20 to 25, 2012 (See Report 6). The habitat assessment looked for habitat and presence of species federally listed as endangered, threatened, proposed or candidates for listing. The habitat assessment area covered approximately 228 acres of which 160 acres have federal coal. The inspection results are in Table 3 and Table 4.

In addition to conducting the habitat assessment, Best Coal further elaborated on the concerns mentioned by the USFWS. In order to help reduce or eliminate any direct impacts to Trouble Creek, Best Coal will be leaving a minimum of 100 foot vegetated buffer zone between the nearest portion of the Narley No. 3 project boundary and Trouble Creek. Therefore no additional fill impacts are proposed for Trouble Creek.

In addition, Best Coal will be adhering to the ASMC Administrative Code, Chapter 880-X-10C, Performance Standards Surface Mining Activities, and will develop an erosion control plan tailored to the mining operation that will be submitted and reviewed by qualified professionals from the ASMC. The mine plan will closely adhere to the protective measure in the Alabama Department of Environmental Management (ADEM) regulations sections 335-6-10.06 (a) and (c) to maintain minimum water quality conditions applicable to all state waters as stated within the approved ADEM National Pollutant Discharge Elimination System (NPDES) permit AL0075752 (See Appendix 7).

Furthermore, the NPDES permit has six specific sediment basins that will address and filter the runoff from this project prior to entering into a flow path or overland flow that will ultimately drain into Trouble Creek. These basins are identified as basin 001, 002, 002A, 003, 031 & 032. All of the sediment basins will be constructed in the outer perimeter of the proposed mine site. The sediment basins will have storm detentions to absorb any increase of surface run-off, if it should occur. The mining operation will not alter the drainage area of Trouble Creek. Therefore, the overall quantity of flow to Trouble Creek is not likely to be adversely affected. The sediment basins will be designed for a 10 year 24 hour stormwater event at the primary spillway with a design of a 25 year 6 hour stormwater event at the emergency spillway.

Best Coal will adhere to the current requirements for the inspections of Best Management Practices (BMP) that are in strict accordance with both ASMC and ADEM rules and regulations.

Additionally, Best Coal will immediately re-vegetate any disturbed areas that are not actively being mined and execute any work that results in exposed earth or slopes leading to the surface waters during periods when significant rainfall is not present. In addition, the area to be impacted will be restored immediately following the mineral extraction operation.

MEC has evaluated Trouble Creek and performed a habitat assessment on the area (See Report 9) and found that the portion of Trouble Creek downstream of the proposed mine site is impounded from previous pre-law mining operations. Additionally, Trouble Creek has an excessive amount of sedimentation within the tributary created from the current off-road vehicle utilization from both hunting and recreational uses. The stream impairments have contributed to the absence of critical habitat and the likely existence of federally listed threatened and endangered species. No evidence was found for the presence or possible presence of any species federally listed as endangered, threatened, or of concern within or along Trouble Creek.

In addition, consultation was conducted with the ADCNR. ADCNR indicated that the area of interest has not had a biological survey performed at the delineation location, by their staff or any individuals referenced in their database. Therefore, ADCNR could not make an accurate assessment to the past or current inhabitancy of any federal or state protected species at the location. ADCNR recommended that the USFWS be contacted for section 7 consultations (See Appendix II – Consultation Letters – ADCNR).

On April 22, 2013, the USFWS concurred that the PA is not likely to adversely affect endangered and threatened species. On June 27, 2013, BLM consulted with the USFWS. BLM was informed that consultation had already occurred with MEC, and that the section 7 consultation requirements had been met and no additional information was needed. The correspondence with the USFWS can be seen in Appendix II – Consultation Letters – USFWS.

Table 2. Threatened, Endangered, Proposed & Candidate Species

Common Name *Scientific Name*	**Status**	**General Habitat**
Bald eagle *Haliaeetus leucocephalus*	*BGEPA*	Large open bodies of water where adequate food exist and human disturbance is limited
Wood stork *Mycteria americana*	*E*	Freshwater and estuarine wetlands, primarily nesting in cypress or mangrove swamps. Narrow tidal creeks or flooded tidal pools where fish become concentrated
Red-cockaded woodpecker *Picoides borealis*	*E*	Open, mature and old growth pine ecosystems with minimal hardwood overstory and midstory
Indiana bat *Myotis sodalis*	*E*	Lives in a variety of habitats including floodplain and riparian zones for roosting with upland area nearby and caves and sometimes mines for hibernating and mating
Gray bat *Myotis grisescens*	*E*	Live in caves year-round; Winter hibernation in deep vertical caves, Summer roost in caves along rivers
Plicate rocksnail *Leptoxis plicate*	*E*	Shallow gravel and cobble shoals in the flowing waters of the bottom 1/3 (20 miles) of the Locust Fork of the Black Warrior River in Jefferson County
Cylindrical lioplax *Lioplax cyclostomaformis*	*E*	Isolated mud deposits found under large rocks in the rapid flowing sections of stream and river shoals
Round rocksnail *Leptoxis ampla*	*T*	Cobble, gravel, or other hard substrates in the strong currents of riffles and shoals of high water quality streams and rivers
Fine-lined pocketbook mussel *Hamiota (=Lampsilis) altilis*	*T*	Large rivers to small creek habitats swift flowing riffles and gravel-cobble substrates
Ovate clubshell mussel *Pleurobema perovatum*	*E*	Sand and gravel bottom free flowing streams and rivers with good water quality and stable stream channels
Orange-nacre mucket mussel *Hamiota (=Lampsilis) perovalis*	*T*	Large rivers to small creek habitats swift flowing riffles and gravel-cobble substrates
Southern clubshell *Pleurobema decisum*	*E*	Sand and gravel bottom free flowing streams and rivers with good water quality and stable stream channels
Alabama moccasinshell *Medionidus acutissimus*	*T*	Small to mid-sized streams with sandy-gravel and gravel substrates with moderate flow
Triangular kidneyshell mussel *Ptychobranchus greenii*	*E*	Sand and gravel bottom free drainage courses and rivers with good water quality and stable stream channels
Southern pigtoe *Pleurobema georgianum*	*E*	Sand and gravel bottom riffles of free flowing streams and rivers with good water quality and stable stream channels
Southern acornshell mussel *Epioblasma othcaloogensis*	*E*	Streams or rivers with fine gravel bottoms with moderate to strong currents and some shallows
Upland combshell mussel *Epioblasma metastriata*	*E*	Stable gravel and sand riffles of high water quality streams
Dark pigtoe mussel *Pluerobema furvum*	*E*	Sand/gravel/cobble shoals and rapids in small rivers and large streams; usually highly oxygenated water with moderate flow
Cahaba shiner *Notropis cahabae*	*E*	Quiet shallow, 1.6 feet or less, shoals below swift riffle areas and downstream of boulders in sandy patches or gravel beds in the main channel of the Cahaba river
Goldline darter *Percina aurolineata*	*T*	Moderate to swift current, and water depths 2 feet or more, with gravel or sand substrates interspersed among cobble and small boulders in big and little Cahaba rivers

Watercress darter *Etheostoma nuchale*	*E*	Slow moving spring fed tributaries to Black Warrior River at mid-depths in dense aquatic vegetation with dense populations of aquatic insect larvae and microcrustaceans. Associated with watercress.
Vermilion darter *Etheostoma chermocki*	*E*	Swift currents in streams of alternating riffles and pools. Riffles with small limestone rubble and shale cobble. Clean bedrock, sometimes with sand, occurs in pools. Associated with water willow in larger riffles and shoals. Near springs, in swift runs and chutes adjacent to watercress and pondweed all in Turkey Creek
Blue shiner *Cyprinella caerulea*	*T*	Clear, medium or large streams and are found in shallow pools with slow currents or in backwaters over sand and gravel substrates of the Coosa river system
Rush darter *Etheostoma phytophilum*	*C*	Lives in the reeds and rushes on the edges of small freshwater streams. It needs clear, cool, unpolluted water to survive.
Flattened musk turtle *Sternotherus depressus*	*T*	Free-flowing creek or small river with pools about 1 m deep or more, with rocks, abundant mollusks, low silt load and deposits, moderate temperature rock-bottomed to sandy substrate
Black Warrior waterdog *Necturus alabamensis*	C	Streams of 1 to 4 meter depth, above the Fall Line and within the Black Warrior River basin, submerged rock ledges with little sedimentation near large leaf packs supporting snail, Dusky salamanders, and Caddis and Mayfly larvae
Gentian pinkroot *Spigelia gentianoides* Var. *alabamensis*	*E*	Glades, open, treeless area surrounded by woodlands, over rock formations of Ketona Dolomite. Solis high in calcium & magnesium and low in phosphorus & potassium and pH ranges from 7.4 to 7.6. Soils will also be rock exposed to very thin and prone to drought.
Leafy prairie clover *Dalea foliosa*	*E*	In thin soils over limestone substrate. In Alabama it lives in prairie-like areas on the edges of cedar glades. It favors sites with a wet spring and fall and a dry summer.
Georgia rock-cress *Arabis georgiana*	*C*	Rocky (limestone, shale, granite-gneiss) bluffs and slopes along watercourses; also along sandy, eroding riverbanks
Mohr's barbara's buttons *Marshallia mohrii*	*T*	Moist sandy clay soils, along shale bed streams, road side right-of-ways, seasonally wet low swales around natural springs and seeps
Tennessee yellow-eyed grass *Xyris tennesseensis*	*E*	Gravelly open wet woodlands, with calcareous rock near the surface, seep margins and wet meadows along spring-fed headwater streams

Key to codes on list:

- **E** - Endangered
- **T** - Threatened
- **BGEPA** - Bald & Golden Eagle Protection
- **C** - Candidate Species
- **(P)** - Possible Occurrence

The threatened, endangered, and candidate terrestrial species listed below (Table 3) were not present within the proposed 228-acre project boundary or surrounding land. Possible habitats were explored, but there was no evidence of the listed species.

Table 3. Habitat Suitability for the Threatened, Endangered, Proposed & Candidate Terrestrial Species

Common Name *Scientific Name*	**General Habitat Description Found**
Bald eagle (*Haliaeetus leucocephalus)*	There was no potential nesting habitat for the Bald Eagles. There were no large trees near open water on or near this site.
Red-cockaded woodpecker (*Picoides borealis)*	There were no isolated mature pines of the age and required size that would harbor the Red-cockaded woodpecker on or adjacent to the project site.
Wood stork *(Mycteria americana)*	There was no potential nesting habitat for the Wood stork. There were no large trees near open water on or near this site.
Indiana bat *(Myotis sodalis)*	Habitat for this species does not exist. Possible summer roost habitat along the drains is unsuitable because the drains within the proposed boundary go dry in the summer. This roost area was explored and no bats were discovered. No caves were found within or adjacent to the proposed project boundary for winter hibernation or mating. (See Report 11 – Biological Habitat Assessment – Indiana Bat)
Gray bat *(Myotis grisescens)*	Habitat for this species does not exist. There are no caves located within or adjacent to the proposed project boundary.
Mohr's barbara's buttons *(Marshallia mohrii)*	Habitat for this species does not exist. There are no seasonal seeps and the wetland is highly disturbed, has a high percentage of nonnative invasive species and lacks the typically preferred soil for this species to survive.
Gentian pinkroot *(Spigelia gentianoides* Var. *alabamensis)*	Habitat for this species does not exist. There are no glades located within the project boundary.
Georgia rock-cress *(Arabis georgiana)*	Habitat for this species does not exist within the proposed boundary. There are no sandstone outcrops.
Leafy prairie clover *(Dalea foliosa)*	Habitat for this species does not exist within the proposed boundary. There are no prairie-like areas on the edges of cedar glades.
Tennessee yellow-eyed grass *(Xyris tennesseensis)*	Habitat for this species does not exist. There are no groundwater seeps in the area with calcareous rock or required soils for this species to survive.

There is no habitat for the threatened, endangered, proposed or candidate aquatic species listed below (Table 4). The intermittent stream within the proposed boundary is heavily disturbed due to off-road vehicle traffic. No evidence was found for the presence or possible presence of these listed aquatic species.

Table 4. Habitat Suitability for the Threatened, Endangered, Proposed & Candidate Aquatic Species

Common Name *Scientific Name*	**General Habitat Description Found**
Flattened musk turtle *(Sternotherus depressus)*	On site flowing streams are known to abate during the dry season. Also, heavy siltation from off road vehicles destroys any possible habitat. These streams are not of the required depth or substrate. Adequate food supply is also not present.
Black Warrior waterdog *(Necturus alabamensis)*	On site flowing streams are known to abate during the dry season. Also, heavy siltation from off road vehicles destroys any possible habitat. These streams are not of the required depth or substrate. Adequate food supply is also not present.

Fine-lined pocketbook mussel *(Hamiota (=Lampsilis) altilis)*	On site flowing streams are known to abate during the dry season. Also, heavy siltation from off road vehicles destroys any possible habitat. They are not suitable to support mussel species. No mussels were found in during study.
Ovate clubshell mussel *(Pleurobema perovatum)*	On site flowing streams are known to abate during the dry season. Also, heavy siltation from off road vehicles destroys any possible habitat. They are not suitable to support mussel species. No mussels were found in during study.
Triangular kidneyshell mussel *(Ptychobranchus greenii)*	On site flowing streams are known to abate during the dry season. Also, heavy siltation from off road vehicles destroys any possible habitat. They are not suitable to support mussel species. No mussels were found in during study.
Southern clubshell mussel *(Pleurobema decisum)*	On site flowing streams are known to abate during the dry season. Also, heavy siltation from off road vehicles destroys any possible habitat. They are not suitable to support mussel species. No mussels were found in during study.
Orange-nacre mucket mussel *(Hamiota (=Lampsilis) perovalis)*	On site flowing streams are known to abate during the dry season. Also, heavy siltation from off road vehicles destroys any possible habitat. They are not suitable to support mussel species. No mussels were found in during study.
Alabama moccasinshell mussel *(Medionidus acutissimus)*	On site flowing streams are known to abate during the dry season. Also, heavy siltation from off road vehicles destroys any possible habitat. They are not suitable to support mussel species. No mussels were found in during study.
Upland combshell mussel *(Epioblasma metastriata)*	On site flowing streams are known to abate during the dry season. Also, heavy siltation from off road vehicles destroys any possible habitat. They are not suitable to support mussel species. No mussels were found in during study.
Dark pigtoe mussel *(Pleurobema perovatum)*	On site flowing streams are known to abate during the dry season. Also, heavy siltation from off road vehicles destroys any possible habitat. They are not suitable to support mussel species. No mussels were found in during study.
Southern acornshell mussel *(Epioblasma othcaloogensis)*	On site flowing streams are known to abate during the dry season. Also, heavy siltation from off road vehicles destroys any possible habitat. They are not suitable to support mussel species. No mussels were found in during study.
Southern pigtoe mussel *(Pleurobema georgianum)*	On site flowing streams are known to abate during the dry season. Also, heavy siltation from off road vehicles destroys any possible habitat. They are not suitable to support mussel species. No mussels were found in during study.
Goldline darter *(Percina aurolineata)*	The drainage courses within the project boundary are known to abate during the dry season. Also this species is only found in the cobble and small boulder area of the big and little Cahaba River.
Cahaba shiner *(Notropis cahabae)*	The drainage courses within the project boundary are known to abate during the dry season. Also this species is only found in the main channel of the Cahaba River.
Watercress darter *(Etheostoma nuchale)*	Flowing streams on the site wane during the dry season and would not sustain this species or they are too near headwaters for these species to be present. Also they are associated with spring fed tributaries to the Black Warrior River.
Vermilion darter *(Etheostoma chermocki)*	Flowing streams on the site wane during the dry season and would not sustain this species or they are too near headwaters for these species to be present. Also they are associated with springs, specifically in Turkey Creek.
Blue shiner *(Cyprinella caerulea)*	Flowing streams on the site wane during the dry season and would not sustain this species or they are too near headwaters for these species to be present. Also they are known of the Coosa river system.
Plicate rocksnail *(Leptoxis plicate)*	Flowing streams on the site wane during the dry season and would not sustain this species or they are too near headwaters for these species to be present.
Cylindrical lioplax (Lioplax cyclostomaformis)	Flowing streams on the site wane during the dry season and would not sustain this species or they are too near headwaters for these species to be present.
Round rocksnail **(***Leptoxis ampla)*	Flowing streams on the site wane during the dry season and would not sustain this species or they are too near headwaters for these species to be present.

Water Quality, Ground and Surface

Groundwater

The following descriptions of regional groundwater, local groundwater, and aquifer characteristics are based on information contained in references such as various hydro-geological evaluations approved by the Alabama Surface Mining Commission; *Hydrologic Assessment, Eastern Coal Province Area 23, Alabama* published by the U.S. Department of the Interior Geological Survey; and *Groundwater Information Manual: Coal Mine Permit Applications - Volumes I and II* published by the U.S. Department of the Interior, Office of Surface Mining Reclamation and Enforcement in cooperation with the U.S. Geological Survey.

Regional Groundwater Setting

Groundwater in the Warrior Basin occurs chiefly in openings along fractures and bedding planes within rocks of the Pottsville Formation. The most productive water-bearing openings generally occur in sandstone beds within 250 to 350 feet of the surface. Well yields in the Pottsville depend on the number, size, and connectivity of water-bearing openings. These characteristics normally vary from one point to another depending upon the degree of fracturing of the rocks. Regionally, the primary source of recharge to groundwater is rainfall which infiltrates the overlying soils, moves past the root zone of plants, and enters strata such as sandstone where it may collect (perch) above a more impervious stratum such as shale. Groundwater may encounter fault and fracture zones which will allow it to move through shale beds or other low permeability units to deeper aquifers. Where aquifers are overlain by less permeable strata, these aquifers may become confined due to the pressure exerted by groundwater in up-dip strata. Groundwater movement in the Warrior Basin is generally along bedding planes (in the direction of the dip of the strata) from areas of higher elevation toward stream channels. Seeps or springs may occur where the static groundwater level intersects the surface. Groundwater discharges into streams, contributing to surface runoff as base flow, where the static groundwater surface is above the stream bed. Where groundwater levels are below the stream bed, water moves from the stream into the groundwater system.

Local Groundwater Setting

Local aquifers are found in sandstone and, to a lesser extent, sandy shale units in ridges within and adjacent to the proposed permit area. These small aquifers may be ‘perched’ on underlying strata with lower hydraulic conductivities such as shale. Perched aquifers have very small recharge areas and are of very small aerial extent at this location. Where groundwater is not perched, it may be contained in unconfined (water table) aquifers. The primary source of recharge for perched aquifers and the water table is rainfall. Local groundwater levels rise and fall in direct response to rainfall frequency, duration, and intensity. The water table is largely a muted reflection of the overlying topography. These water table and perched aquifers contribute to the baseflow in the local receiving streams but are not utilized by people. A small aquifer alone generally would not provide a reliable source of water for domestic use especially under drought conditions. However a well which penetrates several of these small, perched aquifers might provide enough water for domestic use.

As stated above, where the groundwater level (the potentiometric surface) is below the stream channel, stream water may discharge to the water table. At this site, strata overlying the target coal seams dip towards the southeast and the topography gains elevation in that direction. As these small aquifers become deeper they may become confined. This observation is based on the average groundwater levels observed in baseline monitoring wells, local strata composition and orientation, and local topography. Confined aquifers in this vicinity are typically overlain by lower hydraulically conductive intervals such as shale; however, they may be confined by less obvious intervals with relatively lower hydraulic conductivities, such as siltstone or an interval of interbedded sandstone and shale. Recharge zones for these aquifers increase in both size and depth as the distance down-dip from the proposed permit area increases. Recharge for confined aquifers comes from more than one source: rainfall, which infiltrates into the interval in up-dip areas where the interval is exposed to the surface, and groundwater from overlying aquifers in up-dip areas where the confining unit is fractured, not as competent, or is non-existent. Local confined aquifers have adequate groundwater volume to be considered reliable for domestic use. Groundwater associated with the New Castle, Mary Lee, and Blue Creek seams in the vicinity of the Narley No.3 Mine is extremely limited in volume due to the thinness of these coal beds and their low hydraulic conductivities. The primary source of recharge to these intervals is most likely direct infiltration from rain falling on their outcrop area which, because of the thinness of the coal beds, is small. Infiltration from overlying strata is limited by the vertical hydraulic conductivity of those strata. The target coal seams would not be considered reliable sources of domestic groundwater based on quantity, and the elimination of these intervals during mining would not measurably affect the amount of local groundwater.

Groundwater associated with the interval underlying the lowest target coal seam at the proposed mine site is primarily in sandstone immediately below the Blue Creek seam. Local drill data shows this interval to be about 15 to 23 feet thick. The water-bearing sandstone zone may correlate stratigraphically with the Lick Creek Sandstone Member (locally called the Jagger Bedrock), a regional aquifer in parts of Marion, Walker, and Winston Counties). However, this interval is much thinner, closer to the surface, and has a much smaller recharge area at this site and may be only a shallow outlier of the regional aquifer.

Local Groundwater Movement

Groundwater stations BCN3MW-4, BCN3MW-6, and BCNMMW-2 monitor water contained in the Pottsville Formation strata below the target coal seams. Personnel from PERC Engineering Laboratory measured the static depth of groundwater in each of the three wells on April 8, 2010. All depth measurements were taken within a period of 26 minutes. The groundwater elevation in each well was used to determine the groundwater gradient in the aquifer below the Blue Creek seam, the lowest coal bed to be mined at this site. Water level data are given below.

Monitoring Well	***Surface Elevation (feet above mean sea level)***	***Distance to Groundwater (feet)***	***Groundwater Elevation (feet above mean sea level)***
BCN3MW-4	431.00	31.70	399.30
BCN3MW-6	392.00	20.70	371.30
BCNMMW-2	422.00	7.60	414.40

The gradient is 0.022 ft. / ft. and the flow direction is south 18 degrees east. Groundwater movement in the vicinity of the Narley Mine No.3 would be affected by a number of factors: dip direction of the Pottsville Formation strata, strata composition, faults, and local surface topography including the location of receiving streams and highwalls created by previous mining.

Regional Groundwater Quality

Groundwater quality in the Pottsville Formation was described by Thomas J. Hill in *Hydrologic Assessment, Eastern Coal Province Area 23, Alabama* on page 59. The following values come from that publication:

Parameter	***Maximum***	***Minimum***	***Average***
Total Iron (mg/l)	7.40	0.10	0.89
pH (standard units)	9.40	6.40	8.40*
Specific Conductance (umhos)	1760	37	504
Sulfate (mg/l)	37.0	0.20	11.0

*Median

Local Groundwater Quality

Walker Drilling Service installed monitoring wells BCN3MW-2, BCN3MW-4, BCN3MW-8, and BCNMMW-2. Best Coal drilled the hole for monitoring well BCN3MW-6 and PERC completed the well installation. Wells BCN3MW-2, BCN3MW-4, BCN3MW-6, and BCN3MW-8 were drilled with an air rotary rig and cased for baseline monitoring specifically for this proposed permit. Wells BCN3MW-2 and BCN3MW-8 monitor water in the Pottsville Formation strata above the target coal seams and BCN3MW-4, BCN3MW-6, and BCNMMW-2 monitor water in the Pottsville Formation strata below the target coal seams. Well BCNMMW-2 was drilled and cased for baseline and performance monitoring at the adjacent Narley Mine (Permit P-3850) and will also be used for baseline monitoring for this proposed permit.

Personnel from the PERC sampled wells BCN3MW-2, BCN3MW-4, BCN3MW-6 and BCN3MW-8 four times between December 1, 2009, and March 16, 2010. Personnel from the PERC also sampled BCNMMW-2 29 times between July 16, 2003, and March 16, 2010. Samples were taken with either a hand bailer or a submersible pump after purging the well. Water level was measured prior to purging.

PERC employs the following practices to collect a sample that would be representative of the water in an aquifer. Where recharge of groundwater is sufficient, three well volumes of groundwater (measured from the static depth) are pumped prior to sampling. Where recharge is slow, and three well volumes cannot be obtained within the monitoring cycle (usually monthly), only one well volume will be pumped. The well will then be allowed to recharge, and a sample will be obtained after a volume equal to the volume of the pump line has been discharged. In infrequent instances where recharge is very limited, and the volume of water in the well is too small to be pumped to the surface, a 'bottom sampler' is employed to bail as much water as possible from the well. The well will then be allowed to recharge and the bottom sampler will again be used to obtain a sample when ample groundwater is present to be collected. Depth to water and pH are measured in the field, and the sample is split into two separate containers: a

473-ml plastic bottle is acidified for metals analysis, and a one-quart plastic bottle is used for all other analysis. Water samples are stored on ice for transport to the PERC Engineering Laboratory. Analyses in the laboratory follow ASTM specifications.

Test parameters for the Narley Mine data set include pH, iron, manganese, conductivity, sulfates, acidity, and alkalinity. Average water-quality values for selected monitoring wells within and adjacent to the proposed permit area are shown below:

---Above Target Coal Seams---

Well	*pH, (std. units)*	*Total iron, (mg/l)*	*Spec. cond.,(µmhos)*	*Sulfate, (mg/l)*
BCN3MW-2	6.75	2.15	178.0	18.88
BCN3MW-8	6.58	4.26	168.5	3.50
Average	6.67*	3.21	173.3	11.19

*Median

---Below Target Coal Seams---

Well	*pH, (std. units)*	*Total iron, (mg/l)*	*Spec. cond.,(µmhos)*	*Sulfate, (mg/l)*
BCN3MW-4	6.65	5.07	1,611	62.75
BCN3MW-6	7.08	2.00	282.3	53.75
BCNMMW-2	6.27	4.36	335.8	184.7
Average	6.67*	3.81	743.0	100.4

*Median

Narley Mine No. 3 groundwater is of lower pH, higher mineralization, lower or higher specific conductivity, and higher sulfate concentrations than water produced from the regional Pottsville Formation. It is recommended that the local groundwater be treated or filtered prior to domestic use.

Well Inventory

An April 2010 well inventory by PERC identified only three residences within a ½ mile of the proposed Narley Mine No. 3 permit boundary. Two of the three residences were previously identified during a well inventory conducted for the adjacent Best Coal Jagger Mine. According to our research, this rural area does not have a municipal water supply; therefore, it is assumed that all three residences rely to some extent on local groundwater for their domestic needs.

Local Groundwater Use

Water use for residences with indoor plumbing and cloths-washing facilities average 150 gallons per person per day according to the reference *Engineering Manual* by Robert H. Perry. Ph. D., third edition. Therefore, it is assumed that the aquifer below the target coal seam supplies a minimum of 750 gallons per day to area residences.

Regional Surface Water Setting

All surface runoff from the proposed Narley Mine No. 3 drains into Trouble Creek and Trouble Creek drains into the Locust Fork of the Black Warrior River. The mine site is in sub-watershed 120 of hydrologic unit code 03160111 as defined by the U. S. Department of Agriculture (USDA) Natural Resources Conservation Service. Drainage of the Locust Fork of the Black Warrior River at Trouble Creek is approximately 870 square miles. According to *State of Alabama Hydrologic Unit Map with Drainage Areas by Counties and Sub-Watersheds* by the USDA Natural Resources Conservation Service, sub-watershed 120 has a drainage area of 139.46 square miles and occupies parts of Blount, Jefferson, and Walker Counties. Jefferson County has 92.6 percent of the total drainage area. Locust Fork of the Black Warrior River is publicly owned, perennial, and is classified as "Fish and Wildlife" by Chapter 335-6-11 in ADEM's *Water Use Classifications For Interstate and Intrastate Waters.* Chapter 335-6-10 states the best usage under the "Fish & Wildlife" classification is fishing, the propagation of fish, aquatic life, and wildlife, and any other usage except as a supply for drinking or food processing, or for swimming and water contact sports. According to the same reference, ADEM imposes a number of water-quality restrictions for this use classification. Wastes shall not cause the pH to deviate more than one unit from the normal pH, nor be less than 6.0 or greater than 8.5. The temperature shall not exceed 90 degrees Fahrenheit. Dissolved oxygen concentrations will not be less than 5 mg/l. Only such amounts of toxic substances or taste, odor, and color producing substances will be allowed which will not exhibit acute or chronic toxicity. Fecal coliform will not exceed a geometric mean of 1,000/100ml on a monthly average. Radioactive materials will not exceed the requirements of the Alabama Department of Public Health and there shall be no turbidity of other than natural origin that will cause substantial visible contrast with the natural appearance of the waters or interfere with any beneficial uses which they serve.

Officials from ADEM were asked what concentrations for parameters not listed in Chapter 335-6-10 would impair water use under this classification/protection scheme. They responded that if the parameter is not specifically listed in Chapter 335-6-10, the baseline quality of the water body would be used to determine whether or not degradation is taking place.

Local Surface Water Setting

Trouble Creek drains approximately 3.78 square miles at its mouth according to *Drainage Areas for the Upper Black Warrior River Basin, Alabama* by the Geological Survey of Alabama. The drainage pattern within this watershed is predominantly dendritic. Slope conditions range from slight to severe but are predominantly severe. Elevations range from approximately 298 feet above mean sea level at the mouth of Trouble Creek to approximately 640 feet at the drainage divide. Pre-mine land use within this watershed is 76.49 percent forest, 14.04 percent previously mined, and 9.47 percent active mining as determined from the Brookside, Alabama, USGS quadrangle map with supporting ASMC data. There are no significant areas of agricultural use within this watershed. Trouble Creek flows into the Locust Fork of the Black Warrior River, which is classified as "Fish and Wildlife."

Drainage Control

Sediment basins 001P, 002P, 002AP, 003P, 031P, and 032P will contain sediment produced by the proposed mine and, if needed, serve as treatment sites for mine area runoff. Basins will be

constructed at the locations shown in Appendix F. Outflow from all sediment basins associated with this proposed mine will be monitored under ADEM NPDES Permit AL0075752. Permit AL0075752 was originally assigned to Narley Mine. Sediment basins 001P, 002P, 002AP, 003P, 031P, and 032P will drain into Trouble Creek. All basins are proposed as permanent water impoundments (fish and wildlife habitats).

Local Surface Water Quality & Quantity

Baseline surface water quality and quantity for Trouble Creek was established from samples collected at downstream monitoring stations BCNMSW-3 and BCN3SW-1 and upstream station BCN3SW-3. These Trouble Creek monitoring points are shown in Appendix F. Station BCNMSW-3 was established for the adjacent Narley Mine, and its record consists of both baseline and performance monitoring. The watershed above BCNMSW-3 is 1.85 square miles: 72.93 percent of that area is forest, 8.34 percent was previously mined, and 18.73 percent qualifies as active mining (the ongoing Narley Mine operation). PERC sampled BCNMSW-3 31 times between July 16, 2003, and March 16, 2010.

Downstream station BCN3SW-1 was sampled specifically for the proposed Narley No. 3 mine site. The watershed above BCN3SW-1 is 1.62 square miles and has land uses divided among forest (71.27 percent), previously mined (6.64 percent), and active mining (22.09 percent). PERC sampled BCN3SW-1 six times between October 19, 2009, and March 16, 2010. Upstream Surface Water Monitoring Site BCN3SW-3 was sampled specifically for baseline monitoring for the proposed mine site. Upstream station BCN3SW-3 drains 0.09 square miles, all of it forested. PERC sampled BCNMSW-3 five times between October 19, 2009, and March 16, 2010.

PERC took all surface water samples by the 'grab' method. Flow measurements conformed to ASTM D3858 —Standard Practice for Open Channel Flow Measurement of Water by Velocity - Area Method or other equally valid methods. PERC Engineering Laboratory analyzed all samples according to ASTM standards. Measured variables included pH, total iron, total manganese, total suspended solids, specific conductance, sulfates, acidity, and alkalinity. Average values at each monitoring site are given below.

Parameter	***BCNMSW-3***	***BCN3SW-1***	***BCN3SW-3***	*****DMDL***
Flowrate (cubic feet per second)	1.75	4.32	0.20	N/A
pH*(standard units)	7.10	8.12	7.08	9.0
Total Iron (mg/l)	1.37	0.27	0.41	6.0
Total Manganese (mg/l)	1.02	0.42	0.03	4.0
Conductivity (µmhos)	765	1,401	48.0	N/A
Total Suspended Solids (mg/l)	10.1	6.00	5.40	70.0
Acidity (mg/l as $CaCO_3$)	10.5	12.33	6.40	N/A
Alkalinity (mg/l as $CaCO_3$)	50.3	186.0	22.8	N/A
Sulfate (mg/l)	239	672	6.20	N/A
*Median				
**NPDES Permit AL0075752 - Daily Maximum Discharge Limit (DMDL)				
Not Established / Not Available (N/A) – (See Report 7 – NPDES Permit AL0075752 For More Information)				

Pollution of Surface and Ground Water

Any surface runoff in the Narley Mine area is intercepted by a sediment control system which includes an appropriate combination of ditches and sedimentation ponds. NPDES Permit AL0075752 controls the quality of water discharged from the Narley Mine. A modification to Permit AL0075752 was made to allow for additional outfalls associated with the Narley Mine No. 3 site. Therefore, the permit will also cover effluent from Narley No. 3 Mine. Further, Best Coal had tested the Narley Mine overburden and interburden to determine whether acid or other toxic-forming substances were present in amounts that might pollute water resources. The results indicated that toxicity issues with respect to the materials tested were minimal. The three overburden cores contained small amounts of acid-forming shale zones near one or more of the coal beds to be mined. The volume of this toxic material was small compared to the total volume of overburden. Excavation of the overburden would not necessarily mix the spoil thoroughly. Therefore, there is a possibility that pods of toxic shale might be positioned within the backfill where they could have some localized environmental effect. However, considering the volumes involved, that effect would be limited to a few patches of sparse vegetation, which could be mitigated with an application of agricultural lime. Best Coal has conducted comparable examinations of the overburden and interburden at the proposed permit area as well.

Wetlands and Floodplains

The Narley Mine No. 3 project area consists of 0.01 acres of wetlands, 4,080 linear feet of intermittent streams and 7,106 linear feet of ephemeral streams that will ultimately drain into Trouble Creek, which eventually drains into the Locust Fork of the Black Warrior River. Drainage of the Locust Fork, which lies a little over a mile northwest of the proposed project boundary, at Trouble Creek is approximately 870 square miles. The ACOE Nationwide Permit (NWP) 21 is current, with Permit SAM-2010-01027-CHE expiring on March 18, 2017 and

Permit SAM-2012-00615-CMS expiring on June 1, 2017 as detailed in Appendix II – Consultation Letters - ACOE. The project boundary is not located within a floodplain as seen in Appendix I. Furthermore, the mitigation plan for the NWP 21 permit contains a detailed description of the stream, wetland, and riparian habitat reconstruction and can be seen in Report 8.

Socio-economic Values

Currently, the Narley Mine No. 3 project area is used primarily for recreational activities. The closest city, Gardendale, Alabama, is about 5.5 miles southeast of the 160-acre tract. The U.S. Census stated the 2012 population to be 13,849 with a median household income from 2007-2011 of $58,656 with only 4.3% below the poverty level compared to the state poverty level of 17.6% (*U.S. Census Bureau*).

Noise

Currently, there is no noise pollution produced from the project area except for that generated by recreational use such as hunting and OHV traffic. The forested 160-acre tract is about 1/2 mile from the nearest resident and domesticated animals.

Visual Resource

The proposed area is rural timberland with typical landscape vistas and no special viewing areas. The closest residence is about 1/2 half mile away, and the project area will only be visible from vantage points in the immediate vicinity and from aircraft. Currently, the site is not visible from any nearby residence and can only be seen from Glover's Bend Road which is to the north of the project area.

Wildlife and Vegetation

The proposed Best Coal, Inc. Narley Mine No. 3 project area is south of Old Mt. Olive and Glovers Bend roads. The project area is in the midst of both previously mined ground and ongoing mining operations. The project site of approximately 228 acres, of which 160 acres are federal land, mostly consists of the vegetation species listed in Table 5 as compiled by biologist Wes Lamon of MEC during his habitat study.

Table 5. Vegetation Species Found at the Project Area

Trees - Common Name (*Scientific Name*)		
American Beech *(Fagus grandifolia)*	Bear Oak *(Quercus ilicifolia)*	Black Cherry *(Prunus serotina)*
Black Gum *(Nyssa sylratica)*	Black Oak *(Quercus velutina)*	Black Willow *(Salix nigra)*
Chestnut Oak *(Quercus prinus)*	Eastern Hophornbeam *(Ostraya virginiana)*	Eastern Red Cedar *(Juniperus virginiana)*
Flowering Dogwood *(Cornus florida)*	Loblolly Pine *(Pinus taeda)*	Mimosa *(Albizia julibrissin)*
Mockernut Hickory *(Carya tomentosa)*	Persimmon *(Diospyros virginiana)*	Post Oak *(Quercus stellata)*
Red Maple *(Acer rubrum)*	Scarlett Oak *(Quercus coccinea)*	Shortleaf Pine *(Pinus echinata)*
Southern Red Oak *(Quercus falcata)*	Sugar Maple *(Acer sacchrum)*	Sweet Gum *(Liquidambar styraciflua)*
Sycamore *(Platanus occidentalis)*	Turkey Oak *(Quercus laevis)*	Virginia Pine *(Pinus virginiana)*
White Oak *(Quercus alba)*	Yellow Poplar *(Liriodendron tulipifera)*	

Sapling Stratum - Common Name (*Scientific Name*)		
American Beech *(Fagus grandifolia)*	Bear Oak *(Quercus ilicifolia)*	Black Cherry *(Prunus serotina)*
Black Oak *(Quercus velutina)*	Black Willow *(Salix nigra)*	Chestnut Oak *(Quercus prinus)*
Chinese Privet *(Ligustrum sinense)*	Eastern Hophornbeam *(Ostraya virginiana)*	Eastern Red Cedar *(Juniperus virginiana)*
Eastern Redbud *(Cercis canadensis)*	Flowering Dogwood *(Cornus florida)*	Glossy Privet *(Ligustrum lucidum)*
Loblolly Pine *(Pinus taeda)*	Mimosa *(Albizia julibrissin)*	Mockernut Hickory *(Carya tomentosa)*
Oakleaf Hydrangea *(Hydrangea quercifolia)*	Persimmon *(Diospyros virginiana)*	Post Oak *(Quercus stellata)*
Red Maple *(Acer rubrum)*	Scarlett Oak *(Quercus coccinea)*	Shortleaf Pine *(Pinus echinata)*
Sourwood *(Oxydendrum arboreum)*	Southern Red Oak *(Quercus falcata)*	Sugar Maple *(Acer sacchrum)*
Sweet Gum *(Liquidambar styraciflua)*	Turkey Oak *(Quercus laevis)*	Virginia Pine *(Pinus virginiana)*
White Oak *(Quercus alba)*	Yellow Poplar *(Liriodendron tulipifera)*	

Shrub Stratum - Common Name (*Scientific Name*)		
American Beech *(Fagus grandifolia)*	American Hophornbeam *(Ostrya virginiana)*	Black Cherry *(Prunus serotina)*
Black Elderberry *(Sambucus nigra)*	Black Oak *(Quercus velutina)*	Black Willow *(Salix nigra)*
Bottle Brush Buckeye *(Aesculus parviflora)*	Chestnut Oak *(Quercus prinus)*	Chinese Privet *(Ligustrum sinense)*
Eastern Hophornbeam *(Ostraya virginiana)*	Eastern Red Cedar *(Juniperus virginiana)*	Eastern Redbud *(Cercis canadensis)*
Fanleaf Hawthorn *(Crataegus flabellata)*	Flowering Dogwood *(Cornus florida)*	Glossy Privet *(Ligustrum lucidum)*
Heart's a Burstin *(Euonymus americanus)*	Loblolly Pine *(Pinus taeda)*	Mimosa *(Albizia julibrissin)*

Mockernut Hickory *(Carya tomentosa)*	Oakleaf Hydrangea *(Hydrangea quercifolia)*	Persimmon *(Diospyros virginiana)*
Post Oak *(Quercus stellata)*	Red Maple *(Acer rubrum)*	Scarlett Oak *(Quercus coccinea)*
Shortleaf Pine *(Pinus echinata)*	Smooth Sumac *(Rhus glabra)*	Sourwood *(Oxydendrum arboreum)*
Southern Red Oak *(Quercus falcata)*	Sugar Maple *(Acer sacchrum)*	Sweet Gum *(Liquidambar styraciflua)*
Switch Cane *(Arundinaria gigantea)*	Sycamore *(Platanus occidentalis)*	White Oak *(Quercus alba)*
Yellow Poplar *(Liriodendron tulipifera)*		

Woody Vine Stratum - Common Name (*Scientific Name*)		
Green Briar *(Smilax rotundifolia)*	Japanese Honeysuckle *(Lonicera japonica)*	Multiflower Rose (*Rosa multiflora)*
Muscadine *(Vitis rotundifolia)*	Saw Briar *(Smilax bona-nox)*	Virginia creeper *(Parthenocissus quinquefolia)*
Yellow Jessamine *(Gelsemium sempervirens)*		

Herbaceous Stratum - Common Name (*Scientific Name*)		
Aloe Yucca *(Yucca aloifolia)*	American Beech *(Fagus grandifolia)*	Annual Ragweed *(Ambrosia artemisiifolia)*
Big Bluestem *(Andropogon gerardii)*	Black Cherry *(Prunus serotina)*	Black Elderberry *(Sambucus nigra)*
Black Willow *(Salix nigra)*	Blackberry *(Rubus betulifolius)*	Blackeyed Susan *(Rudbeckia Hirta)*
Bluestem Broom Sedge *(Andropogon virginicus)*	Bonset *(Brickellia eupatorioides)*	Bottle Brush Buckeye *(Aesculus parviflora)*
Canadian Golden rod *(Solidago altissima)*	Chestnut Oak *(Quercus prinus)*	Chinese Privet *(Ligustrum sinense)*
Christmas Fern *(Polystichum acrostichoides)*	Cinnamon Fern *(Osmunda cinnamomea)*	Cutleaf Blackberry *(Rubus laciniatus)*
Dog Fennel *(Eupatorium capillifolium)*	Eastern Hophornbeam *(Ostraya virginiana)*	Eastern Red Cedar *(Juniperus virginiana)*
Eastern Redbud *(Cercis canadensis)*	Ebony Spleenwort *(Aspenium platyneuron)*	Flowering Dogwood *(Cornus florida)*
Glossy Privet *(Ligustrum lucidum)*	Heart's a Burstin *(Euonymus americanus)*	Horseweed *(Conyza canadensis)*
Korean Lespedeza *(Lespedeza stipulaca)*	Loblolly Pine *(Pinus taeda)*	Meadow Fescue *(Festuca pratensis)*
Mimosa *(Albizia julibrissin)*	Mockernut Hickory *(Carya tomentosa)*	Muhly Grass *(Muhlenbergia schreberi)*
Nepalese Brown Top *(Microstegium vimineum)*	Netted Chain Fern *(Woodwardia aerolata)*	New England Aster *(Symphyotrichum novae-angline)*
Oakleaf Hydrangea *(Hydrangea quercifolia)*	Persimmon *(Diospyros virginiana)*	Polk Weed *(Phytolacca americanum)*
Post Oak *(Quercus stellata)*	Poverty Grass *(Danthonia spichata)*	Red Buckeye *(Aesculus pavia)*
Red Maple *(Acer rubrum)*	Royal Fern *(Osmunda regalis)*	Shortleaf Pine *(Pinus echinata)*
Smooth Sumac *(Rhus glabra)*	Soft Rush *(Juncus effusus)*	Sourwood *(Oxydendrum arboreum)*

Southern Red Oak *(Quercus falcata)*	Sugar Maple *(Acer sacchrum)*	Sweet Gum *(Liquidambar styraciflua)*
Switch Cane *(Arundinaria gigantea)*	Sycamore *(Platanus occidentalis)*	Tall Fescue *(Festuca arundinacea)*
Virginia Chain fern *(Woodwardia virginica)*	Wax Myrtle *(Myrica cerifera)*	White Oak *(Quercus alba)*
Yankeeweed *(Eupatorium compostifolium)*	Yellow Poplar *(Liriodendron tulipifera)*	

The proposed Narley Mine No. 3 site includes undisturbed ground and areas affected by silvaculture operations, hunting roads, and off-road vehicles trails. Upland slope areas are vegetated with pines, hardwoods, several invasive species, grasses, annual and perennial herbs as well as vines. Much of the area was cut for timber approximately 10 years ago was planted thinly with loblolly pine *(Pinus taeda).* The sparse planting allowed for a dense undergrowth of hardwoods, brambles and vines. Hardwoods include American beech *(Fagus grandifolia),* white oak *(Quercus alba),* post oak *(Q. stellata),* chestnut oak *(Q, prinus),* scarlet oak *(Q. coccinea),* red maple *(Acer rubrum),* sourwood *(Oxydendrum arboreum),* mockernut hickory *(Carya tomentosa)* and sweet gum *(Liquidambar styraciflua).* Bramble include blackberry *(Rubus laciniatus* and *Rubus betulifolius).* The vines include muscadine *(Vitis rotundifolia),* saw briar *(Smilax bona-nox),* green briar *(Smilax rotundifolia)* and Japanese honeysuckle *(Lonicera japonica).* A few areas were planted densely with the loblolly pines and have very little undergrowth. Vegetation of the lower section of the proposed area and the banks of the streams for the most part has remained undisturbed. These areas primarily support the above mentioned tree hardwoods and pine, along with shortleaf pine *(Pinus echinata)* with a smaller canopy of flowering dogwood *(Cornus florida),* American hornbeam *(Carpinus caroliniana),* American hophornbeam *(Ostrya virginiana),* oakleaf hydrangea *(Hydrangea quercifolia),* bottle brush buckeye *(Aesculus parviflora),* and red buckeye *(A. pavia).* There are some trails that have been created through these hardwoods for the use of Grey Rock OHV Park. The intermittent streams of the area are used as trails and are heavily disturbed due to the off road vehicles. All streams are deeply rutted and flow with a heavy sediment load. Old hunting roads were found throughout the proposed area. Most of these roads lead to overgrown, abandoned green fields that are vegetated with herbs, grasses, brambles and young hardwoods. Herbs and grasses include big bluestem *(Andropogon gerardii),* blackeyed susan *(Rudbeckia Hirta),* bluestem broom sedge *(Andropogon virginicus),* bonset *(Brickellia eupatorioides),* dog fennel *(Eupatorium capillifolium),* horseweed *(Conyza canadensis),* meadow fescue *(Festuca pratensis),* tall fescue *(Festuca arundinacea),* polk weed *(Phytolacca americanum)* and wax myrtle *(Myrica cerifera).* It is also vegetated with nonnative invasive species including Nepalese browntop *(Microstegium vimineum)* and Chinese privet *(Ligustrum sinense).* Active mining operations are east-northeast of the proposed project boundary, and mining has occurred west and north of the site as well. The proposed project site is in the midst of a heavily mine-affected landscape.

While performing the habitat study (See Report 6) on the project area, biologist Wes Lamon of MEC compiled a list of terrestrial animal species found or expected to be found on or around the project area (Table 6).

An asterisk (*) will denote species that were visually seen, tracks were found, or dens were found.

Table 6. Terrestrial Species Expected to Be Found On or Around the Project Area

Mammals		**Migratory Birds**	
Armadillo	Beaver*	American Crow*	American Robin*
Bobcat*	Chipmunk	Barred Owl	Blue Jay*
Coyote	Eastern Cottontail*	Brown Thrasher*	Carolina Chickadee
Feral Hog*	Gray Fox	Carolina Wren	Common Grackle*
Mice	Opossum	Common Yellowthroat	Dark Eyed Junco
Raccoon*	Rats	Eastern Kingbird	Eastern Towhee*
Skunk	Voles	Eastern Whip-poor-will	Gray Catbird
Weasel	White-tail Deer*	Great Blue Heron*	Hermit Thrush*
		Mourning Dove*	Northern Bobwhite
Reptiles	**Amphibians**	Northern Cardinal*	Northern Flicker
Common 5-Lined Skink*	Frog*	Northern Mockingbird*	Pine Warbler
Eastern Fence Lizard*	Salamander	Red -shouldered Hawk*	Red -tailed Hawk*
Pond Slider*	Newt	Ruby Throated Hummingbird*	Tufted Titmouse
Eastern Box Turtle*	Toads	Turkey Vulture	White-Eyed Vireo
Green Anole*		White-Winged Dove	Wild turkey*
Snakes		Wood Duck	

CHAPTER IV ENVIRONMENTAL CONSEQUENCES

Impacts to Resources

This chapter assesses potential environmental consequences associated with direct, indirect, and cumulative effects of the PA and alternatives.

A cumulative impact, as defined by the Council on Environmental Quality (CEQ) (40 CFR 1508.7), is the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes other such actions. Cumulative impacts could result from individually minor, but collectively significant actions taking place over a period of time. These reasonably foreseeable future actions refer to future action projections, or estimates, of what is likely to take place when a PA is implemented. They are not part of the PA, but are projections being made so that future impacts, cumulative and otherwise, could be estimated, as required by NEPA. The CEQ has defined the resulting effects as direct and indirect. Direct effects are caused by the PA and occur at the same time and place. Indirect effects are also cause by the PA, but are later in time or further removed in distance, yet are still reasonably foreseeable (40 CFR 1508.8). Cumulative impacts are the total effect on a given resource or ecosystem of all actions taken or proposed.

The potential impact is defined as any change or alteration in the existing condition of the environment related to implementation of the alternative, either directly or indirectly. Impacts can be beneficial to the resource (positive) or adverse (negative). For the purpose of this EA, the duration of the potential impacts have been divided into four temporal categories:

Permanent – Everlasting

Long-term – Lasting more than five years

Short-term – Lasting less than five years

None or Negligible – Insignificant and too small to quantify

Short-term impacts (incidental, temporary) may be disruptive and obvious, but they affect the environment for only a limited time, and the environment generally reverts to the pre-project condition. Long-term impacts can range from “low or minor” to “significant” impact levels (see below) and can sometimes result in permanent alterations to the pre-project environment. With long-term impacts, the environment would potentially not revert to pre-existing conditions during and after the life of the proposed project. Long-term impacts are defined as those impacts whose results endure more than five years. Permanent impacts will result in the environment not reverting back to the pre-existing conditions for the life of the project and beyond. For the purpose of this EA, potential impacts levels have been divided into four categories:

Significant – As defined in 40 CFR 1500-1508, impacts that are substantial in severity and therefore should receive the greatest attention in decision-making

Moderate – Impacts which cause a degree of change that is easy to detect but do not meet the criteria for significant impacts

Low / Minor – Impacts which cannot be easily detected and cause little change in the existing environment

None or Negligible – No increased impact would occur to this element under the identified alternative

Physiography and Geology

The PA would allow Best Coal, Inc. to mine the federal coal, as well as adjacent private coal. The BLM geologic and engineering report estimates 868,423 recoverable tons (See Report 4) of federal coal from the New Castle, Mary Lee, and Blue Creek seams of the Mary Lee Coal Group.

The current land use was determined to be timberland and recreational use based on visual inspection, aerial photography, and the Jefferson County land use map prepared by the Soil Conservation Service, U.S. Department of Agriculture. If the PA is implemented, the impacts to the land will be low to moderate and short-term. No additional cumulative impacts to the physiography or geology would be anticipated beyond the modifications to the surface topography and recontouring during the mining phase. This issue will be addressed in the reclamation phase where the project area will be re-graded and contoured to original parameters.

The general sequence of surface mining and reclamation operations would be as follows:

(1) Removal of woody vegetation (trees and shrubs)
(2) Removal of overburden / interburden
(3) Extraction of the coal resource
(4) Backfilling, grading, and contouring of the surface
(5) Establishment of surface drainage patterns
(6) Re-vegetation and establishment of the land to the prescribed post-mining land use

Best Coal will immediately re-vegetate any disturbed areas that are not actively being mined and execute any work that results in exposed earth or slopes leading to the surface waters during periods when significant rainfall is not present. In addition, the first impacted increment and each additional increment will be restored immediately following the mineral extraction operation. Grading will be a constant operation and will be completed on the first increment approximately 12 months after the operation begins. The post-mining land use would resemble its current land use of timberland and will serve as an adequate wildlife habitat.

Air Quality

The PA would allow the surface mine to operate for six years. Fugitive dust from handling raw and processed coal, fugitive dust from roads that are subject to heavy vehicle traffic, and exhaust fumes from those vehicles could affect air quality throughout the life of the mine. These impacts are very localized, minor, and temporary in nature. Best Coal, Inc., through its private lease, has access to sufficient sediment-basin water to control fugitive dust. To suppress fugitive dust emissions, water spray trucks will be used as necessary to dampen roadways. All measures will be taken to ensure air quality is not degraded over the life of the project. The nearest residence is 1/2 mile away and mature timberland is between the 160-acre project area and that residence. Stands of trees will provide an adequate buffer to filter dust; therefore, impacts to the surroundings areas will be low to none and short-term. Because of the limited geographical extent and temporary nature of the project, the potential for cumulative impacts would be minimal and would only occur in the unlikely event that construction activities for other projects occur at essentially that same time and place as Narley Mine No. 3

The EPA, under the Clean Air Act, has developed a complex system of regulations to protect air quality and is authorized to implement provisions of the Clean Air Act. This would assure compliance with related air quality standards. In addition, ASMC would monitor the operation to insure health and safety of the public and protection of the environment through the control of air pollution.

The potential direct GHG-emitting sources at Narley Mine No. 3 consist of combustion sources (equipment) and coal mining (methane releases). Potential impacts associated with the equipment emissions will be mitigated through the use of mining equipment that exceeds the federal standards for pollution control. Indirect GHG-emitting sources include the electricity usage to power equipment. Although coal mining is a potential GHG-emitting source, all tests conducted at the Narley Mine No. 3 indicate undetectable levels of methane from the seam. Therefore, methane emissions from coal mining activities have not been included in the GHG inventory.

The PA is not expected to affect local or regional air quality directly or indirectly because there would be no increase in combustion activities on an annual or short-term basis. The CEQ Guidance recommends that projects with direct emissions of 25,000 metric tons or more of CO_{2e} emissions per year should be analyzed in NEPA documents. The estimated direct CO_{2e} emissions by Narley Mine No. 3 would be well below this threshold.

Since the impact of the new lease area being mined would be offset by the completion of mining in other areas of the current mine area and methane GHG emissions are undetectable in the mine, overall annual emissions due to mining activities are not likely to increase. Narley Mine No. 3 would just be a continuation of the existing Narley Mine; thus, the current emission rates would continue farther into the future. However, it is not anticipated that current local and regional air quality would be impacted by the project. Therefore, the impacts are likely to be low to none and short-term.

As far as cumulative impacts are concerned, the proposed project would extend the mine life. However, these emissions, when added to emissions from other existing and reasonably foreseeable activities in the area, would have a minimal cumulative impact. The proposed project would not likely result in cumulative impacts on an annual basis because an increase in emissions due to annual operations would not occur. As stated above, the estimated direct annual emissions for Narley Mine are well below the 25,000 metric tons/year threshold for major sources as suggested by the CEQ Guidance for analysis in NEPA documents. Therefore, no measureable cumulative effects are expected.

The assessment of GHG emissions, their relationship to global climatic patterns, and the resulting impacts is an ongoing scientific process. It is currently not feasible to know with certainty the net impacts from the PA on climate – that is, while BLM actions may contribute to the climate change phenomenon, the specific effects of those actions on global climate are speculative given the current state of the science. The BLM does not have the ability to associate a BLM's action contributing to climate change with impacts in any particular area and the science to be able to do so is not yet available. The inconsistency in results of scientific models used to predict climate change on regional or local scales, limits the ability to quantify potential future impacts of decisions made at this level and determining the significance of any discrete amount of GHG emissions is beyond the limits of existing science. Because of the vast number of GHG sources worldwide, it's impossible to determine the degree of impact of one project's emissions on global climate change. However, we can acknowledge that certain activities may contribute to climate change through GHG emissions. When further information on the impacts to climate change is known, such information would be incorporated into the BLM's planning and NEPA documents as appropriate.

Cultural Resources

According to 36 C.F.R. 800 Subpart A [excerpt] ("Purposes."), "Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties and afford the Council a reasonable opportunity to comment on such undertakings, and also seeks to accommodate historic preservation concerns with the needs of federal undertakings through consultation among the agency official and other parties with an interest in the effects of the undertaking on historic properties, commencing at the early stages of project planning. The goal of consultation is to identify historic properties potentially affected by the undertaking, assess its effects and seek ways to avoid, minimize or mitigate any adverse effects on historic properties."

The phase 1 cultural resource assessments performed by PELA within and around the project area that found that no direct or indirect impacts to known cultural or historic properties listed, eligible for listing, or potentially eligible for listing on the NRHP have occurred within the project area. SHPO concurred with PELA's findings, and no concerns were identified through consultation and site investigation.

However, direct and indirect impacts to currently unknown sites may still occur if a buried site was not discovered during the archaeological survey. If an unknown site is discovered through any aspect of this action or future actions with the mine; those activities causing disturbance to

the site must cease until additional consultation among the Alabama State Historic Preservation Officer (SHPO), Native Americans, and the BLM occurs. Therefore, it is unlikely that any adverse impacts would occur to any cultural resources; thus, the level of impacts and duration would be low to none. No additional cumulative impacts to archaeological or cultural resources would be anticipated beyond the potential direct and indirect impacts previously mentioned.

Farmlands (Prime or Unique)

The primary soil within the project boundary is the Montevallo – Nauvoo Association, Steep, 2% - 55%. Other soils present within the subject area are classified as Palmerdale Complex, Steep, 15% - 60%; and Nauvoo fine sandy loam, 8% - 15%. None of these soils are classified as prime farmland soils according to the *Jefferson County, Alabama Soil Survey* published by the U.S. Department of Agriculture Soil Conservation Service. Relatively steep slopes and erosive nature of the project area soils preclude their use as crop farmland. Therefore, it is unlikely that any adverse impacts would occur to any prime or unique farmland; thus, the level of impacts and duration would be low to none. Additionally, no cumulative impacts to farmlands would be anticipated.

Native American Religious Concerns

No Native American religious concerns were identified through consultation and the PELA 2003, 2009, and 2012 cultural resources assessments (Reports 1, 2, and 10). No direct and indirect impacts to known religious activities by Native Americans are anticipated. However, if any artifacts, prehistoric cultural material, human remains, or archaeological features are discovered through activities associated with the Narley Mine No. 3 site, those operations must immediately cease and the BLM and Alabama SHPO alerted to the situation. The BLM will then contact those Tribes and Nations for consultation with SHPO and BLM. Therefore, it is unlikely that any adverse impacts would occur to any Native American religious concerns; thus, the level of impacts and duration would be low to negligible. Furthermore, no cumulative impacts associated with Native American religious concerns would be anticipated.

Threatened, Endangered, and Candidate Species

A written request for concurrence on the project activities and identification of federally listed species and critical habitat in the project area was submitted to the Daphne Ecological Services Office of the USFWS on September 28, 2012 by MEC. The USFWS responded and requested additional information regarding the project. The comments by USFWS consisted of providing 11 species that may occur within the proposed project area. In addition, a request was made for a more detailed description of the proposed project, including a site plan, map of operations, site erosions control plan, and a habitat assessment performed by a qualified biologist. The requested information was provided to the USFWS by MEC on March 20, 2013 (See Appendix II – Consultation Letters – USFWS).

Wes Lamon of MEC, a qualified biologist, reviewed the USFWS threatened, endangered, proposed, and candidate species list for Jefferson County to determine whether such species might occur in the project vicinity. In addition, the Alabama Natural Heritage Section database

that contains numerous records of sensitive species in Alabama was queried to provide a list of any special status species and habitats in or near the project area (See Table 2). MEC then preformed a biological habitat assessment on the proposed Narley Mine No. 3 project area (See Report 6). The habitat assessment looked for habitat and presence of species federally listed as endangered, threatened, proposed or candidates for listing. The habitat assessment area covered approximately 228 acres of which 160 acres have federal coal. The inspection results are in Table 3 and Table 4.

In addition to conducting the habitat assessment, Best Coal further elaborated on the concerns mentioned by the USFWS. In order to help reduce or eliminate any direct impacts to Trouble Creek, Best Coal will be leaving a minimum of 100 foot vegetated buffer zone between the nearest portion of the Narley No. 3 project boundary and Trouble Creek. Therefore no additional fill impacts are proposed for Trouble Creek.

In addition, Best Coal will be adhering to the ASMC Administrative Code, Chapter 880-X-10C, Performance Standards Surface Mining Activities, and will develop an erosion control plan tailored to the mining operation that will be submitted and reviewed by qualified professionals from the ASMC. The mine plan will closely adhere to the protective measure in the ADEM regulations sections 335-6-10.06 (a) and (c) to maintain minimum water quality conditions applicable to all state waters as stated within the approved ADEM NPDES permit AL0075752 (See Appendix 7).

Furthermore, the NPDES permit has six specific sediment basins that will address and filter the runoff from this project prior to entering into a flow path or overland flow that will ultimately drain into Trouble Creek, which eventually drains into the Locust Fork of the Black Warrior River. Drainage of the Locust Fork, which lies a little over a mile northwest of the proposed project boundary, at Trouble Creek is approximately 870 square miles. The sediment basins are identified as basin 001, 002, 002A, 003 031 & 032. All of the sediment basins will be constructed in the outer perimeter of the proposed mine site. The sediment basins will have storm detentions to absorb any increase of surface run-off, if it should occur. The mining operation will not alter the drainage area of Trouble Creek. Therefore, the overall quantity of flow to Trouble Creek is not likely to be adversely affected. The sediment basins will be designed for a 10 year 24 hour stormwater event at the primary spillway with a design of a 25 year 6 hour stormwater event at the emergency spillway. All of the sediment basins are proposed as permanent water impoundments for fish and wildlife habitats.

Best Coal will adhere to the current requirements for the inspections of BMP that are in strict accordance with both ASMC and ADEM rules and regulations. Additionally, Best Coal will immediately re-vegetate any disturbed areas that are not actively being mined and execute any work that results in exposed earth or slopes leading to the surface waters during periods when significant rainfall is not present. In addition, the area to be impacted will be restored immediately following the mineral extraction operation.

MEC has evaluated Trouble Creek and performed a habitat assessment on the area (See Report 9) and found that the portion of Trouble Creek downstream of the proposed mine site is impounded from previous pre-law mining operations. Additionally, Trouble Creek has an

excessive amount of sedimentation within the tributary created from the current off-road vehicle utilization from both hunting and recreational uses. The stream impairments have contributed to the absence of critical habitat and the likely existence of federally listed threatened and endangered species. No evidence was found for the presence or possible presence of any species federally listed as endangered, threatened, or of concern within or along Trouble Creek.

In addition, consultation was conducted with the ADCNR. ADCNR indicated that the area of interest has not had a biological survey performed at the delineation location, by their staff or any individuals referenced in their database. Therefore, ADCNR could not make an accurate assessment to the past or current inhabitancy of any federal or state protected species at the location. ADCNR recommended that the USFWS be contacted for section 7 consultations (See Appendix II – Consultation Letters – ADCNR).

On April 22, 2013, the USFWS concurred that the PA is not likely to adversely affect endangered and threatened species. On June 27, 2013, BLM consulted with the USFWS. BLM was informed that consultation had already occurred with MEC, and that the section 7 consultation requirements had been met and no additional information was needed. The correspondence with the USFWS can be seen in Appendix II – Consultation Letters – USFWS.

Based on the previously discussed information and the measures taken by Best Coal, Inc. to minimize any negative effects associated with the PA, the potential for adverse impacts off-site or to habitat and species federally listed as endangered or threatened are low to none and short-term. No additional cumulative impacts to the threatened, endangered, or candidate species would be anticipated beyond the potential direct or indirect effects mentioned earlier.

Soil Values

The primary soil within the project boundary is previously discussed in the Prime Farmland portion of the report and can be seen in Appendix I – C – Soil Map. Due to the steep slopes and lack of topsoil, the SMCRA allowance for a topsoil waiver will be utilized and a homogenous mixture of the overburden will be used as the growing medium. In order to receive a topsoil waiver, the SMCRA requirements state that the substitution soil must be of equal or greater quality when compared to the native topsoil. Most surface mining operations in Alabama utilize the homogenous mixture of mine spoil for the growing medium to re-establish vegetation of the mine area. Direct and indirect impacts, such as soil erosion, will occur through the excavation of the overburden material. However, the proposed impacts will be low to moderate and short-term. No additional cumulative impacts to soil resources would be anticipated beyond the potential incremental increase in soil loss as described above.

Soil erosion will be controlled through proper surface mining and reclamation techniques. Removal of vegetation ahead of the active mining operations will be limited so as not to subject excessively large areas to the effects of erosion. Seeding of the re-graded substitute soil will be done at the most appropriate time to ensure the best chance for vegetation success. Straw mulch will be applied to reseeded areas. Contour furrowing and terracing on steeper slopes will help limit soil erosion.

Water Quality, Ground and Surface

Groundwater

Little groundwater is associated with the New Castle, Mary Lee, and Blue Creek seams in the vicinity of the Narley Mine No. 3. The target coal seams would not be considered reliable sources of domestic groundwater based on quantity and quality of the contained groundwater. Overlying water-bearing strata are of limited extent and similarly contain water of marginal quality. The extraction of these coal seams and the destruction of any localized water-bearing strata above the coal would not measurably affect the quantity or quality of shallow groundwater resources in the surrounding undisturbed area.

Groundwater below the Blue Creek seam, the deepest target coal seam at the proposed mine site, is primarily in sandstone immediately under this coal bed. Local drill data show this interval to be about 15 to 23 feet thick. The water-bearing sandstone zone may correlate stratigraphically with the Lick Creek Sandstone Member, a regional aquifer in parts of Marion, Walker, and Winston Counties. However, this interval is much thinner, closer to the surface, and has a much smaller recharge area at this site and may be only a shallow outlier of the regional aquifer.

Narley Mine No. 3 groundwater is of lower pH, higher mineralization, lower or higher specific conductivity, and higher sulfate concentrations than water produced from the regional Pottsville Formation. Therefore, it is recommended that the local groundwater be treated or filtered prior to domestic use. Consequently, the local groundwater use for residents nearby is presumed to be minimal.

Direct and indirect impacts to groundwater could occur due to mining of the project area. Impacts associated with mining the area are destruction of water-bearing strata that have limited measured capacity to reliable supply any useable amount of groundwater to wells. Mining impacts to the ground water are anticipated to be low to moderate and short-term. No additional cumulative impacts to groundwater resources would be anticipated beyond the potential direct and indirect impacts previously discussed.

Surface Water

Although the potential exists for adverse impacts to water quality associated with the surface water as a result of disturbed soils eroding due to wind and/or water flowing into nearby ephemeral washes. The effects on the water quality will be greatly reduced and/or eliminated through the construction of sediment basins and the implementation of best management practices that will aid in catching the sediment before it is allowed to enter nearby streams.

Any surface runoff from the proposed Best Coal, Inc. - Narley Mine No. 3 project area will be intercepted by a sediment control system which includes an appropriate combination of ditches and sedimentation ponds. The ADEM NPDES Permit AL0075752 provides strict water quality restrictions that control the quality of water that will be allowed to be discharged into the nearby streams. Best Coal, Inc. has not experienced a non-compliance discharge from any of its basins associated with the NPDES Permit AL0075752 since March 15, 2011. In addition, there are no issues or concerns brought forth relating to the past mining operations in the area according to

their past compliance records. If an issue arises, Best Coal, Inc. will address the matter immediately with the appropriate treatment necessary to eliminate the problem. Best Coal, Inc. will by all means possible prevent any negative impacts from occurring as it relates to the water quality, and for that matter, all critical and non-critical elements previously mentioned. Therefore, impacts to the surface water are anticipated to be low to moderate and short-term. No significant industrial or residential development would be expected for the foreseeable future in the area that may affect the water quality. Therefore, no additional cumulative impacts to surface water resources would be anticipated beyond the potential direct and indirect impacts previously discussed.

Socio-economic Values

The mine would provide economic support to the surrounding area for six additional years. The jobs of the mine employees, approximately 31 at an average of $90,000 per year including benefits, and the jobs of suppliers such as fuel, equipment, consultants, etc., approximately 20 at $75,000 per year, sales of materials such as fuel, oil, parts for equipment, trucking contractors, etc., at approximately $15,000,000 per year would end six years earlier if the lease is not granted. The impacts of issuing the federal coal lease on the surrounding economy would be temporary, lasting until reclamation of mining activities are completed. Individuals involved in the operation of the mine and sales will continue to earn the above average salary for another six years. These moderate, temporary impacts to individuals would last as long as the mining operation continues. Impacts to socio-economic values across Jefferson County will be minor. Therefore, the overall socio-economic impact would be positive with the level of impact being low to moderate and short-term. No additional cumulative impacts to socio-economic conditions would be anticipated beyond the beneficial increase in regional employment opportunities and tax base and the incremental increase in housing and other public service demands as mentioned previously.

Noise

Approval of the lease to allow coal recovery by surface mining methods will continue current noise levels for approximately six more years. The mine will operate two shifts a day. The 160-acre tract is 1/2 mile from the nearest resident and domesticated animals and is covered in mature forest which serves as a buffer for the noise. Noise pollution will also be minimized through the proper care and maintenance of the equipment. The maintenance program keeps the equipment in sound running condition thereby decreasing the amount of ambient noise generated by the surface mining operations. The impacts associated with noise would be minor and short-term. No additional cumulative impacts to sensitive receptors from an incremental increase in noise levels would be anticipated beyond the localized short-term increase in mining and equipment related noise sources during the project operation.

Visual Resource

The proposed area is rural timberland with vistas typical of that type of landscape and no special viewing areas. With the closest residence over 1/2 half mile away and no special viewing areas, the project area will only be visible from vantage points in its immediate vicinity or from aircraft. The visual impacts associated with the mining of the area would be minor to none and

short-term. No additional cumulative impacts to visual resources would be anticipated beyond the potential direct and indirect impacts mentioned.

Wetlands and Floodplains

Narley Mine No. 3 will impact 0.01 acres of wetlands, 4,080 linear feet of intermittent streams, 7,106 linear feet of ephemeral streams, and a couple acres of riparian buffer located along the stream channels. The project boundary is not located within a floodplain as seen in Appendix – I – I; therefore, no floodplains will be impacted. The wetland, streams, and riparian habitat will be reconstructed as required in the ACOE Nationwide Permit (NWP) 21, Permit SAM-2010-01027-CHE and Permit SAM-2012-00615-CMS as detailed in Appendix II – Consultation Letters – ACOE. These permits require mitigation of 16,728 stream credits and 0.03 wetland credits. Credits will be obtained by constructing 4,120 linear feet of intermittent streams and 7,700 linear feet of ephemeral stream as compensatory mitigation for the impacts of the proposed project, which will result in the creation of 18,478 stream mitigation credits at the project site as seen in the mitigation plan in Report 8. This is a net gain of 1,750 restoration credits. An additional 5,506 credits will be generated by the establishment of riparian buffers along upgraded intermittent stream channels. In all, 9.4 acres of riparian buffer habitat will be reconstructed along the stream channels. Furthermore, 0.03 wetland credits will be purchased from Big Sandy Mitigation Bank in order to fulfill the mitigation requirements. The impacts to wetland and riparian values may be considered minor and short-term because of mitigation requirements associated with the ACOE NWP 21 replacing riparian areas. A detailed description of the stream, wetland, and riparian habitat reconstruction can be seen in Report 8. No additional cumulative impacts to wetlands or floodplains would be anticipated beyond the potential direct and indirect impacts mentioned previously.

Wildlife and Vegetation

The extraction of coal at Narley Mine No. 3 could potentially affect the wildlife in and around the project area. The response of wildlife to mining and post-mining reclamation is based on the wildlife species in question, their habitat requirements, the presence of a source population to colonize the mine site, and the structure and composition of the vegetation on the mine site post-reclamation and in the surround area. Wildlife response can be characterized in a variety of ways, including relative abundance on the site, survival, reproduction, movements, foraging behavior, and other behavioral traits. The wildlife community can be broken down into the following groups: endangered species, birds, mammals, reptiles, amphibians, fish and aquatic species.

The potential impacts to threatened or endangered species have previously been discussed in a separate section; therefore, refer to the “Threatened, Endangered, and Candidate Species” section in Chapter 4 for more information.

The next group up for discussion is that of the birds. The effects on the bird communities primarily occur initially with the removal of vegetation in preparation for mining. The project area that will be disturbed is relatively small when compared to the potential bird habitat available nearby. Therefore, the bird population is expected to move to adjacent areas during

mining and is expected to return after post-reclamation has been completed. In addition, on January 10, 2001, Executive Order 13186 was put into effect. It requires federal agencies to consult with USFWS to identify where agency actions may have a measurable negative effect on migratory bird populations, focusing on species of concern, priority habitats and key risk factors. It states that the agency shall develop and use principles, standards, and practices that will lessen the amount of unintentional take, developing any such conservation efforts in cooperation with the USFWS. The complete list of migratory birds covered under this order is stated in 50 C.F.R. 10.13. All necessary precautions and steps required under the Executive Order 13186 will be implemented and utilized in order to minimize the potential of any adverse effects on the bird community. After site investigation and consultation, the impacts to the bird community are expected to be short-term lasting until the post-reclamation process is completed and re-vegetation has occurred. The level of impact should be temporary. While potential habitat may be removed initially, there will be a low adverse impact due to the post-reclamation that will follow.

The potential impacts to the mammal, reptile, and amphibian groups will be similar to that of the bird community in that the primary effects will occur initially with the removal of vegetation in preparation for mining. These groups are expected to temporarily relocate to the adjacent areas until post-reclamation has been completed. At which time, it is anticipated that they will migrate back into the project area. The potential impacts are anticipated to be the same as that of the bird community, which is short-term with a low level of adverse impact.

The final group is that of the fish and aquatic species, which have been covered to some degree previously. The main concern to this group will be associated with soil erosion and stream impacts. The discussion of water quality in relation to the downstream aquatic species has already been elaborated on. However, the water quality that will be allowed to discharge into nearby streams will be strictly monitored and will abide by the parameters established by ADEM in the NPDES permit issued to the Narley Mine, which takes into account the water quality of the nearby streams. Therefore, the discharge water quality will be comparable to that of the Locust Fork water quality. There will likely be some impacts initially that will be linked to the removal of vegetation and streams in preparation for mining. However, soil erosion into nearby tributaries and drains will be negligible due to the previously mentioned best management practices and sediment basins that will be implemented and constructed prior to any disturbance taking place. In addition, as elaborated on further detail in the mitigation plan, new streams and wetlands will be constructed that will exceed the initial quantity before mining. Therefore, the potential impacts are anticipated to be short-term with a low level of adverse impact.

As a whole, the wildlife in the project area could be affected by increased noise, human activity, and habitat fragmentation. Wildlife use of the mine area would be displaced during the term of mining and until such time that reclamation is completed. However, this interruption should have a low to negligible impact to the wildlife community in that the lease area is relatively small in comparison to the habitat available in adjacent areas. The re-habitation of wildlife is expected to commence immediately following reclamation, and the impact duration to the wildlife would be short-term. Potential cumulative impacts to terrestrial wildlife would primarily involve the incremental habitat fragmentation. The continuation of the Narley Mine into the Narley Mine No.3 project area could potentially displace some terrestrial wildlife species that are more

susceptible to disturbances compared to those that are more likely to habituate to human activities and surface disturbances. However, the incremental cumulative impacts to wildlife would not be expected to significantly affect these populations and would be short-term.

Best Coal will immediately re-vegetate any disturbed areas that are not actively being mined and execute any work that results in exposed earth or slopes leading to the surface waters during periods when significant rainfall is not present. In addition, the first impacted increment and each additional increment would be restored immediately following the mineral extraction operation. Grading will be a constant operation and will be completed on the first increment approximately 12 months after the operation begins. The post-mining land use would resemble its current land use of timberland and will serve as an adequate wildlife habitat.

To aid in erosion control and bank stabilization, temporary native vegetation will be planted. No invasive non-native species will be used. A combination of hardwoods and pine species would be planted. The particular species to be planted would reflect what is currently found within the project area as described in the Chapter 3 - Wildlife and Vegetation section. Since the area will be restored to a condition similar to its current state, impacts to vegetation will be moderate to major but short-term with no additional cumulative impacts anticipated. Impacts will last until the planted vegetation has matured enough to support the wildlife values that existed prior to mining, which is expected to be five years or less. No additional cumulative impacts to vegetation would be anticipated beyond the potential direct and indirect impacts mentioned previously.

Environmental Justice

Title IV of the Civil Rights Act of 1964 and related statutes ensure that individuals are not excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal assistance on the basis of race, color, national origin, age, sex, or disability. Executive Order 12898 on Environmental Justice directs that programs, policies, and activities not have a disproportionately high and adverse human health and environmental effect on minority and low-income populations. The 2006-2010 U.S. Census Quick Facts states that 15.5% of people in Jefferson County, Alabama are below poverty level. Locally, the impacts to the human health of any minority or low-income populations will be minor to none and short-term. Since there are no residences within one-half mile of the proposed project boundary, the impacts generated by the mine operation to the surrounding area will also be minor to none and short-term. No additional cumulative impacts related to environmental justice would be anticipated beyond the potential impacts mentioned previously.

Social Values and Health and Safety

Possible impacts to the human environment and health from the action of approving a lease to recover federally owned coal by surface mining methods could consist of pollutants being emitted by equipment recovering the coal and the pollution of the local water resources, both of which have been discussed in more detail previously.

In order to insure public health and safety around the project area, signs will be posted at all entrances to the mine area and on the perimeter of the permit area. The signs posted in these areas will include a description of the activities being conducted, and the name, address, and telephone number of the company responsible for such activities. Best Coal, Inc. complies with all Mine Safety and Health Administration regulations in protecting its employees from hazards and unsafe conditions.

Impacts on the social and infrastructure systems of the local communities as well as the impacts to the public health as a result of approving the lease to conduct surface mining operations will be minor and temporary. Impacts on the state and national level will be none. No additional cumulative impacts to human health and safety and social values would be anticipated beyond the potential impacts previously discussed.

AGENCIES AND PERSONS CONSULTED

List of Preparers

Name	Title
Leslie G. Stephens, PLS, PE	Mining Engineer – PERC
Brad Youngblood, EI	Civil Engineer – MEC
Randall A. Mills, RPG	Mining Engineer/Geologist – BLM
Gary Taylor	NEPA Coordinator – BLM

CONSULTATION AND COORDINATION

Specialist Name	Title, Organization
William J. Pearson, Larry E. Goldman	Field Supervisor, U.S. Fish and Wildlife Service
Jon Hornsby	Environmental Coordinator, Alabama Department of Conservation and Natural Resources
Terry L. Lolley	M.A., R.P.A., Archaeologist, PE LaMoreaux & Associates, Inc.
Elizabeth Ann Brown	Deputy State Historic Preservation Officer, Alabama Historical Commission
Ashley Peters	Database Manager, Natural Heritage Section, State of Alabama Department of Conservation and Natural Resources
James J. McHugh	Wildlife Diversity Coordinator, State of Alabama Department of Conservation and Natural Resources
Joseph Graham, III	State of Alabama Registered Forester, J.H. Graham, LLC
	U.S. Department of Agriculture, Soil Survey of Jefferson County, Alabama
Cleo Stubbs	Registered Professional Soil Classifier, Delta Natural Resources, Inc.
Randall Mills, John Sullivan, Alison McCartney	U.S. Department of the Interior, Bureau of Land Management
Larry Emmons, Brian Hicks, Nicholas Grant	U.S. Department of the Interior, Office of Surface Mining Reclamation and Enforcement

References

1. *Alabama and Mississippi Proposed Resource Management Plan and Final Environmental Impact Statement*. August 2008 Bureau of Land Management Eastern States, Jackson Field Office

2. *Alabama Department of Environmental Management 2010, Water Quality Report to Congress 305(b) (The Clean Water Act), Chapter 5 Groundwater Protection Programs*. http://adem.gov/programs/water/waterquality.cnt

3. *Council on Environmental Quality, Regulations for Implementing NEPA Parts 1500-1508*. http://ceq.hss.doe.gov/nepa/regs/ceq/toc_ceq.htm

4. *Groundwater Information Manual: Coal Mine Permit Applications - Volumes I and II* United States Department of Interior, Office of Surface Mining Reclamation and Enforcement

5. *Hydrologic Assessment, Eastern Coal Province Area 23, Alabama,* United States Department of Interior Geological Survey, Water-Resources Investigations Open-File Report 80-683

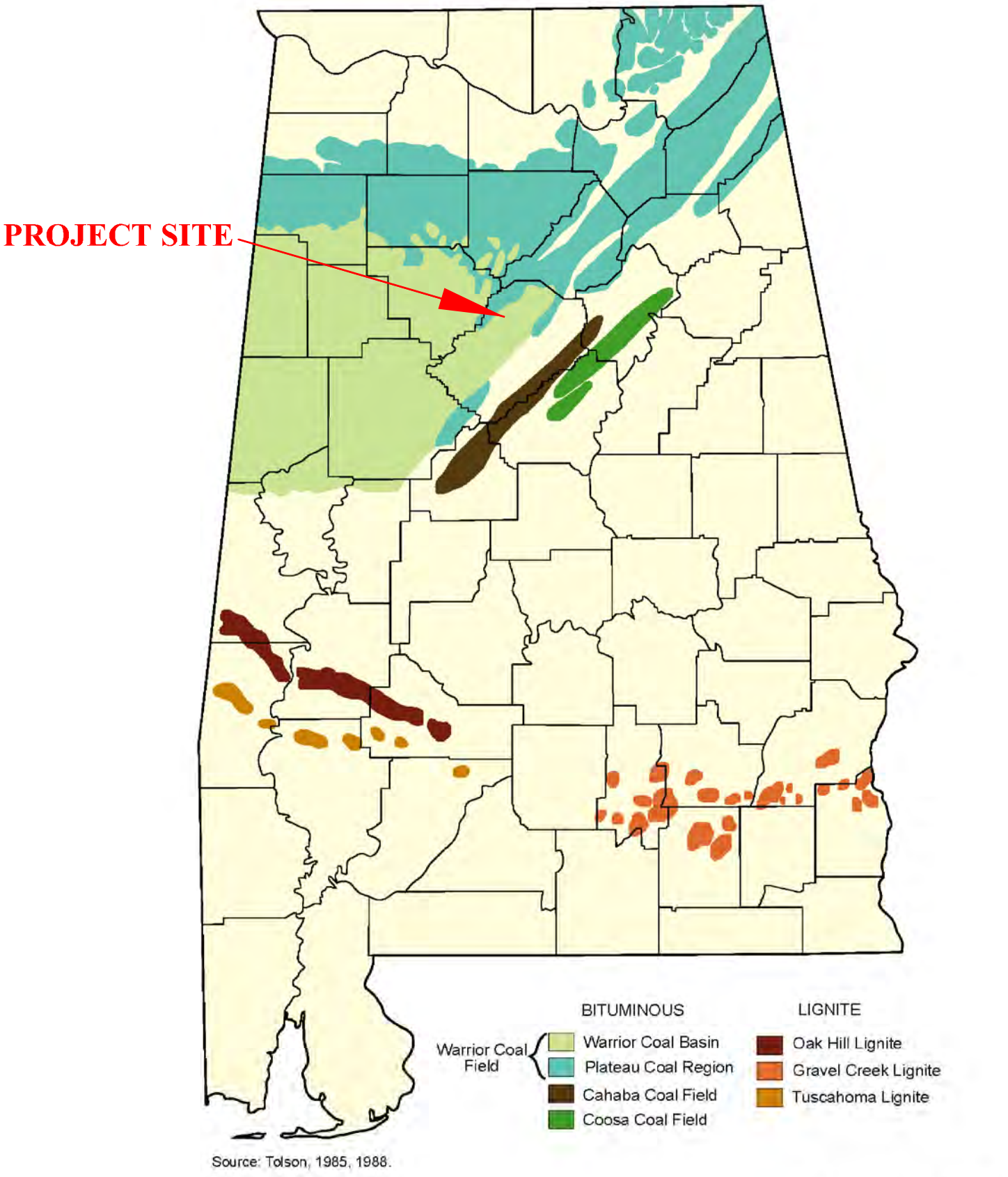
6. *Soil Survey of Jefferson County, Alabama*, 1982 United States Department of Agriculture Soil Conservation Service

7. *U.S. Census Bureau, State and County Quick Facts for Gardendale, AL.* http://quickfacts.census.gov/qfd/states/01/0129056.html

Appendix I — Maps

Appendix A — Location Map with Alabama Coal Fields

ALABAMA COAL RESOURCES

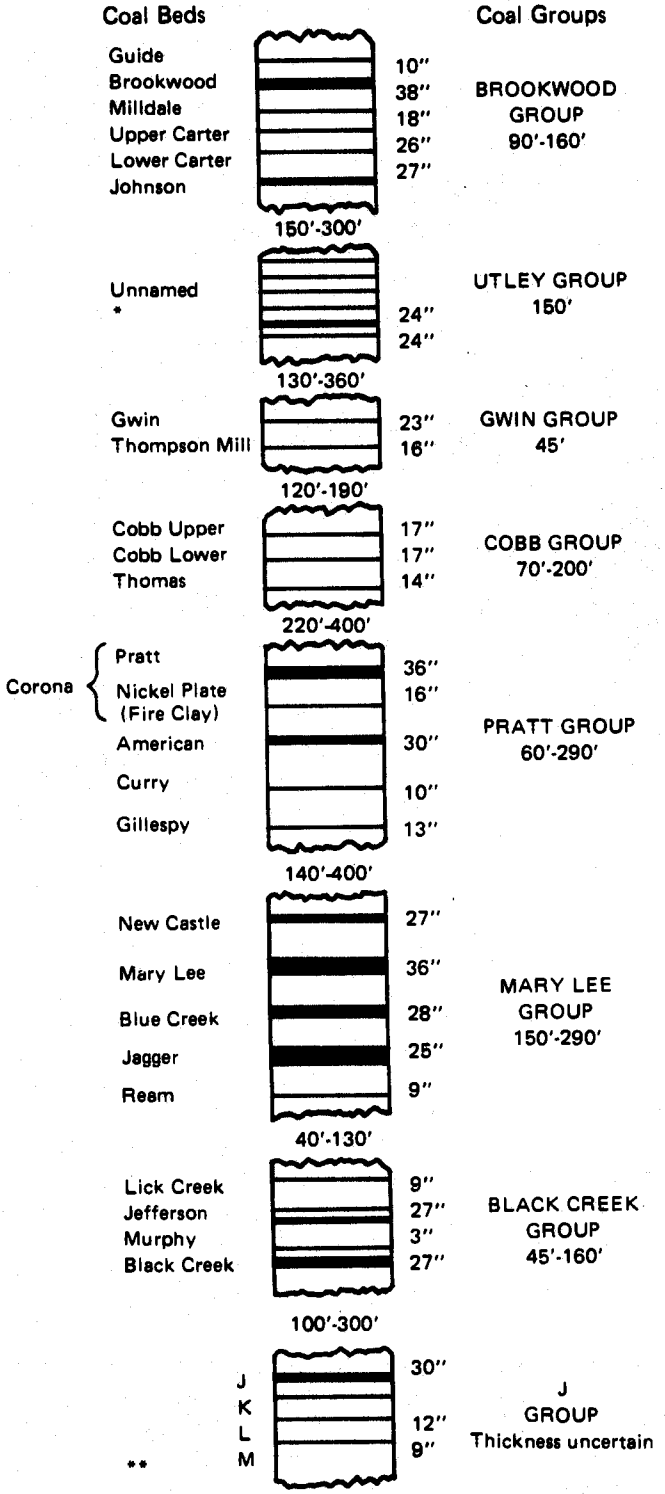


Source: Tolson, 1985, 1988.

Produced by the Dept. of Geography
College of Arts and Sciences
The University of Alabama

Appendix B — Warrior Coal Basin, Columnar Section

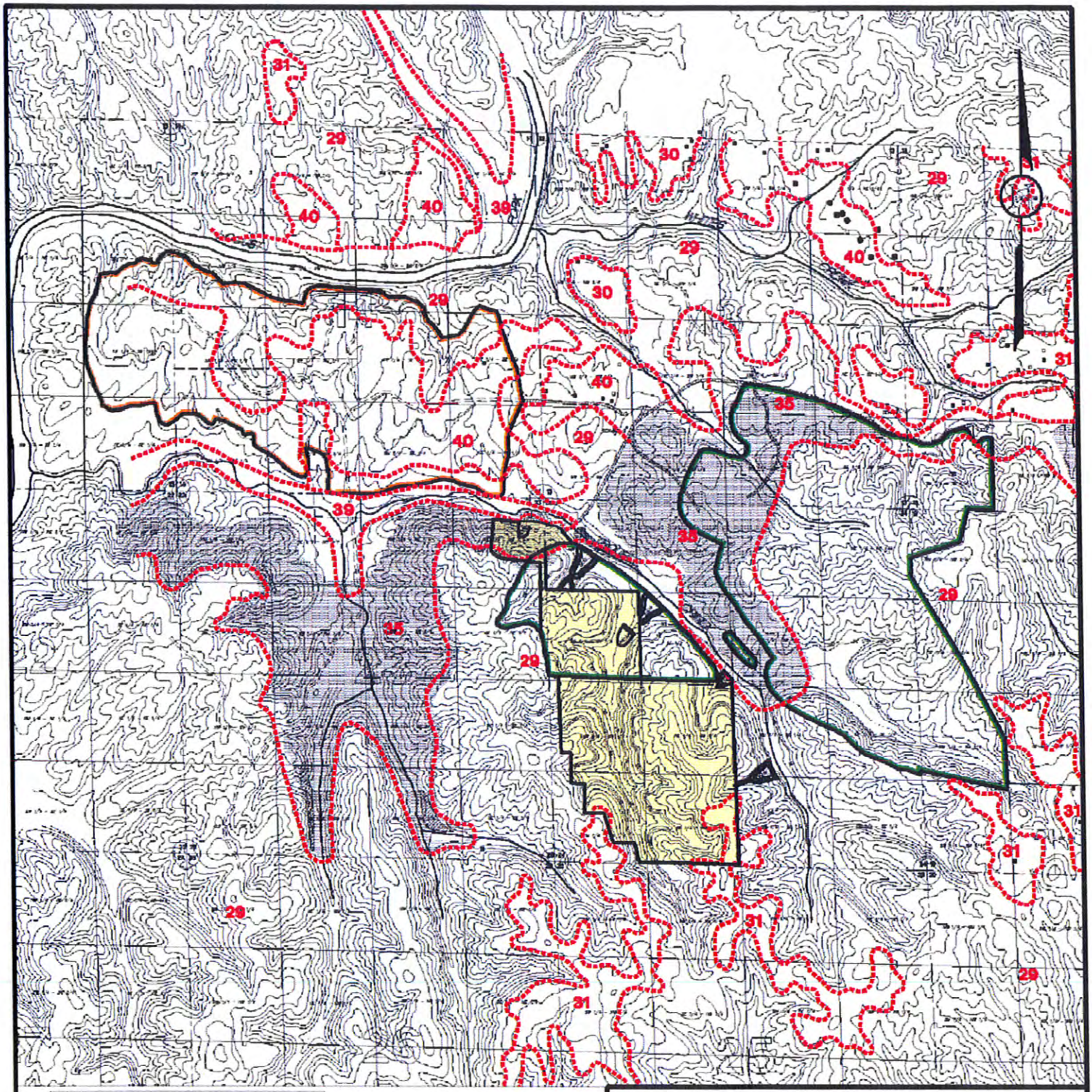
WARRIOR COAL BASIN
GENERAL COLUMNAR SECTION



*The Clements coal bed, which probably occurs in the upper part of the Utley group, has been mined extensively in the Warrior coal basin. Its exact stratigraphic position, however, is unknown.

**J group coal beds are probably equivalent to the Polecat, Bear Creek, Buttahatchee, and Bull Mountain beds. See text.

Appendix C — Soil Map



LEGEND

Permit Area
P-3850
P-3932
Soil Increment Line
29 Soil Text

MAP SYMBOL	SOIL NAME & SLOPE RANGE	
29	Montevallo-Nauvoo Association, Steep	2%-55%
31	Nauvoo Fine Sandy Loam	8%-15%
35	Palmerdale Complex Steep	15%-60%

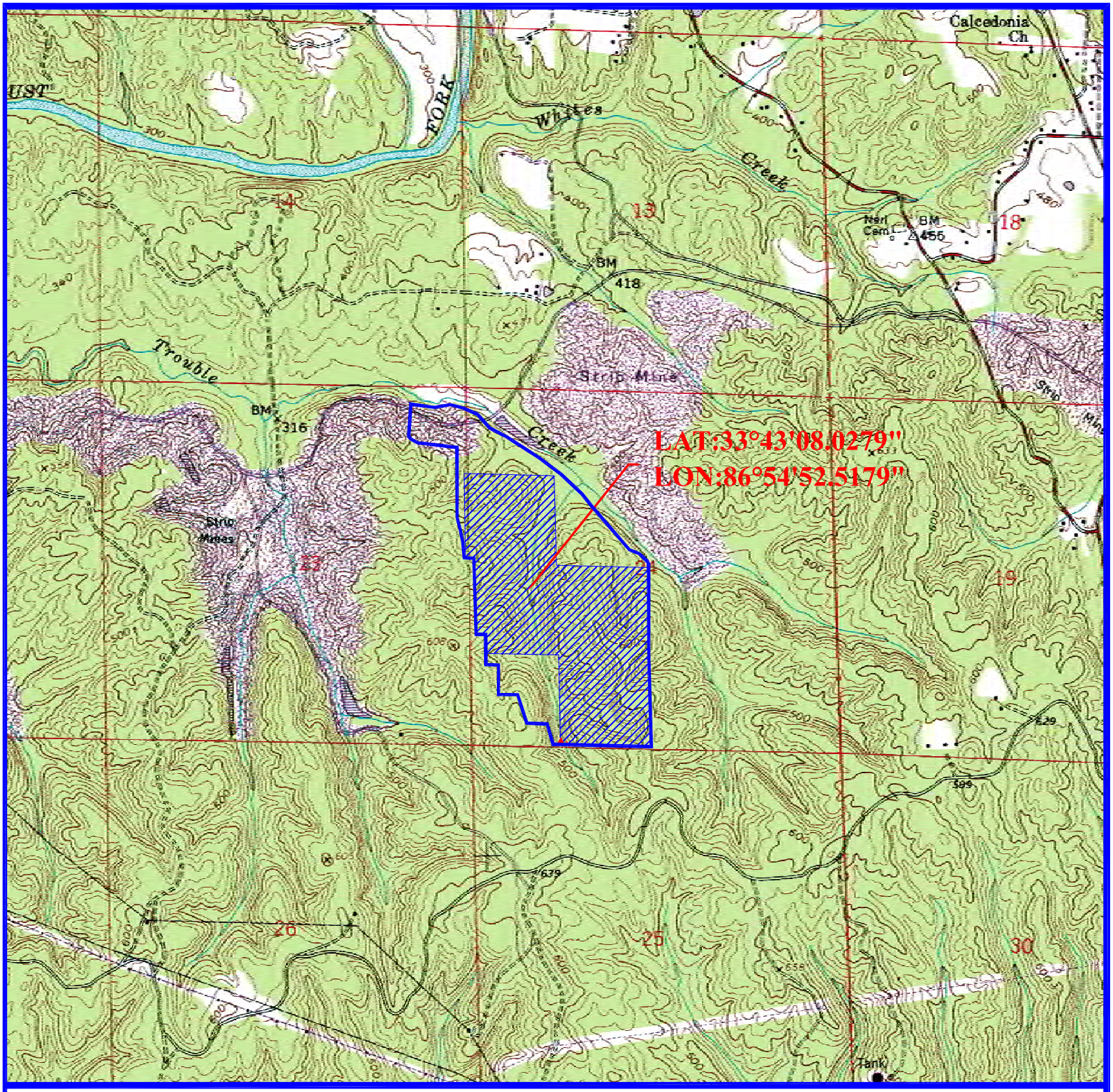
Note: None of the soils listed above are shown as Prime Farmland soils by the Jefferson County Soil Survey.

PERC ENGINEERING CO., INC.

SOIL MAP
BEST COAL, INC.
NARLEY MINE NO. 3
Sections 13, 23 & 24, Township 15 South, Range 4 West,
Sections 18, Township 15 South, Range 3 West
Jefferson County, Alabama

DRAWN BY: DWG. NAME:	DATE: 11/14/2011
APPROVED BY:	SCALE: 1"=2000'

Appendix D — Project Area Map



SCALE: 1" = 2000'

BEST COAL, INC.
NARLEY MINE NO. 3

Project Area Map

N
W E
S

Federal Coal Lease Area of Interest:

SW 1/4 of the NW 1/4
N 1/2 of the SW 1/4
SE 1/4 of the SW 1/4

SECTION 24, TOWNSHIP 15 SOUTH, RANGE 4 WEST
ALL IN JEFFERSON COUNTY, ALABAMA
AS FOUND ON THE BROOKSIDE, AL. USGS QUAD.

Proposed Permit Boundary

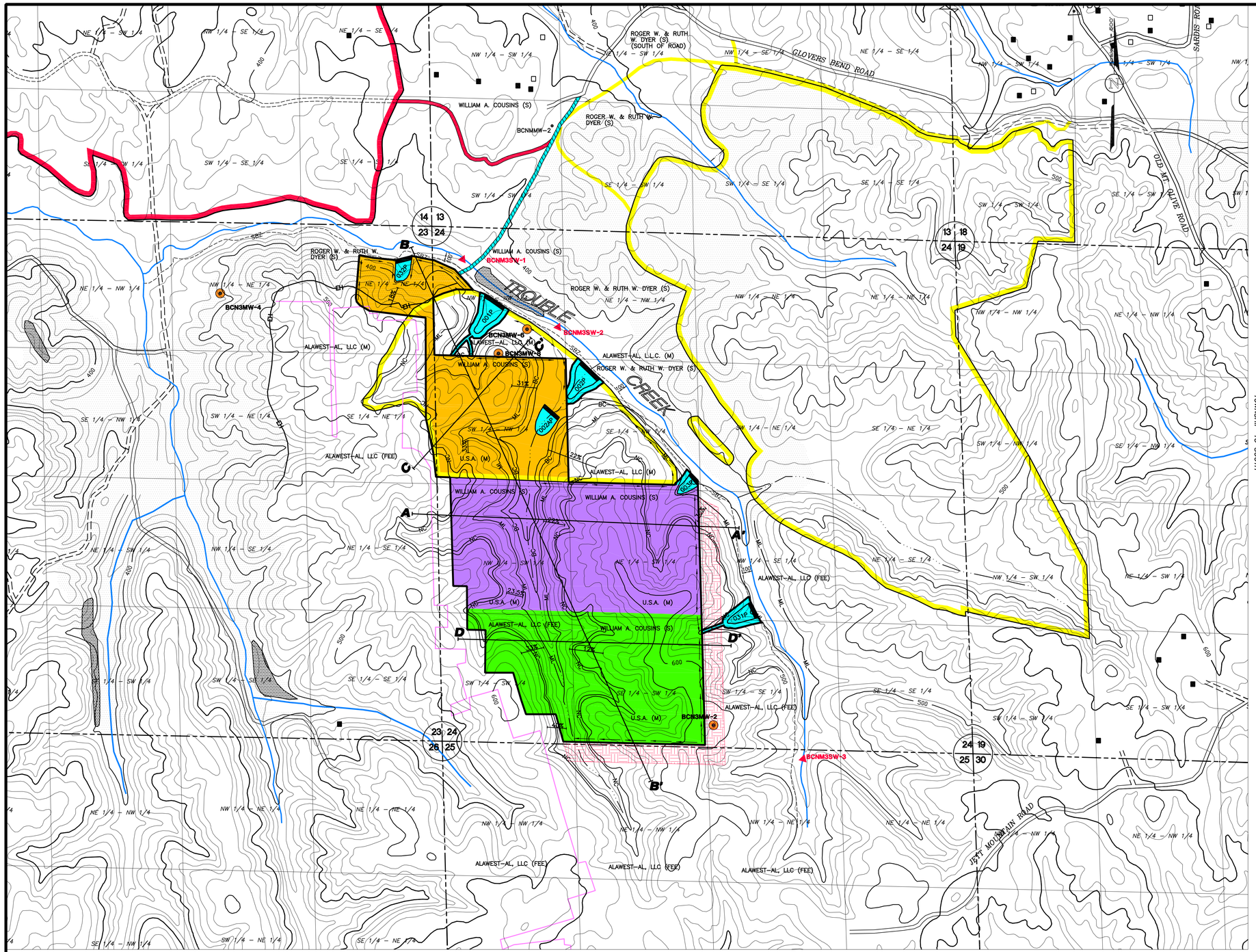
Federal Coal Lease Property

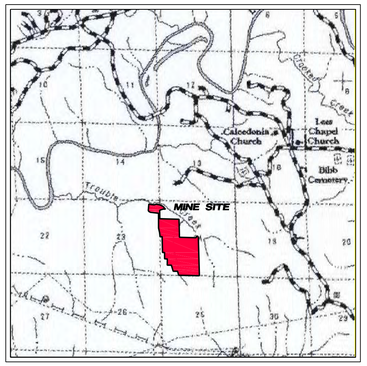
mcgehee engineering corp
post office box 3431
jasper, alabama 35502-3431
telephone: (205) 221-0686 fax: 221-7721
email: staff@mcgehee.org

Latitude: 33°43"08" N
Longitude: 86°54"52" W

Date: 10/25/2012
Drawn By: B.W.Y

Appendix E — Permit and Vicinity Map





VICINITY MAP
Scale: 1"= 1 Mile

PERMIT AREA
Scale: 1"= 500'
Contour Interval = 20'

Base map – Brookside Alabama United States Geological Survey 7.5 Minute Quadrangle Map.

LEGEND

- Permit Boundary
- Previously Surface Mined by Others
- Private Impoundment
- 600 Surface Contour
- 001 Sediment Basin
- Drainage Course
- Perennial Stream
- 10% Land Slope Measurement
- Property Line other than Forty Line
- M Mineral Ownership Line other than Forty Line
- Diversion Ditch
- Occupied Dwelling
- Unoccupied Dwelling (Barn, Shed, etc..)
- Primary Road
- Ancillary Road
- County Road (Paved unless otherwise designated)
- Road (Private unless otherwise shown)
- (M) Indicates Mineral Ownership
- (S) Indicates Surface Ownership
- Monitoring Well
- Landhook, conveys Surface Ownership Only.
- BC Blue Creek Seam
- ML Mary Lee Seam
- NC New Castle Seam
- SBZ Stream Buffer Zone
- EH Existing Highwall
- P–3850
- P–3932
- Extent Of Underground Mind Boundary Of Republic Steel Corporation Sayre Mine, 1972 Existing Underground Works
- BCNMSW-1 Surface Water Monitoring Site
- Proposed Area to be Augered

NOTES

- All Buildings Within 1000' of Permit Area are shown
- Surface and Mineral Ownership By Forties Unless Otherwise Shown
- No Municipality has Police Jurisdiction Within or Contiguous To the Permit Area
- Police Jurisdiction Within and Contiguous to the Permit Area is Provided by Jefferson County.
- Coal Stockpile Locations are subject to change.
- No Ownership on this map (Surface & Mineral) is to be used for Conveyance.
- All acreage in Increment No. 1 contained within P–3850 will be deleted from P–3850 in Revision R–6 Of P–3850.

BOND LEGEND

Increment No. 1
Mining Area..... 51 Acres
Total Increment No. 1..... 51 Acres

Increment No. 2
Mining Area..... 76 Acres
Total Increment No. 2..... 76 Acres

Increment No. 3
Mining Area..... 61 Acres
Total Increment No. 3..... 61 Acres

Increment No. 4
Basins 001P, 002P, 002AP 003P & 032P..... 9 Acres
Haulroad..... 2 Acres
Total Increment No. 4..... 11 Acres

Total Permitted Area..... 199 Acres

I, Leslie G. Stephens, a Registered Professional Engineer and Land Surveyor, hereby certify the foregoing to be a true and correct map to the best of my knowledge, information, and belief.

Leslie G. Stephens, P.L.S. & P.E.
AL Reg. No. 14117–E

Date

PERC
ENGINEERING CO., INC.
1606 Hwy. 78 West Jasper, AL 35501/P.O. Box 1712–35502
(205) 384–5553 Office (205) 295–3114 Fax

REVISIONS
NATURE OF REVISION

NO.	DATE
1	
2	
3	
4	
5	
6	

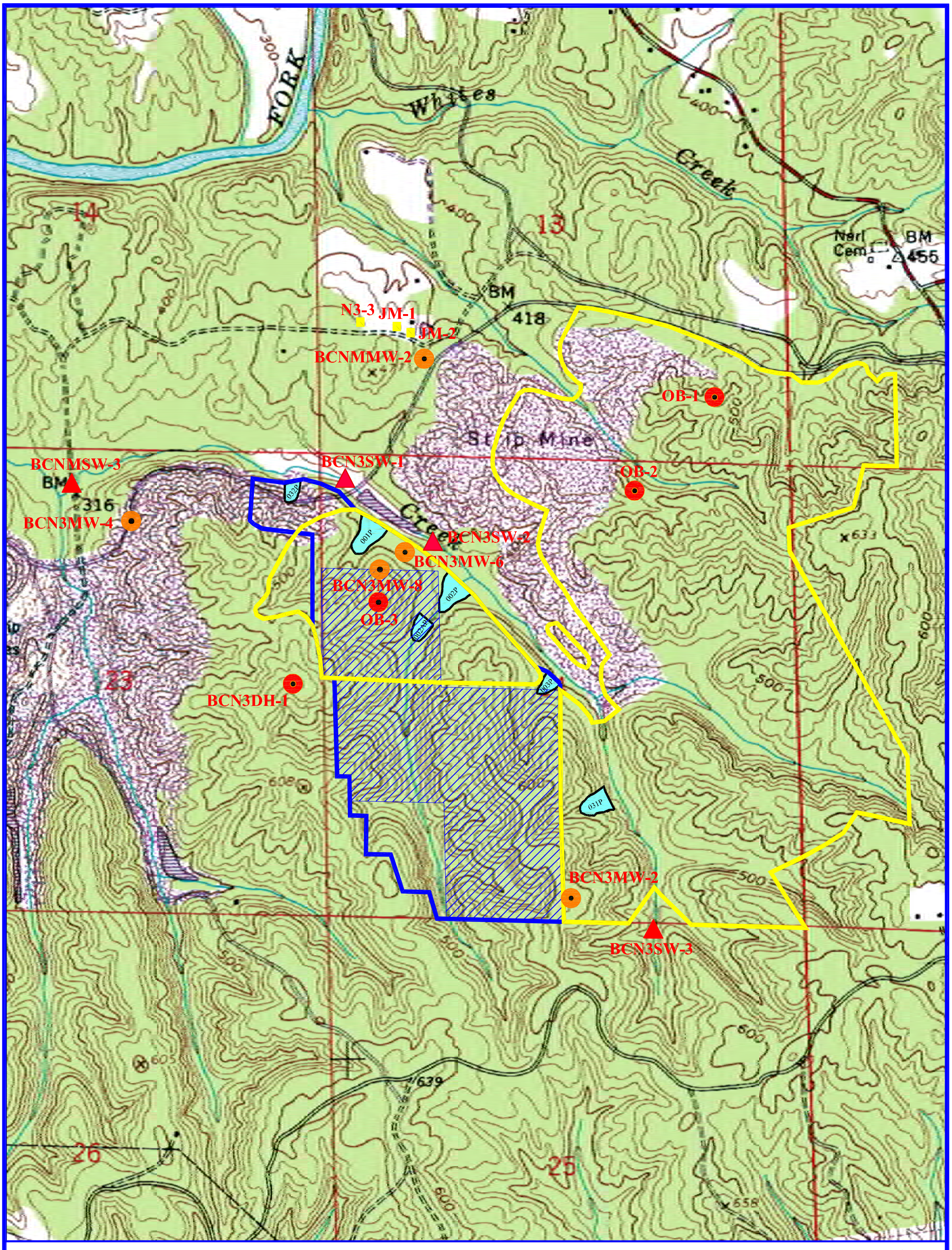
Date: November 11, 2011

BCNM3PM.DWG

PERMIT AND VICINITY MAP
BEST COAL, INC.
NARLEY MINE NO. 3
P-3954

Part of Sections 13, 23 & 24
Township 15 South, Range 4 West
Jefferson County, Alabama

Appendix F — Hydrologic Monitoring Sites



SCALE: 1" = 1000'

BEST COAL, INC.
NARLEY MINE NO. 3

Hydrologic Monitoring Sites

- Geochemical Analysis Site
- Monitoring Well
- Surface Water Monitoring Site
- Inventoried Residence
- Sediment Basin
- P-3850 - Best Coal Narley Mine
- Proposed Permit Boundary
- Federal Coal Lease Property

N
W E
S

mcgehee engineering corp
post office box 3431
jasper, alabama 35502-3431
telephone: (205) 221-0686 fax: 221-7721
email: staff@mcgehee.org

Latitude: 33°43"08" N
Longitude: 86°54"52" W
Date: 10/10/2012
Drawn By: B.W.Y

Appendix G — Previously Mined Map

SCALE: 1" = 1000'

BEST COAL, INC.
NARLEY MINE NO. 3

Previous Mining Map

- Previous Underground Mining - Sayre Mine 1972
- P-3850 - Best Coal Narley Mine
- P-3932 - Proposed Best Coal Jagger Mine
- Proposed Permit Boundary
- Federal Coal Lease Property

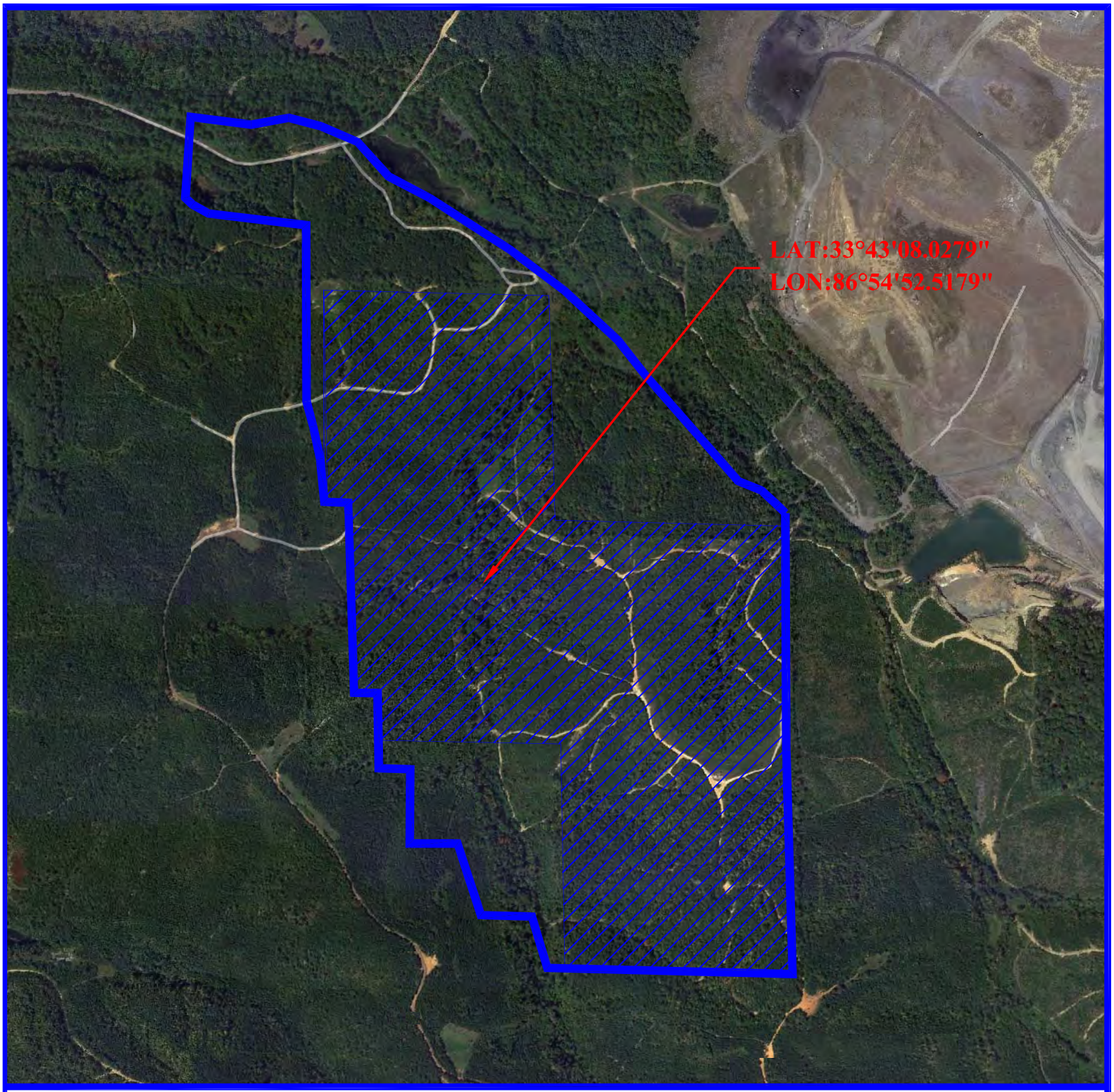
N
W E
S

mcgehee engineering corp
post office box 3431
jasper, alabama 35502-3431
telephone: (205) 221-0686 fax: 221-7721
email: staff@mcgehee.org

Latitude: 33°43"08" N
Longitude: 86°54"52" W

Date: 10/09/2012
Drawn By: B.W.Y

Appendix H — Aerial Photo Map



SCALE: 1" = 800'

BEST COAL, INC.
NARLEY MINE NO. 3

Aerial Photo

N
W E
S

Federal Coal Lease Area of Interest:

SW 1/4 of the NW 1/4
N 1/2 of the SW 1/4
SE 1/4 of the SW 1/4

SECTION 24, TOWNSHIP 15 SOUTH, RANGE 4 WEST
ALL IN JEFFERSON COUNTY, ALABAMA
AS FOUND ON THE BROOKSIDE, AL. USGS QUAD.

Image from Google Earth - 8/28/2011

Proposed Permit Boundary

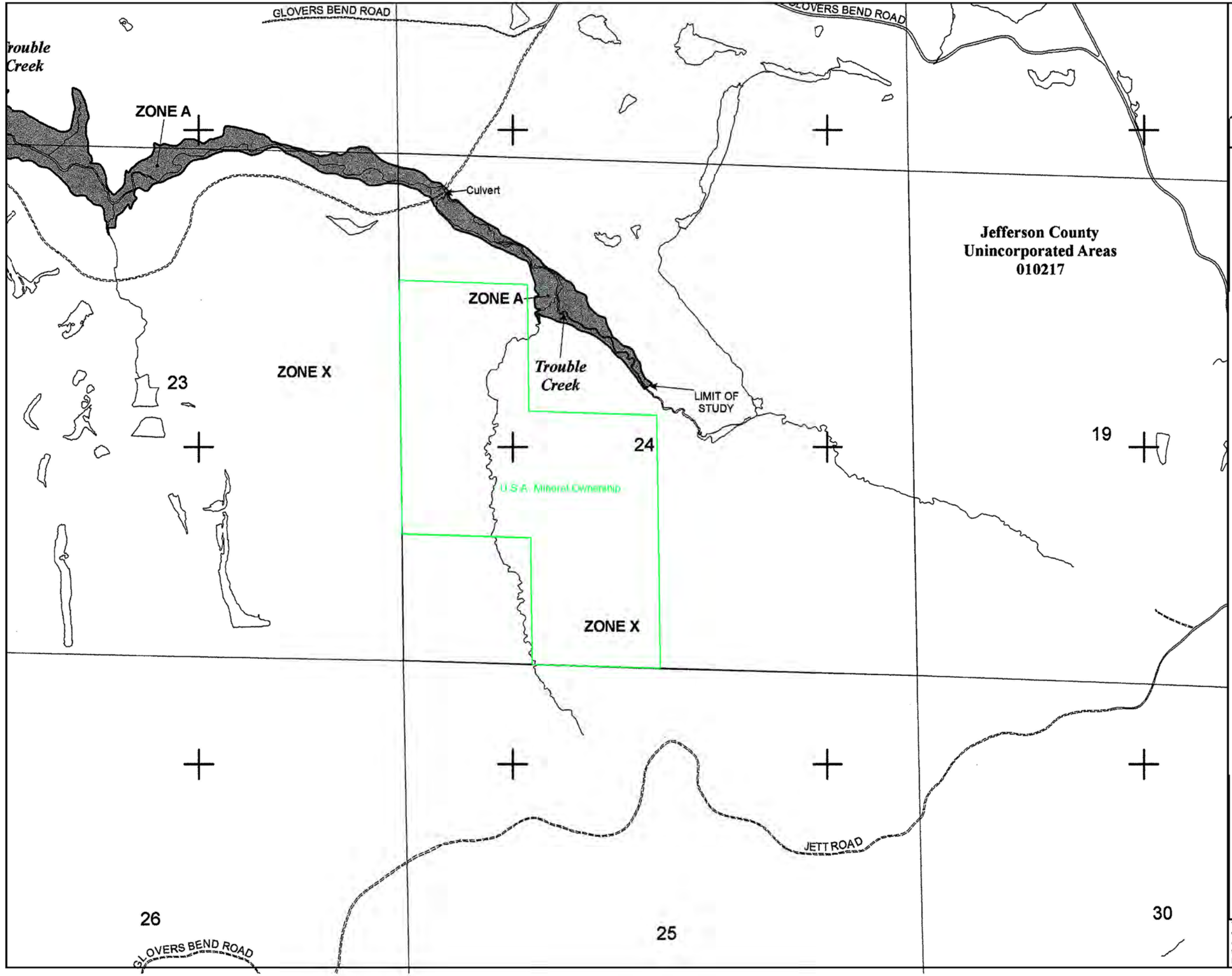
Federal Coal Lease Property

mcgehee engineering corp
post office box 3431
jasper, alabama 35502-3431
telephone: (205) 221-0686 fax: 221-7721
email: staff@mcgehee.org

Latitude: 33°43"08" N
Longitude: 86°54"52" W

Date: 10/10/2012
Drawn By: B.W.Y

Appendix I — Floodplain Map



MAP SCALE 1" = 1000'

500 0 1000 2000 FEET

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0185G

FIRM

FLOOD INSURANCE RATE MAP

JEFFERSON COUNTY, ALABAMA
AND INCORPORATED AREAS

PANEL 185 OF 755
(SEE LOCATOR DIAGRAM OR MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
JEFFERSON COUNTY	010217	0185	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP REVISED	MAP NUMBER
SEPTEMBER 29, 2006	01073C0185G

State of Alabama
Federal Emergency Management Agency

Appendix II — Consultation Letters

USFWS Consultation Letter

United States Department of the Interior

FISH AND WILDLIFE SERVICE
1208-B Main Street
Daphne, Alabama 36526

IN REPLY REFER TO
2009-I-0347

APR 22 2013

Ms. Amber Tubbs
McGehee Engineering Corp.
P.O. Box 3431
450 19th Street
Jasper, AL 35502-3431

Dear Ms. Tubbs:

Thank you for your March 20, 2013, letter, providing additional information to support your request for our concurrence that a proposed mining permit revision for Best Coal Inc.'s Narley Mine No. 3 in Jefferson County will have no adverse effects on any endangered and threatened species. The proposed revision will encompass 192 acres at approximately 33° 43' 8" N and 86° 54' 52" W, in close proximity to Trouble Creek a tributary to Locust Fork, which lies a little over a mile northwest of the proposed project boundary. We are providing the following response in accordance with the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) (ESA).

According to the information provided in your letter, Best Coal, Inc., intends to leave a 100-foot vegetated buffer zone between the nearest portion of the Narley No. 3 project boundary and Trouble Creek, with the exception of a pre-existing road crossing. You also confirmed that Best Coal, Inc., will adhere to the Alabama Surface Mining Commission Administrative Code, Chapter 880-X-10C, PERFORMANCE STANDARDS SURFACE MINING ACTIVITIES.

Five sediment basins, built to a 10-year, 24-hour storm water event standard, will be constructed in the outer perimeter of the project site, to absorb any increase of surface run-off and prevent any increase in the overall quantity of flow to Trouble Creek as a result of the proposed mining activities. In addition, Best Coal, Inc., will ensure that the water quality is monitored to ensure adherence to the State's water quality standards.

All approved BMP structures will be inspected within 24 hours of each significant rainfall event and immediate corrective action will be taken if erosion or soil runoff is observed. Best Coal, Inc., will re-vegetate all disturbed areas that are not being actively mined and will limit work that results in exposed earth or slopes leading to the surface waters during periods when significant rainfall is not present.

PHONE: 251-441-5181 FAX: 251-441-6222

Summary

We have reviewed the information provided in your letter and our files and concur with your conclusion that the proposed action is not likely to adversely affect endangered and threatened species. In view of this, we believe that requirements of section 7 of the ESA have been satisfied. However, obligations under section 7 of the ESA must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner that was not previously considered; (2) this action is subsequently modified in a manner not previously considered in this assessment; or, (3) a new species is listed or critical habitat determined that may be affected by the identified action.

If you have any questions or need additional information, please contact Ms. Karen Marlowe of my staff at (205) 726-2667. Please use the reference number located at the top of this letter in future phone calls or written correspondence.

Sincerely,

William J. Pearson
Field Supervisor
Alabama Ecological Services Field Office

cc: USACE, Birmingham, AL
ADEM, Montgomery, AL
ADCNR, Montgomery, AL
EPA, Region 4, Atlanta, GA
ASMC, Jasper, AL

March 20th, 2013

Dan Everson
Deputy Field Supervisor
U.S. Department of Interior
Fish & Wildlife Service
Alabama Ecological Services Field Office
1208-B Main Street
Daphne, AL 36526

RE: **Best Coal, Inc.**
Narley Mine No. 3 -- P-3954
2009-TA-0347

Dear Mr. Everson:

In response to your letter dated October 17, 2012, we would like to offer the additional information requested.

Best Coal shares the concern of potential impacts to Trouble Creek and in order to reduce and eliminate any direct impacts to Trouble Creek, Best Coal will be leaving a minimum of 100 foot vegetated buffer zone between the nearest portion of the Narley No. 3 project boundary and Trouble Creek, with the exception of the road crossing that will be utilized which is already in place. This stream crossing is the stream crossing that is in place in the NW ¼-NW ¼ of Section 24 which utilizes the embankment of the existing pre-law impoundment. Therefore no additional fill impacts are proposed for Trouble Creek.

In addition Best Coal plans to adhere to the Alabama Surface Mining Commission Administrative Code, Chapter 880-X-10C, PERFORMANCE STANDARDS SURFACE MINING ACTIVIES, and will develop an erosion control plan tailored to the mining operation that will be submitted and reviewed by qualified professionals from the Alabama Surface Mining Commission. The mine plan will closely adhere to the protective measure in the ADEM regulations sections 335-6-10.06 (a) and (c) to maintain minimum water quality conditions applicable to all state waters as stated within the approved ADEM NPDES permit AL0075752.

Post Office Box 3431 • 450 19th Street • Jasper, Alabama 35502-3431 • 205-221-0686 • Fax 205-221-7721 • amber.tubbs@mcgehee.org

Additionally the NPDES Permit has some maximum and average limitations as set forth by ADEM for this NPDES Permit and are as follows: The pH limit is between 6.0 - 9.0 s.u.; TSS maximum limit is 70 mg/l and the average is 35 mg/l; Fe maximum limit is 6.0 mg/l and the average is 3.0 mg/l; Mn maximum limit is 4.0 mg/l and the average is 2.0 mg/l. Toxicity testing is also required in this ADEM NPDES permit using both Acute and Chronic testing. I have also attached a copy of the ADEM NPDES monitoring requirements in attachment "A".

This NPDES Permit has five specific Sediment Basins that will address and filter the runoff from this project prior to entering into a flow path or overland flow that will ultimately drain into Trouble Creek. These basins are identified as basin 001, 002, 003 031 & 032. The location of these basins can be seen in attachment "B".

All of the Sediment basins will be constructed in the outer perimeter of the proposed mine site. These sediment basins will have storm detentions to absorb any increase of surface run-off, if it should occur. This mining operation will not alter the drainage area of Trouble Creek. Therefore, the overall quantity of flow to Trouble Creek should not be adversely affected. The Sediment Basins will be designed for a 10 year 24 hour stormwater event at the primary spillway with a design of 25 year 6 hour at the emergency spillway.

Best Coal will adhere to the current requirements for the inspections of BMPs that are in strict accordance with both Alabama Surface Mining Commission (ASMC) and Alabama Department of Environmental Management (ADEM) Rules and Regulations and are as follows:

Sediment basins are inspected semi-monthly for erosion, instability, etc., with maintenance performed as necessary. Sediment basins are examined quarterly for structural weakness, instability, slope failure, or other hazardous conditions with maintenance performed as necessary. Formal inspections are made annually, by a qualified registered professional engineer or other qualified person under the direction of a professional engineer, including any reports or modifications, in accordance with 880-X- 10C- .20[1(j)] of the Alabama Surface Mining Regulations.

In addition to the frequent inspections (listed above) made by Best Coal personnel or their agents, monthly inspections of the BMPs are performed by ASMC inspectors during the active mining phase. Following a phase II bond release, the ASMC inspections are performed quarterly until the final bond release.

Best Coal will ensure that the water quality is monitored to assure discharges/runoff does not increase stream solids beyond the state water quality standards. All surface water samples will be taken by the grab method. Flow rate measurements of surface water samples will be performed in accordance with ASTM D3858, 10.9.6, p.101 "Standard Practice for Open Channel Flow Measurement of Water by Velocity - Area Method".

All surface water samples are analyzed for at a minimum the pH, Total Iron, Total Manganese, Total Suspended Solids, Total Nickel, Conductivity, Acidity, Alkalinity, and Sulfates and reported to the Alabama Department of Environmental Management and Alabama Surface Mining Commission to maintain and ensure adherence to the State's water quality standards required in the approved ADEM NPDES permit AL0075752.

The approved BMP's structures will be inspected within 24 hours of each significant rainfall event and immediate corrective action will be taken if erosion or soil runoff is observed.

Best Coal will immediately re-vegetate any disturbed areas that are not actively being mined and execute any work that results in exposed earth or slopes leading to the surface waters during periods when significant rainfall is not present.

In addition the area to be impacted will be restored immediately following the mineral extraction operation. Through the BMP's required by the Alabama Surface Mining Commission (ASMC) and the Alabama Department of Environmental Management (ADEM) State Water Quality Standards Best Coal believes the project will not have any permanent adverse downstream effects in Trouble Creek on any Threatened and Endangered Species outside the project area.

Surface water within the permit area consists of runoff in direct response to rainfall and/or intermittent flow; there are no perennial stream flows onsite.

We have evaluated Trouble Creek and have found that downstream of the proposed mine site in Trouble Creek the water is impounded from previous pre-law mining operations. Additionally, Trouble Creek has an excessive amount of sedimentation within the tributary created from the current Off Road Vehicle utilization from both hunting and recreational uses. These stream impairments have contributed to the absence of potential habitat from the existence of listed threatened and endangered species.

Therefore based on the previous disturbance that already exist in Trouble Creek, the avoidance of Trouble Creek, the vegetated buffer between the project area and Trouble Creek, the information provided above and the information previously provided on September 28th, 2012 would you concur that the project activities will have no adverse effect on any endangered and threatened species and that no further species consultation will be required.

I would like to thank you for your co-operation concerning this matter and would appreciate your comments at your earliest convenience. If you should have any questions or need additional information, please do not hesitate to contact our office.

Post Office Box 3431 • 450 19th Street • Jasper, Alabama 35502-3431 • 205-221-0686 • Fax 205-221-7721 • amber.tubbs@mcgehee.org

Sincerely,

McGehee Engineering Corp.

Amber Tubbs

Amber Tubbs
Project Manager,

Enclosure:
(A) ADEM NPDES Monitoring Requirements
(B) Basin Location Map

Post Office Box 3431 • 450 19th Street • Jasper, Alabama 35502-3431 • 205-221-0686 • Fax 205-221-7721 • amber.tubbs@mcgehee.org

Attachment “A”

ADEM NPDES Monitoring Requirements

Post Office Box 3431 • 450 19th Street • Jasper, Alabama 35502-3431 • 205-221-0686 • Fax 205-221-7721 • amber.tubbs@mcgehee.org

PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS

1. Outfalls 001-1 through 004-1, 006-1, and 016-1 through 041-1

During the period beginning on the effective date of this Permit and lasting through the expiration date of this Permit, the Permittee is authorized to discharge from **Outfalls 001-1 through 004-1, 006-1, and 016-1 through 041-1**, which are identified on Page 1 of this Permit and described more fully in the Permittee's application, if the outfall has been constructed and certified. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations			Monitoring Requirements		Type[1, 2]
	Daily Minimum	Monthly Average	Daily Maximum	Sample Type	Measurement Frequency	
Specific Conductance 00095	****	Report µS/cm	Report µS/cm	Grab	2/Month	Active Mining, Post-Mining, & Precipitation Event Exemption
Sulfate (As S) 00154	****	Report mg/L	Report mg/L	Grab	2/Month	Active Mining, Post-Mining, & Precipitation Event Exemption
pH 00400	6.0 s.u.	****	9.0 s.u.	Grab	2/Month	Active Mining, Post-Mining, & Precipitation Event Exemption
pH[3] 00400	****	****	10.5 s.u.	Grab	2/Month	Active Mining
Solids, Total Suspended 00530	****	35.0 mg/L	70.0 mg/L	Grab	2/Month	Active Mining
Solids, Settleable 00545	****	****	0.5 mL/L	Grab	2/Month	Post-Mining and Precipitation Event Exemption
Iron, Total (As Fe) 01045	****	3.0 mg/L	6.0 mg/L	Grab	2/Month	Active Mining
Iron, Total (As Fe) 01045	****	****	7.0 mg/L	Grab	2/Month	Precipitation Event Exemption[4]
Manganese, Total (As Mn)[5] 01054	****	2.0 mg/L	4.0 mg/L	Grab	2/Month	Active Mining
Nickel, Total Recoverable[6] 01074	****	103 µg/L	Report µg/L	Grab	1/Month	Active Mining
Flow, In Conduit or Thru Treatment Plant 50050	****	Report MGD	Report MGD	Instantaneous	2/Month	Active Mining and Post-Mining
Toxicity, Ceriodaphnia Acute[7] 61425	****	****	0 pass(0)/fail(1)	Grab	1/Quarter	Active Mining
Toxicity, Pimephales Acute[7] 61427	****	****	0 pass(0)/fail(1)	Grab	1/Quarter	Active Mining
Solids, Total Dissolved (TDS) 70296	****	Report mg/L	Report mg/L	Grab	Quarterly	Active Mining, Post-Mining, & Precipitation Event Exemption

[1] See Part IV.C. for Precipitation Event Discharge Limitations.
[2] The measurement frequency for Post-Mining monitoring requirements shall be once per month. See Part IV.F. for Post-Mining Discharge Limitations.
[3] See Part IV.D. for pH Exemption Discharge Limitations.
[4] The discharge limitation for Total Iron as (Fe) is only applicable for precipitation events less than or equal to a 2-year, 24-hour precipitation event.
[5] See Part IV.E. for Manganese Exemption Discharge Limitations.
[6] For the purpose of demonstration of compliance with this parameter, "Total" and Total Recoverable" shall be considered equivalent.
[7] See Part IV.G. for Effluent Toxicity Limitations and Biomonitoring Requirements.

2. Outfall 005-1

During the period beginning on the effective date of this Permit and lasting through the expiration date of this Permit, the Permittee is authorized to discharge from **Outfall 005-1**, which is identified on Page 1 of this Permit and described more fully in the Permittee's application, if the outfall has been constructed and certified. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations			Monitoring Requirements		Type[1, 2]
	Daily Minimum	Monthly Average	Daily Maximum	Sample Type	Measurement Frequency	
Specific Conductance 00095	****	Report µS/cm	Report µS/cm	Grab	2/Month	Active Mining, Post-Mining, & Precipitation Event Exemption
Sulfate (As S) 00154	****	Report mg/L	Report mg/L	Grab	2/Month	Active Mining, Post-Mining, & Precipitation Event Exemption
pH 00400	6.0 s.u.	****	9.0 s.u.	Grab	2/Month	Active Mining, Post-Mining, & Precipitation Event Exemption
pH[3] 00400	****	****	10.5 s.u.	Grab	2/Month	Active Mining
Solids, Total Suspended 00530	****	35.0 mg/L	70.0 mg/L	Grab	2/Month	Active Mining
Solids, Settleable 00545	****	****	0.5 mL/L	Grab	2/Month	Post-Mining and Precipitation Event Exemption
Selenium, Total Recoverable[4] 00981	****	5.0 µg/L	20 µg/L	Grab	1/Month	Active Mining
Iron, Total (As Fe) 01045	****	3.0 mg/L	6.0 mg/L	Grab	2/Month	Active Mining
Iron, Total (As Fe) 01045	****	****	7.0 mg/L	Grab	2/Month	Precipitation Event Exemption[5]
Manganese, Total (As Mn)[6] 01054	****	2.0 mg/L	4.0 mg/L	Grab	2/Month	Active Mining
Nickel, Total Recoverable[4] 01074	****	103 µg/L	Report µg/L	Grab	1/Month	Active Mining
Flow, In Conduit or Thru Treatment Plant 50050	****	Report MGD	Report MGD	Instantaneous	2/Month	Active Mining and Post-Mining
Toxicity, Ceriodaphnia Acute[7] 61425	****	****	0 pass(0)/fail(1)	Grab	1/Quarter	Active Mining
Toxicity, Pimephales Acute[7] 61427	****	****	0 pass(0)/fail(1)	Grab	1/Quarter	Active Mining
Solids, Total Dissolved (TDS) 70296	****	Report mg/L	Report mg/L	Grab	Quarterly	Active Mining, Post-Mining, & Precipitation Event Exemption

[1] See Part IV.C. for Precipitation Event Discharge Limitations.
[2] The measurement frequency for Post-Mining monitoring requirements shall be once per month. See Part IV.F. for Post-Mining Discharge Limitations.
[3] See Part IV.D. for pH Exemption Discharge Limitations.
[4] For the purpose of demonstration of compliance with this parameter, "Total" and Total Recoverable" shall be considered equivalent.
[5] The discharge limitation for Total Iron as (Fe) is only applicable for precipitation events less than or equal to a 2-year, 24-hour precipitation event.
[6] See Part IV.E. for Manganese Exemption Discharge Limitations.
[7] See Part IV.G. for Effluent Toxicity Limitations and Biomonitoring Requirements.

3. Outfalls 007-1 and 008-1

During the period beginning on the effective date of this Permit and lasting through the expiration date of this Permit, the Permittee is authorized to discharge from **Outfalls 007-1 and 008-1**, which are identified on Page 1 of this Permit and described more fully in the Permittee's application, if the outfall has been constructed and certified. Such discharge shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations			Monitoring Requirements		Type[1, 2]
	Daily Minimum	Monthly Average	Daily Maximum	Sample Type	Measurement Frequency	
Specific Conductance 00095	****	Report µS/cm	Report µS/cm	Grab	2/Month	Active Mining, Post-Mining, & Precipitation Event Exemption
Sulfate (As S) 00154	****	Report mg/L	Report mg/L	Grab	2/Month	Active Mining, Post-Mining, & Precipitation Event Exemption
pH 00400	6.0 s.u.	****	9.0 s.u.	Grab	2/Month	Active Mining, Post-Mining, & Precipitation Event Exemption
pH[3] 00400	****	****	10.5 s.u.	Grab	2/Month	Active Mining
Solids, Total Suspended 00530	****	35.0 mg/L	70.0 mg/L	Grab	2/Month	Active Mining
Solids, Settleable 00545	****	****	0.5 mL/L	Grab	2/Month	Post-Mining and Precipitation Event Exemption
Selenium, Total Recoverable[4] 00981	****	5.0 µg/L	20 µg/L	Grab	1/Month	Active Mining
Iron, Total (As Fe) 01045	****	3.0 mg/L	6.0 mg/L	Grab	2/Month	Active Mining
Iron, Total (As Fe) 01045	****	****	7.0 mg/L	Grab	2/Month	Precipitation Event Exemption[5]
Manganese, Total (As Mn)[6] 01054	****	2.0 mg/L	4.0 mg/L	Grab	2/Month	Active Mining
Flow, In Conduit or Thru Treatment Plant 50050	****	Report MGD	Report MGD	Instantaneous	2/Month	Active Mining and Post-Mining
Toxicity, Ceriodaphnia Acute[7] 61425	****	****	0 pass(0)/fail(1)	Grab	1/Quarter	Active Mining
Toxicity, Pimephales Acute[7] 61427	****	****	0 pass(0)/fail(1)	Grab	1/Quarter	Active Mining
Solids, Total Dissolved (TDS) 70296	****	Report mg/L	Report mg/L	Grab	Quarterly	Active Mining, Post-Mining, & Precipitation Event Exemption

[1] See Part IV.C. for Precipitation Event Discharge Limitations.
[2] The measurement frequency for Post-Mining monitoring requirements shall be once per month. See Part IV.F. for Post-Mining Discharge Limitations.
[3] See Part IV.D. for pH Exemption Discharge Limitations.
[4] For the purpose of demonstration of compliance with this parameter, "Total" and Total Recoverable" shall be considered equivalent.
[5] The discharge limitation for Total Iron as (Fe) is only applicable for precipitation events less than or equal to a 2-year, 24-hour precipitation event.
[6] See Part IV.E. for Manganese Exemption Discharge Limitations.
[7] See Part IV.G. for Effluent Toxicity Limitations and Biomonitoring Requirements.

4. Outfalls 009-1 and 015-1

During the period beginning on the effective date of this Permit and lasting through the expiration date of this Permit, the Permittee is authorized to discharge from **Outfalls 009-1 and 015-1**, which are identified on Page 1 of this Permit and described more fully in the Permittee's application, if the outfall has been constructed and certified. Such discharge shall be limited and monitored by the Permittee as specified below:

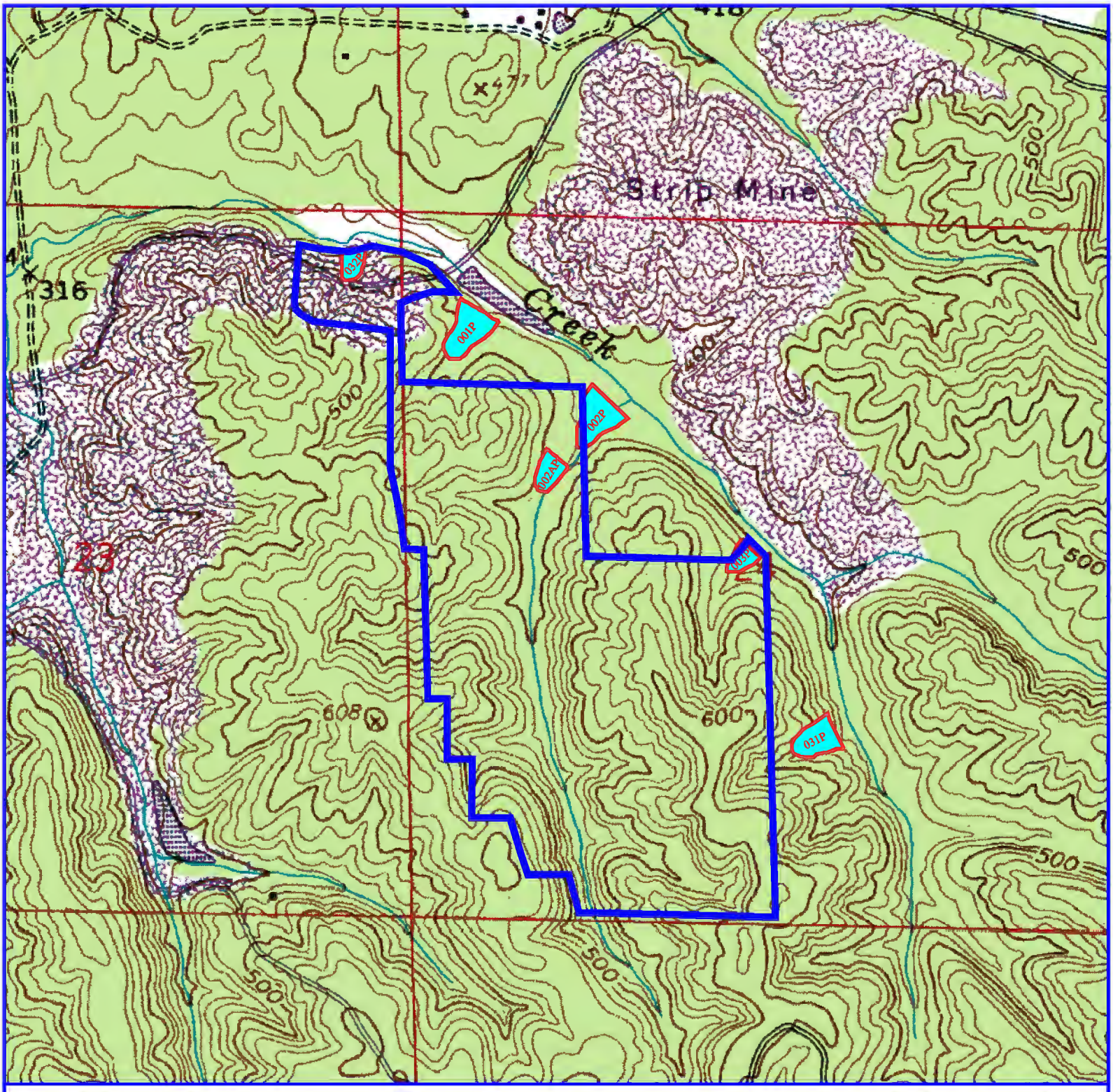
Parameter	Discharge Limitations			Monitoring Requirements		Type[1, 2]
	Daily Minimum	Monthly Average	Daily Maximum	Sample Type	Measurement Frequency	
Specific Conductance 00095	****	Report µS/cm	Report µS/cm	Grab	2/Month	Active Mining, Post-Mining, & Precipitation Event Exemption
Sulfate (As S) 00154	****	Report mg/L	Report mg/L	Grab	2/Month	Active Mining, Post-Mining, & Precipitation Event Exemption
pH 00400	6.0 s.u.	****	9.0 s.u.	Grab	2/Month	Active Mining, Post-Mining, & Precipitation Event Exemption
pH[3] 00400	****	****	10.5 s.u.	Grab	2/Month	Active Mining
Solids, Total Suspended 00530	****	35.0 mg/L	70.0 mg/L	Grab	2/Month	Active Mining
Solids, Settleable 00545	****	****	0.5 mL/L	Grab	2/Month	Post-Mining and Precipitation Event Exemption
Iron, Total (As Fe) 01045	****	3.0 mg/L	6.0 mg/L	Grab	2/Month	Active Mining
Iron, Total (As Fe) 01045	****	****	7.0 mg/L	Grab	2/Month	Precipitation Event Exemption[4]
Manganese, Total (As Mn)[5] 01054	****	2.0 mg/L	4.0 mg/L	Grab	2/Month	Active Mining
Flow, In Conduit or Thru Treatment Plant 50050	****	Report MGD	Report MGD	Instantaneous	2/Month	Active Mining and Post-Mining
Toxicity, Ceriodaphnia Acute[6] 61425	****	****	0 pass(0)/fail(1)	Grab	1/Quarter	Active Mining
Toxicity, Pimephales Acute[6] 61427	****	****	0 pass(0)/fail(1)	Grab	1/Quarter	Active Mining
Solids, Total Dissolved (TDS) 70296	****	Report mg/L	Report mg/L	Grab	Quarterly	Active Mining, Post-Mining, & Precipitation Event Exemption

[1] See Part IV.C. for Precipitation Event Discharge Limitations.
[2] The measurement frequency for Post-Mining monitoring requirements shall be once per month. See Part IV.F. for Post-Mining Discharge Limitations.
[3] See Part IV.D. for pH Exemption Discharge Limitations.
[4] The discharge limitation for Total Iron as (Fe) is only applicable for precipitation events less than or equal to a 2-year, 24-hour precipitation event
[5] See Part IV.E. for Manganese Exemption Discharge Limitations.
[6] See Part IV.G. for Effluent Toxicity Limitations and Biomonitoring Requirements.

Attachment “B”

Basin Location Map

Post Office Box 3431 • 450 19th Street • Jasper, Alabama 35502-3431 • 205-221-0686 • Fax 205-221-7721 • amber.tubbs@mcgehee.org



SCALE: 1" = 1000'
March 20th, 2013

BEST COAL COMPANY, INC.
NARLEY MINE NO. 3
(APPROXIMATELY 192 ACRES TOTAL)

N
W E
S

BASIN LOCATION MAP

SECTION 23 & 24, TOWNSHIP 15 SOUTH, RANGE 4 WEST
ALL IN JEFFERSON COUNTY, ALABAMA
AS FOUND ON THE BROOKSIDE, AL. USGS QUAD

REVISED REVISION R-6 BOUNDARY

BASIN LOCATION

Latitude: 33°47'17" N
Longitude: 87°26'41" W

mcgehee engineering corp
post office box 3431
jasper, alabama 35502-3431
telephone: (205) 221-0666 fax: 221-7721
email: staff@mcgehee.org

United States Department of the Interior

FISH AND WILDLIFE SERVICE
1208-B Main Street
Daphne, Alabama 36526

IN REPLY REFER TO:
2009-TA-0347

OCT 17 2012

Ms. Amber Tubbs
McGehee Engineering Corp.
P.O. Box 3431
450 19th Street
Jasper, AL 35502-3431

Dear Ms. Tubbs:

Thank you for your September 28, 2012, letter requesting our concurrence that a proposed mining permit revision for Best Coal Inc.'s Narley Mine No. 3 in Jefferson County will have no adverse effects on any endangered and threatened species. The proposed revision will encompass 192 acres at approximately 33° 43' 8" N and 86° 54' 52" W, and appears to impact or be in close proximity to Trouble Creek a tributary to Locust Fork, which lies a little over a mile northwest of the proposed project boundary. We are providing the following comments in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. et seq.) and the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) (ESA).

Federally Listed and Candidate[1] Species and Critical Habitat

We have determined that the following federally listed species may occur within the proposed project area. In addition, the Locust Fork main stem from U.S. Highway 78 upstream to its confluence with the Little Warrior River is designated as critical habitat (CH) for six of these species:

Alabama moccasinshell, *Medionidus acutissimus* - Threatened (CH)
Black Warrior waterdog, *Necturus alabamensis* - Candidate
Cahaba shiner, *Notropis cahabae* - Endangered
Dark pigtoe, *Pleurobema furvum* - Endangered (CH)
Flattened musk turtle, *Sternotherus depressus* - Threatened
Orange-nacre mucket, *Hamiota* (=*Lampsilis*) *perovalis* - Threatened (CH)
Ovate clubshell, *Pleurobema perovatum* - Endangered (CH)
Plicate rocksnail, *Leptoxis plicata* - Endangered
Rush darter, *Etheostoma phytophylum* - Endangered

[1] Candidate species are afforded no protection under the ESA. Surveys for these species in any appropriate habitat are recommended, but not required. This information is being provided to alert you that the species could be listed in the future. Therefore, if the proposed work is not carried out in the next year, it would be prudent to contact this office to determine if any changes have occurred to the status of these species.

Triangular kidneyshell, *Ptychobranchus greenii* - Endangered (CH)
Upland combshell, *Epioblasma metastriata* - Endangered (CH)

It is not clear from your correspondence or the previous correspondence on this project how the proposed project may impact Trouble Creek or any other tributary to Locust Fork. We, therefore, request a more detailed description of the proposed project, including a site plan and map of operations. Due to the documented sensitivity of these listed aquatic species to altered water quality, we also request an opportunity to review the adequacy of the project site's erosion control plan, including the planned use of any vegetative riparian buffers along the streams and/or site drainages within the project area. If the project will impact Trouble Creek in any way, either directly or indirectly, we also request that a survey for the above-listed federally protected aquatic species be conducted by a qualified biologist, with a current collecting permit from the U.S. Fish and Wildlife Service (Service). Prior experience with each of these particular species is strongly recommended for the consultant undertaking the survey. Please provide the name of the surveyor, his/her credentials, and a thorough description of survey methods and habitats present.

Upon receipt and review of the information requested above, we will provide a section 7 review of your project. If you have any questions or need additional information, please contact Ms. Karen Marlowe of my staff at (205) 726-2667. Please use the reference number located at the top of this letter in future phone calls or written correspondence.

Sincerely,

Dan Everson
Deputy Field Supervisor
Alabama Ecological Services Field Office

cc: USACE, Birmingham, AL
ADEM, Montgomery, AL
ADCNR, Montgomery, AL
EPA, Region 4, Atlanta, GA
ASMC, Jasper, AL

September 28th, 2012

William J. Pearson
Field Survey
U.S. Department of Interior
Fish & Wildlife Service
Daphne ES Field Office
1208-B Main Street
Daphne, AL 36526

RE: **Best Coal, Inc. – *Narley Mine No. 3 Project***
2009-TA-0347

Dear Mr. William J. Pearson

Due to the fact that portions of the above project consists of federal mineral we are continuing in the process of applying for a mining permit for the area described below and would like to request a re-verification in regards to the previous concurrence from your office.

Best Coal, Inc. continues to propose expanding its mining operations in Jefferson County, Alabama and wants to permit 192 acres at the project site located in Sections 23, 24, Township 15 South, Range 4 West, all on the Brookside, Alabama U.S.G.S Quadrangle as found in Jefferson County, Alabama. The proposed site location is shown on the attached 2000' scale mine site location map attachment "B", and the 800' scale aerial photo map attachment "C".

Based on consultation with your office as recorded in correspondence (2009-TA-0347) dated March 19, 2009, there were no federally listed species or critical habitat known to occur in the project area.

Therefore based on the information provided in the attached Project Notification Summary and your previous concurrence, would you concur that the project activities will have no adverse effect on any endangered and threatened species and that no further species consultation will be required.

Thank you for your co-operation concerning this matter and would appreciate your comments at your earliest convenience. If you should have any questions or need additional information, please do not hesitate to contact our office.

Post Office Box 3431 • 450 19th Street • Jasper, Alabama 35502-3431 • 205-221-0686 • Fax 205-221-7721 •
amber.tubbs@mcgehee.org

Sincerely,

McGehee Engineering Corp.

Amber Tubbs

Amber Tubbs
Project Manager,

Enclosure:

(A) Project Notification Summary
(B) Mine Site Location Map 2000 Scale
(C) Aerial Photo Map 800 Scale

Post Office Box 3431 • 450 19th Street • Jasper, Alabama 35502-3431 • 205-221-0686 • Fax 205-221-7721 •
amber.tubbs@mcgehee.org

Attachment “A”

Project Notification Summary

Post Office Box 3431 • 450 19th Street • Jasper, Alabama 35502-3431 • 205-221-0686 • Fax 205-221-7721 •
amber.tubbs@mcgehee.org

PROJECT NOTIFICATION & PROJECT SUMMARY
REQUEST FOR IDENTIFICATION OF THE AREAS OF SPECIAL CONCERN
FOR A SURFACE OR UNDERGROUND MINING OPERATION

Date: September 28th, 2012

Mining Company Name: Best Coal, Inc.

Return Address: P. O. Box 3431, Jasper, Alabama 35502-3431

Return Fax Number: (205) 221-7721

Contact Person: McGehee Engineering Corp., L. Stephen Blankenship

Project Name: Best Coal, Inc. – Narley Mine No. 3

Number of Acres: 192 Acres

USGS Quad Sheet(s) on which the Mine occurs: Brookside

County: Jefferson County

See Attached Map

Current Landuse of Permit and Adjacent Areas:

Undeveloped/No current use

Dominant Vegetation Communities of Permit and Adjacent Areas:

Loblolly Pine, White Oak, and other various grasses, weeds & briars.

Project:

Best Coal, Inc. – Narley Mine No. 3

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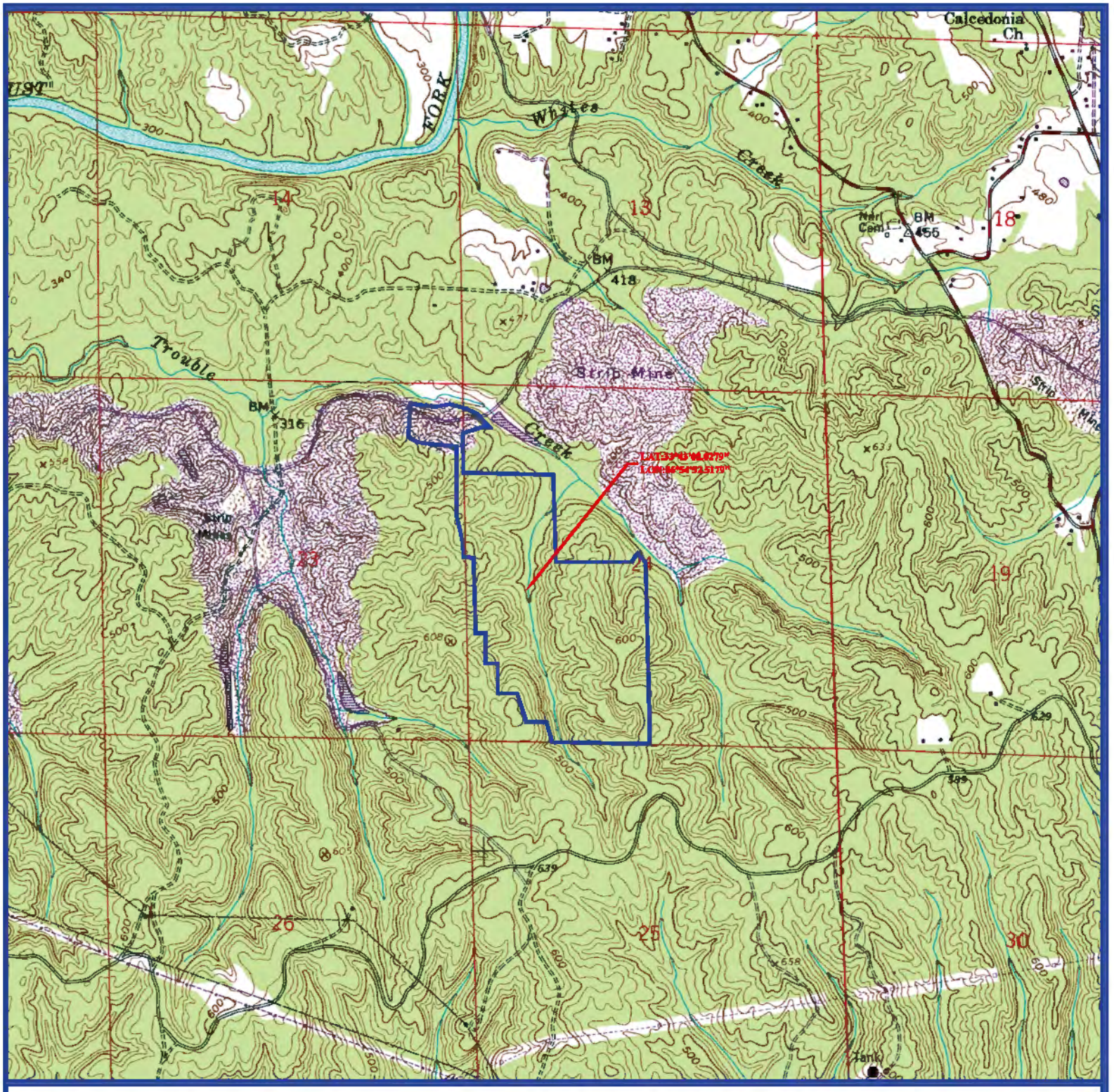
amber.tubbs@mcgehee.org

Attachment “B”

Mine Site Location Map 2000 Scale

Post Office Box 3431 • 450 19th Street • Jasper, Alabama 35502-3431 • 205-221-0686 • Fax 205-221-7721 •
amber.tubbs@mcgehee.org



SCALE: 1" = 2000'

BEST COAL, INC.
NARLEY MINE NO. 3

N
W E
S

Mine Site Location Map

SECTION 23 & SECTION 24, TOWNSHIP 15 SOUTH, RANGE 4 WEST
ALL IN JEFFERSON COUNTY, ALABAMA
AS FOUND ON THE BROOKSIDE, AL. USGS QUAD.

MEC
mcgehee engineering corp
post office box 3431
jasper, alabama 35502-3431
telephone: (205) 221-0888 fax: 221-7721
email: staff@mcgehee.org

Proposed Permit Boundary

Latitude: 33°43"08" N
Longitude: 86°54"52" W

Date: 09/27/2012
Drawn By: B.W.Y

Attachment “C”

Aerial Photo Map 800 Scale

Post Office Box 3431 • 450 19th Street • Jasper, Alabama 35502-3431 • 205-221-0686 • Fax 205-221-7721 •
amber.tubbs@mcgehee.org

SCALE: 1" = 800'

BEST COAL, INC.
NARLEY MINE NO. 3

N
W E
S

Aerial Photo

Image from Google Earth - 8/28/2011

SECTION 23 & SECTION 24, TOWNSHIP 15 SOUTH, RANGE 4 WEST
ALL IN JEFFERSON COUNTY, ALABAMA
AS FOUND ON THE BROOKSIDE, AL. USGS QUAD.

mcgehee engineering corp
post office box 3431
jasper, alabama 35502-3431
telephone: (205) 221-0686 fax: 221-7721
email: staff@mcgehee.org

Proposed Permit Boundary

Latitude: 33°43"08" N
Longitude: 86°54"52" W

Date: 09/27/2012
Drawn By: B.W.Y

SHPO Consultation Letters

United States Department of the Interior
Bureau of Land Management
Southeastern States Field Office
411 Briarwood Drive, Suite 404
Jackson, Mississippi 39206
http://www.es.blm.gov

IN REPLY REFER TO:
8100 (020) JMS Best Coal, Inc.

July 01, 2011

Mr. Frank White
State Historic Preservation Officer
468 South Perry Street
Montgomery, Alabama 36104

Dear Mr. White:

The BLM has received a request to lease Federal coal under private surface from Best Coal, Inc. The coal lease will be developed as a continuation of the Narley Mine, in northeastern Jefferson County, already in production on private surface. The mine is an open-pit production which will access federal minerals approximately 300 feet below the surface. The proposed 160 acres of Federal coal for lease are located in the following locations (map enclosed):

Jefferson County (Brookside quadrangle)
T. 15 S., R. 4 W. Sec. 13, NESW, SESW, SWSW
Sec. 23, NENE, SENE
Sec. 24, NWNW, NENW, SWNW, SENW, NWSW, NESW, SWSW, SESW, SWNE, NWSE (approx 160 ac.)

In 2003 and 2009, P.E. LaMoreaux and Associates conducted Cultural Resource Assessments for PERC Engineering Co., Inc. The report entitled Phase 1 Cultural Resources Assessment for the Proposed Narly Mine No. 3 In Jefferson County, Alabama dated March 16, 2009. Your office has reviewed and commented with stipulations on the proposed project.

The BLM concurs with these findings, and will not require any further consideration of the effect of permitting the proposed open pit mine on cultural resources or historic properties. However, a stipulation will be included in the permit which covers accidental discovery that would require additional consultation with both your office and the appropriate federally recognized Native Americans Tribes/Nations.

Your concurrence of no further consideration of cultural resources for the plan as presented is requested within 30 days. If you have any questions, please contact John M. Sullivan, Archeologist, at (601) 977-5439.

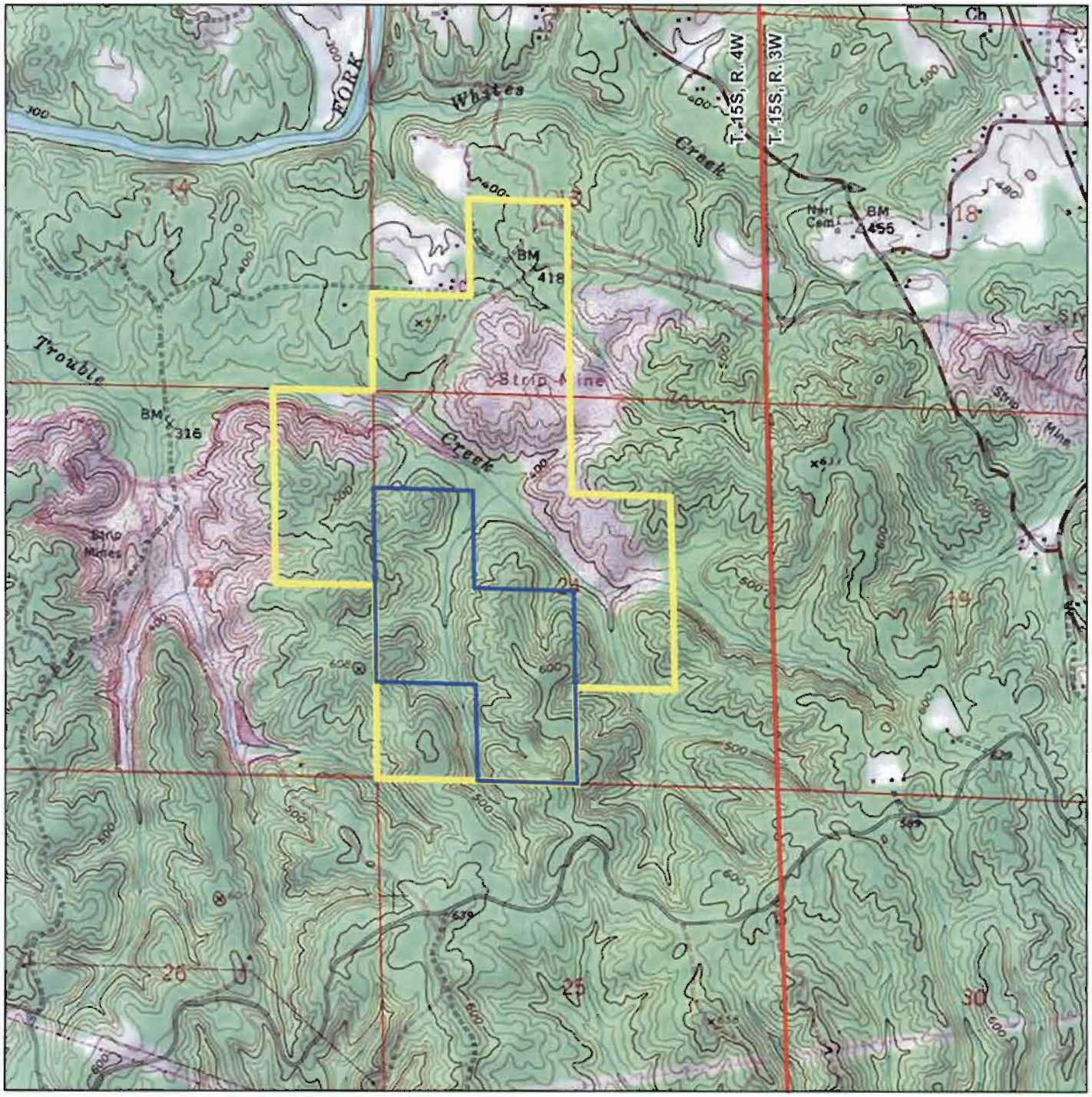
Sincerely,
Original Signed
Vicky Craft

Vicky Craft
Acting Assistant Field Manager
Natural Resources Program Specialist

Enclosures
1 - Map

bc:
JFO CF & RF
ES RF
DWinters
RMills
ES020:JMSullivan:07/01/2011:601-977-5400:Jefferson Co.T.15S.R.4W.Sec. 13, 23, 24.Nearly Mine.SHPO Ltr

Proposed Surface Coal Mining Operations
Company: Best Coal, Inc.
Jefferson County, Alabama



Legend

- Federal Coal Ownership
- Best Coal Inc. Proposed Mining Area

0 1,000 2,000 4,000 6,000 Feet

1:23,702

N

U.S. Department of the Interior
Bureau of Land Management
Southeastern States Field Office
Jackson, Mississippi

Proposed Mining Operation in T. 15S, R. 4W:
Section 13 - NESW, SESW, SWSW
Section 23 - NENE, SENE
Section 24 - NWNW, NENW, SWNW, SENW, NWSW, NESW, SWSW, SESW, SWNE, NWSE
(Federal acreage being approximately 160 acres . Total permit acreage including federal being approximately 600 acres .)

This map contains portions of the following USGS 1:24,000 Topographic Quadrangle: Brookside

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

FRANK W. WHITE
EXECUTIVE DIRECTOR

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

June 13, 2013

Duane Winters
Assistant Field Manager
Natural Resources Specialist
Eastern States Office
411 Briarwood Dr., Suite 404
Jackson MS 39206

Re: AHC 12-1314
Cultural Resources assessment
7 Acres at Best Coal Narley Mine, R-10
Jefferson County

Dear Mr. Winters:

Upon review of the cultural resource assessment conducted by the Office of Archaeological Research the above referenced project, 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. They include but are not excluded 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 post holes, 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 commitment to helping us preserve Alabama's non-renewable resources. Should you have any questions, the point of contact for this matter is Amanda Hill at 334-230-2692. Please have the AHC tracking number referenced above available and include it with any correspondence.

Truly yours,

Elizabeth Ann Brown

Elizabeth Ann Brown
Deputy State Historic Preservation Officer

EAB/AMH/amh

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

FRANK W. WHITE
EXECUTIVE DIRECTOR

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

May 19, 2014

Amber Tubbs
McGehee Engineering Corp.
P.O. Box 3431
450 19th Street
Jasper, AL 35502-3431

Re: AHC 04-0328
CRA/NARLEY MINE NO. 3 - Re-verification Request
Jefferson County

Dear Ms. Tubbs:

Upon review of the above referenced project, we have determined that we previously concurred with this project. We continue to concur with project activities provided the scope of work remains the same. However, should the scope of work change, further consultation with our office will be necessary.

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. They include but are not excluded 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 post holes, 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 commitment to helping us preserve Alabama's non-renewable cultural resources. Should you have any questions, please contact Amanda McBride at 334.230.2692 or Amanda.McBride@preserveala.org. Have the AHC tracking number referenced above available and include it with any future correspondence.

Sincerely,

Lee Anne Wofford

Lee Anne Wofford
Deputy State Historic Preservation Officer

LAW/AMH/amh

mcgehee engineering corp
post office box 3431
jasper, alabama 35502-3431
telephone: (205) 221-0686 fax: 221-7721
email: staff@mcgehee.org

JSU -- HOBGOOD 2008
AHC 08-1196

ALL PREVIOUSLY MINED
AHC 09-0804

U OF A -- KAREEN L. HAWSEY 2013
AHC 09-0804

PREVIOUSLY MINED AREA

PELA -- LOLLEY 2003
AHC 2004-0328

PELA -- LOLLEY 2012
AHC 04-0328

PELA -- LOLLEY 2009
AHC 04-0328

PELA -- LOLLEY 2008
AHC 04-0328

U OF A -- THOMPSON 2012
AHC 04-0328

- NARLEY MINE NO. 3 ADDITIONAL PREVIOUSLY MINED AREA
- PREVIOUSLY MINED AREA (AHC 09-0804)
- U OF A THOMPSON 2012 (AHC 04-0328)
- PELA LOLLEY 2008 (AHC 04-0328)
- PELA LOLLEY 2012 (AHC 04-0328)
- U OF A HAWSEY 2013 (AHC 09-0804)
- PELA LOLLEY 2009 (AHC 04-0328)
- JSU HOBGOOD 2008 (AHC 08-1196)
- PELA LOLLEY 2003 (AHC 2004-0328)

N
W E
S

ALL IN JEFFERSON COUNTY
AS FOUND ON THE BROOKSIDE,
ALABAMA U.S.G.S. QUAD.

BEST COAL COMPANY, INC.

ALL MINES

PROJECT AREA MAP

FILE:	SCALE: 1" = 2000'	JOB NO:
APPROVED BY:	DATE: 04/07/2014	SHEET NO:

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

FRANK W. WHITE
EXECUTIVE DIRECTOR

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

May 8, 2012

Heath Franks
PERC Engineering
P.O. Box 1712
Jasper, Alabama 35502

Re: AHC 04-0328
Best Coal, Inc.
Narley Mine No. 3
13-Acre Addition
Jefferson County, Alabama

Dear Ms. Bazzill:

Upon review of the cultural resource assessment submitted by your office, we have determined that the project activities will have no adverse effect on cultural resources listed on or eligible for the National Register of Historic Places. Therefore, we concur with the proposed project. However, should artifacts or archaeological features be discovered during project activities, work shall cease and our office shall be consulted immediately.

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

Elizabeth Ann Brown
Deputy State Historic Preservation Officer

EAB/GCR/gcr

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

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

March 20, 2009

Heath Franks
PERC Engineering
P.O. Box 1712
Jasper, Alabama 35502

Re: AHC 04-0328
Cultural Resource Assessment
Narley Mine No. 3
Jefferson County, Alabama

Dear Mr. Franks:

Upon review of the cultural resource assessment conducted by P. E. LaMoreaux, 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

preserveALA
ALABAMA HISTORICAL COMMISSION

February 26, 2004

Keith Madison, P.G.
PERC Engineering Co., Inc.
P.O. Box 1712
Jasper, AL 35502

Re: AHC 2004-0328; CRA for Narley Mine, Jefferson County

Dear Mr. Madison:

LEE H. WARNER
Executive Director

468 South Perry Street
Montgomery, Alabama
36130-0900

tel 334 242•3184
fax 334 240•3477

Per your telephone conversation with Amanda McBride of our office, the Alabama Historical Commission has determined that the project activities will have no effect on any known cultural resources listed on or eligible for the National Register of Historic Places. Therefore, we can 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. They include but are not excluded to arrowheads, broken pieces of pottery or glass, stone implements, metal fasteners or tools, etc. Archaeological features are stains in the soil that indicated disturbance by human activity. Some examples are post holes, 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 commitment to helping us preserve Alabama's non-renewable resources. Should you have any questions, please contact Amanda McBride of this office and include the AHC tracking number referenced above.

Very truly yours,

Elizabeth Ann Brown
Deputy State Historic Preservation Officer

EAB/ALM/alm

Native American Consultation Letters

United States Department of the Interior
Bureau of Land Management
Southeastern States Field Office
411 Briarwood Drive, Suite 404
Jackson, Mississippi 39206
http://www.es.blm.gov

IN REPLY REFER TO:
8100 (020) JMS Best Coal, Inc.

July 01, 2011

Beasley Denson, Miko
Mississippi Band of Choctaw Indians
P.O. Box 6010
Philadelphia, Mississippi 39350

Dear Miko Denson:

The BLM has received a request to lease Federal coal under private surface from Best Coal, Inc. The coal lease will be developed as a continuation of the Narley Mine, in northeastern Jefferson County, already in production on private surface. The mine is an open-pit production which will access federal minerals approximately 300 feet below the surface. The proposed 160 acres of Federal coal for lease are located in the following locations (map enclosed):

Jefferson County (Brookside quadrangle)
T. 15 S., R. 4 W. Sec. 13, NESW, SESW, SWSW
Sec. 23, NENE, SENE
Sec. 24, NWNW, NENW, SWNW, SENW, NWSW, NESW, SWSW, SESW, SWNE, NWSE (approx 160 ac.)

In 2003 and 2009, P.E. LaMoreaux and Associates conducted the cultural resource assessments. The report entitled Phase 1 Cultural Resources Assessment For The Proposed Narly Mine No. 3 In Jefferson County, Alabama dated March 16, 2009, has been reviewed and commented on by the Alabama Historical Commission, with a finding of no impacts to cultural or historic properties.

The BLM concurs with the above determination and will not require any further consideration of the effect of permitting on the proposed project. However, in the event of accidental discovery,

additional consultation with both your office and the Alabama Historical Commission would be required: this requirement will be stipulated in the lease agreement

If you are aware of any sites within the proposed lease area which are currently being used for religious purposes, or are recognized as sacred sites on these privately owned lands, please let us know so that additional consultation can be conducted to avoid collateral impacts. As provided by law, any specific location information will be held in confidence. Your information is requested within 30 days.

If you have any questions, concerns or comments about this undertaking, please contact John M. Sullivan, Archeologist, at (601) 977-5439 or John_M_Sullivan@BLM.Gov.

Sincerely,

Original Signed
Bruce Dawson

Bruce Dawson
Field Manager

Enclosures
1 - Map

cc via email: Ken Carlton, Cultural/Historic Preservation

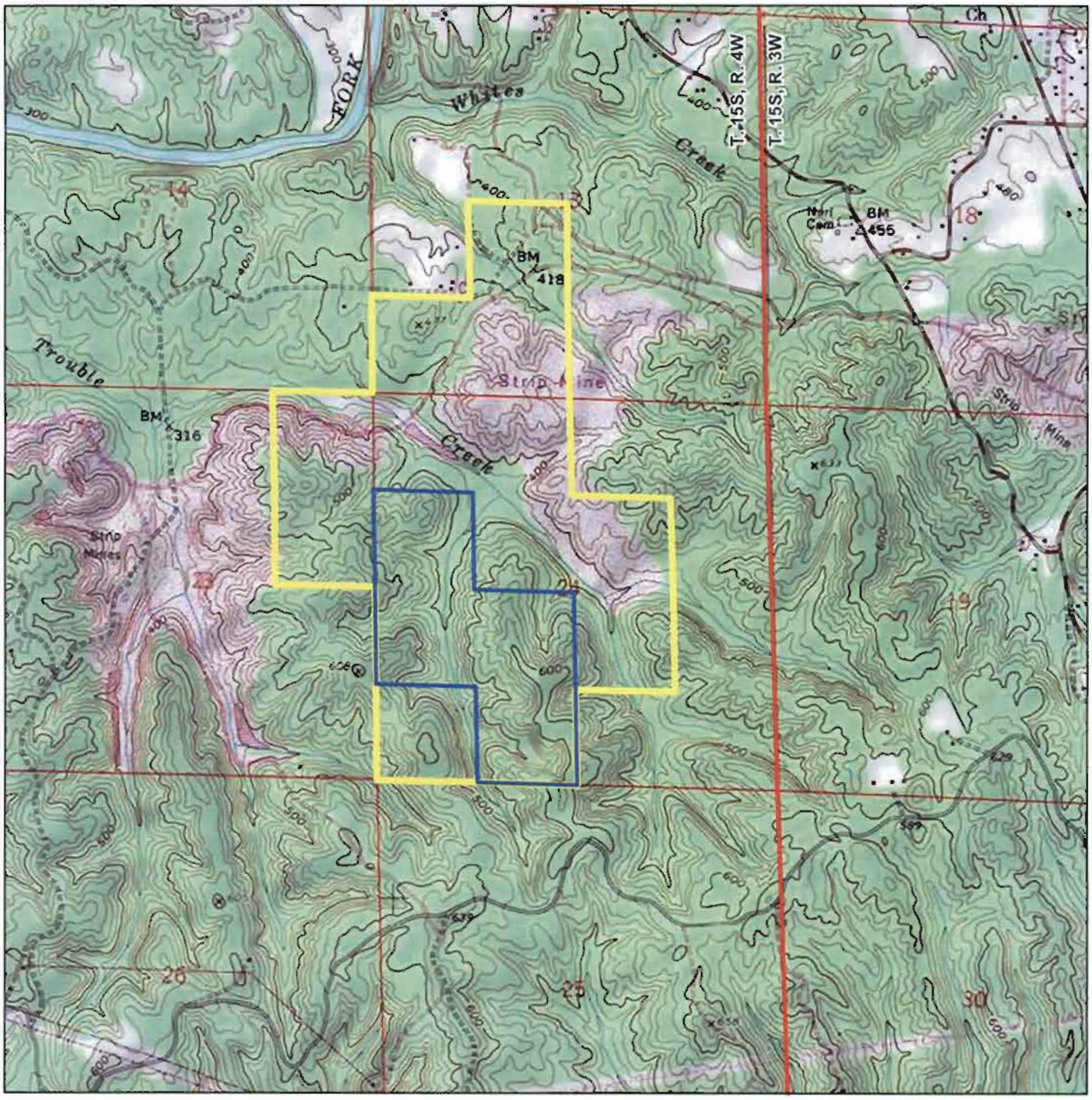
bc:
JFO CF & RF
ES RF
DWinters
RMills
ES020:JMSullivan:07/01/2011:601-977-5400:Jefferson Co.T.15S.R.4W.Sec. 13, 23, 24.Nearly Mine.NA.Ltr

Original letter goes to these	CC letter goes to these
Beasley Denson, Miko Mississippi Band of Choctaw Indians P.O. Box 6010 Philadelphia, MS 39350	Mr. Ken Carleton Mississippi Band of Choctaw Indians P.O. Box 6257 Philadelphia, MS 39350 kcarleton@choctaw.org
George Scott, Mekko Thlopthlocco Tribal Town P.O. Box 188 Okemah, Oklahoma 74859	Charles Coleman, Cultural/Historic Preservation P.O. Box 188 Okemah, Oklahoma 74859 chascoleman@prodgy.net 405-220-2185 (cell) 405-786-2579 (office/home)
Tiger Hobia, Mekko Kialagee Tribal Town P.O. Box 332 Wetumka, OK 74883	Tel# (405) 452-3263, Fax# 452-3413
Gregory Pyle, Chief Choctaw Nation of Oklahoma Drawer 1210 Durant, OK 74701	Mr. Terry Cole, Tribal Historic Preservation Officer Dr. Ian Thompson, RPA, Tribal Archaeologist and NAGPRA Specialist 580-775-0914, 580-920-3181 (Fax) P.O. Drawer 1210 Durant, OK 74702 tcole@choctawnation.com ithompson@choctawnation.com
George Wickliffe, Chief United Keetoowah Band of Cherokee Indians in Oklahoma P. O. Box 746 Tahlequah, Oklahoma 74465	Ms. Lisa Larue, Tribal Historic Preservation Officer P.O. Box 746 Tahlequah, OK 74465 llarue@unitedkeetoowahband.org
Only send email to Preservation Officer Tarpie Yargee, Chief Alabama-Quassarte Tribal Town P.O. Box 187 Wetumka, OK 74883	Augustine Asbury, 2nd Chief/ Cultural Preservation Officer P.O. Box 187 Wetumka, OK 74883 aqttcultural@yahoo.com 405 452-3987

Original letter goes to these	CC letter goes to these
B. Cheryl Smith, Chief Jena Band of Choctaw P.O. Box 2717 Jena LA 71342	Dana Masters, Tribal Council and Cultural Preservation Officer Jena Band of Choctaw P.O. Box 2717 Jena LA 71342 danammasters@aol.com 318-992-2717, 318-992-82-44 (Fax)
A.D. Ellis, Principal Chief Muscogee (Creek) Nation of Oklahoma P.O. Box 580 Okmulgee, OK 74447	Emman Spain, Cultural/Historic Preservation Office Muscogee (Creek) Nation of Oklahoma P.O. Box 580 Okmulgee, OK 74447 espain@muscogeenation-NSN.Gov
Chadwick Smith, Principal Chief Cherokee Nation of Oklahoma P. O. Box 948 Tahlequah, Oklahoma 74465	Dr. Richard Allen, Cultural/Historic Preservation P.O. Box 948 Tahlequah, OK 74465 Richard-Allen@cherokee.org
Leonard Harjo, Principal Chief Seminole Nation of Oklahoma P.O. Box 1498 Wewoka, Oklahoma 74884	Natalie Deer, Cultural Preservation Office P.O. Box 1768 Seminole, OK 74868-1768 ndeere@seminolenation.com
Honorable Bill Anoatubby Governor Chickasaw Nation P.O. Box 1548 Ada, OK 74821	Kevin Scrivner, Historic Preservation Manager Gingy Nail, Historic Preservation Officer Chickasaw Nation P.O. Box 1548 Ada, OK 74821 Kevin.Scrivner@chickasaw.net gingy.nail@chickasaw.net,
Fred L. McGhee, Chairman Poarch Band of Creek Indians 5811 Jack Springs Road Atmore, AL 36502	Mr. Robert Thrower, Tribal Historic Preservation Officer Poarch Band of Creek Indians 5811 Jack Springs Road Atmore, AL 36502 rgthrower@hotmail.com 251-368-9136 ext 2656

Original letter goes to these	CC letter goes to these
Oscola Clayton Sylestine, Chairman Alabama-Coushatta Tribe of Texas 571 State Park Road 56 Livingston, TX 77351	Bryant J. Celestine, Historical Preservation Alabama-Coushatta Tribe of Texas 571 State Park Road 56 Livingston, TX 77351 celestine.bryant@actribe.org
Kevin Sickey, Chairman Coushatta Indian Tribe P.O. Box 818 Elton, LA 70532	Linda Langley, Cultural/Historic Preservation P.O. Box 818 Elton, LA 70532 llangley@mcneese.edu 337-584-2261
Mitchell Cypress, Chairman Seminole Tribe of Florida 6300 Stirling Road Hollywood, Florida 33024	Willard Steele, Tribal Historic Preservation Officer (863) 983-6549 Anne Mullins, Compliance Review Supervisor (863) 983-6549 ext. 12262 34725 W. Boundary Road Clewiston, FL 33440 wsteele@semtribe.com, annemullins@semtribe.com, elliottyork@semtribe.com, jenniferpietarila@semtribe.com

Proposed Surface Coal Mining Operations
Company: Best Coal, Inc.
Jefferson County, Alabama



Legend

- Federal Coal Ownership
- Best Coal Inc. Proposed Mining Area

0 1,000 2,000 4,000 6,000 Feet

1:23,702

N

U.S. Department of the Interior
Bureau of Land Management
Southeastern States Field Office
Jackson, Mississippi

Proposed Mining Operation in T. 15S, R. 4W:
Section 13 - NESW, SESW, SWSW
Section 23 - NENE, SENE
Section 24 - NWNW, NENW, SWNW, SENW, NWSW, NESW, SWSW, SESW, SWNE, NWSE
(Federal acreage being approximately 160 acres. Total permit acreage including federal being approximately 600 acres.)

This map contains portions of the following USGS 1:24,000 Topographic Quadrangle: Brookside

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

SEMINOLE TRIBE OF FLORIDA
TRIBAL HISTORIC PRESERVATION OFFICE

TRIBAL HISTORIC
PRESERVATION OFFICE

SEMINOLE TRIBE OF FLORIDA
AH-TAH-THI-KI MUSEUM

HC-61, BOX 21A
CLEWISTON, FL 33440

PHONE: (863) 983-6549
FAX: (863) 902-1117

John Sullivan
Department of the Interior
Bureau of Land Management
Jackson Field Office
411 Briarwood Drive, Suite 404
Jackson, MS 39206

THPO#: 008514

August 16, 2011

Subject: Assessment of Effects for the Proposed Narly Mine No. 3 in Jefferson County, Alabama

Dear Mr. Sullivan,

The Seminole Tribe of Florida's Tribal Historic Preservation Office (STOF-THPO) has received the BLM correspondence concerning the aforementioned project. The STOF-THPO has no objection to your proposal at this time. However, the STOF-THPO would like to be informed if cultural resources that are potentially ancestral or historically relevant to the Seminole Tribe of Florida are inadvertently discovered at any point during the construction process.

We thank you for the notification of this proposed project. Please reference ***THPO-008514*** in any future documentation about this project.

Sincerely,

Direct routine inquiries to:

Willard Steele,
Tribal Historic Preservation Officer
Seminole Tribe of Florida

Anne Mullins
Compliance Review Supervisor
annemullins@semtribe.com

ETY:am:ws

United States Department of the Interior
Bureau of Land Management
Southeastern States Field Office
411 Briarwood Drive, Suite 404
Jackson, Mississippi 39206
http://www.es.blm.gov

IN REPLY REFER TO:
8100 (020) JMS Best Coal, Inc.

July 01, 2011

George Wickliffe, Chief
United Keetoowah Band of Cherokee Indians in Oklahoma
P. O. Box 746
Tahlequah, Oklahoma 74465

The United Keetoowah Band of Cherokee Indians in Oklahoma has no objection to the referenced project. However, if any remains, artifacts or other items are inadvertnetly discovered, please cease construction immediately and contact us at 918-458-6533 or by letter.

Lisa C. Stopp, Tribal NAGPRA POC — JUL 15 2011 Date

Dear Chief Wickliffe:

The BLM has received a request to lease Federal coal under private surface from Best Coal, Inc. The coal lease will be developed as a continuation of the Narley Mine, in northeastern Jefferson County, already in production on private surface. The mine is an open-pit production which will access federal minerals approximately 300 feet below the surface. The proposed 160 acres of Federal coal for lease are located in the following locations (map enclosed):

Jefferson County (Brookside quadrangle)
T. 15 S., R. 4 W. Sec. 13, NESW, SESW, SWSW
Sec. 23, NENE, SENE
Sec. 24, NWNW, NENW, SWNW, SENW, NWSW, NESW, SWSW, SESW, SWNE, NWSE (approx 160 ac.)

In 2003 and 2009, P.E. LaMoreaux and Associates conducted the cultural resource assessments. The report entitled Phase 1 Cultural Resources Assessment For The Proposed Narly Mine No. 3 In Jefferson County, Alabama dated March 16, 2009, has been reviewed and commented on by the Alabama Historical Commission, with a finding of no impacts to cultural or historic properties.

The BLM concurs with the above determination and will not require any further consideration of the effect of permitting on the proposed project. However, in the event of accidental discovery,

Elliott York
<ElliottYork@semtribe.com>
07/08/11 10:31 AM

To "John_M_Sullivan@blm.gov" <John_M_Sullivan@blm.gov>
cc
bcc
Subject Narley Mine Expansion - Jefferson County, AL

Good Morning John,

The STOF-THPO has received and reviewed the notification you sent regarding the aforementioned project proposal. Please find attached a position letter for your files (THPO-008514 Response). If you have any questions, don't hesitate to contact me via email or at the telephone number listed below.

Thanks,

Elliott York
Compliance Review
Tribal Historic Preservation Office
Seminole Tribe of Florida
30290 Josie Billie Highway
PMB 1004
Clewiston, FL 33440
Phone: 863-983-6549 ext: 12216
Fax: 863-902-1117

THPO-008514 Response.docx

SEMINOLE TRIBE OF FLORIDA
TRIBAL HISTORIC PRESERVATION OFFICE

TRIBAL HISTORIC
PRESERVATION OFFICE
SEMINOLE TRIBE OF FLORIDA
AH-TAH-THI-KI MUSEUM
30290 JOSIE BILLIE HWY
PMB 1004
CLEWISTON, FL 33440
PHONE: (863) 983-6549
FAX: (863) 902-1117

John Sullivan
Bureau of Land Management
Southeastern States Field Office
411 Briarwood Drive, Suite 404
Jackson, Mississippi 39206

THPO#: 008514

July 8, 2011

Subject: Phase I Survey of the Proposed Narley Mine Expansion in Jefferson County, Alabama

Dear Mr. Sullivan,

The Seminole Tribe of Florida Tribal Historic Preservation Office (STOF-THPO) has received the BLM's correspondence for the aforementioned project. Due to the fact that the project area is within the geographic area considered by the Seminole Tribe of Florida to be ancestral, aboriginal, or ceded (NHPA 1966, Section b1, and 36 CFR, Section 800.2), the STOF-THPO would like to review the Phase I archaeological survey for the proposed project's APE before commenting on possible effects to cultural resources.

We thank you for the notification of this proposed project. Please reference ***THPO-008514*** in any future documentation about this project.

Sincerely,

Direct routine inquiries to:

Willard Steele,
Tribal Historic Preservation Officer
Seminole Tribe of Florida

Anne Mullins
Compliance Review Supervisor
annemullins@semtribe.com

ETY:am:ws

"Bryant J. Celestine" <celestine.bryant@actribe.org>
07/29/11 03:04 PM

To <j35sullivan@blm.gov>
cc
bcc
Subject RE: Best Coal Inc., Narley Mine

Dear Mr. Sullivan:

On behalf of Mikko Oscola Clayton Sylestine and the Alabama-Coushatta Tribe, our appreciation is expressed on your efforts to consult us regarding Best Coal Inc, Narley Mine expansion in Jefferson County.

Our Tribe maintains ancestral associations throughout the state of Alabama despite the absence of written records to completely identify Tribal activities, villages, trails, or burial sites. However, it is our objective to ensure significances of Native American ancestry, especially of the Alabama-Coushatta Tribe, are administered with the utmost considerations.

Upon review of your July 1, 2011 submission, no immediately known impacts to religious, cultural, or historical assets of the Alabama-Coushatta Tribe of Texas are anticipated at this time. In the event of inadvertent discovery of human remains and/or archaeological artifacts, activity in proximity to the location must cease and appropriate authorities, including our office, notified without delay for additional consultation.

Should you require further assistance, please do not hesitate to contact us.

Sincerely,

Bryant J. Celestine
Historic Preservation Officer
Alabama-Coushatta Tribe of Texas
571 State Park Rd 56
Livingston, Texas 77351
936 - 563 - 1181
celestine.bryant@actribe.org

ADCNR Consultation Letter

STATE OF ALABAMA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
64 NORTH UNION STREET, SUITE 464
MONTGOMERY, ALABAMA 36130

ROBERT BENTLEY
GOVERNOR

N. GUNTER GUY, JR.
COMMISSIONER

CURTIS JONES
DEPUTY COMMISSIONER

PATRICIA J. POWELL, DIRECTOR
STATE LANDS DIVISION

TELEPHONE (334) 242-3484
FAX NO (334) 242-0999

January 18, 2013

Ms. Amber Tubbs
McGehee Engineering Corp.
P.O. Box 3431
Jasper, AL 35502-3431

RE: Sensitive Species Information request
Best Coal Company, Inc. - Narley Mine No. 3

Dear Ms. Tubbs:

The Natural Heritage Section office received your e-mail dated 1/17/2013 addressed to Ashley Peters on 1/17/2013 and has since developed the following information pertaining to sensitive species (state protected, and federally listed candidate, threatened, and endangered species). I have enclosed a list of sensitive species which the Natural Heritage Section Database or the U.S. Fish and Wildlife Service have indicated occur or have occurred in Jefferson County. Additionally, I have listed some potentially helpful and informative web sites at the end of this letter.

The Natural Heritage Section database contains numerous records of sensitive species in Jefferson County. Our database indicates the area of interest has had no biological survey performed at the delineated location, by our staff or any individuals referenced in our database. Therefore we can make no accurate assessment to the past or current inhabitancy of any federal or state protected species at that location. A biological survey conducted by trained professionals is the most accurate way to ensure that no sensitive species are jeopardized by the development activities.

The closest sensitive species is recorded in our database as occurring approximately 0.7 miles from the subject site. The current range of this federally listed endangered species (Plicate Rocksnail) is limited to a small area of the Locust Fork of the Black Warrior River in Jefferson and Blount Counties, Alabama. This species requires free flowing water in order to survive, therefore impoundments are a major threat to this species.*

I hope this information will be useful to you. The provided information is to help you in fulfilling your necessary legal obligations. This does not constitute any form of Section 7 consultation. The Natural Heritage Section recommends that the U. S. Fish and Wildlife Service field office in Daphne be contacted for Section 7 consultations.

The information does not suggest that protected species are not at this location. The specific location of a sensitive species is considered confidential information by a State Lands Division Regulation and can be released only to individuals who enter into a confidentiality and indemnity contract with the State Lands Division.

The Natural Heritage Section provides this information as a service to the people of Alabama. The NHS acts as a clearing house for species distribution data. We happily accept any information environmental researchers are willing to donate. Sensitive species exact locations are kept confidential. If you would be willing to donate any information to this database, we will be better able to assist all individuals interested in environmental compliance.

Sincerely,

Ashley Peters

Ashley Peters
Database Manager
Natural Heritage Section

Enclosures

*Paraphrased Information from NatureServe. 2006. NatureServe Explorer: An online encyclopedia of life [web application]. Version 5.0. NatureServe, Arlington, Virginia. Available http://www.natureserve.org/explorer. (Accessed: August 18, 2006).

Potentially helpful web sites

Information about federally listed species
http://daphne.fws.gov/es/specieslst.htm
http://www.pfmt.org/wildlife/endangered/
http://www.natureserve.org/explorer/

State Protected Species Regulations:
http://www.outdooralabama.com/hunting/regulations/regs.cfm

ALABAMA'S FEDERALLY LISTED AND STATE PROTECTED SPECIES (BY COUNTY)

This is a list of protected species that are believed to occur in the designated county and the legal protection status of each species. This list is a combination of the U.S. Fish and Wildlife Service (Daphne field office) federally listed species county and state lists and the Alabama State Lands Division's Natural Heritage Section (SLD-NHS) Database of species occurrence data. This list is continually being updated, and, therefore, it may be incomplete or inaccurate and is provided strictly for informational purposes. Site specific information can be provided by the Alabama SLD-NHS and/or the U.S. Fish and Wildlife Service (Daphne field office) prior to project activities. To be certain of occurrence, surveys should be conducted by qualified biologists to determine if a sensitive species occurs within a project area. Species not listed for a given county does not imply that they do not occur there, only that their occurrence there is as yet unrecorded by these two agencies. This list is currently under review and refects only our current understanding of species distributions. It also does not constitute any form of Section 7 consultation. The Alabama SLD-NHS recommends that the U.S. Fish and Wildlife Service field office in Daphne be contacted for Section 7 consultations.

Jefferson

Protection Status	Common Name	Scientific Name	Applicable State Regulation
Candidate	Black Warrior River Waterdog	Necturus alabamensis	
Candidate/ State Protected	Rush Darter	Etheostoma phytophilum	220-2-.92 (1) (a)
Endangered	Leafy Prairie Clover	Dalea foliosa	
Endangered/ State Protected	Cahaba Shiner	Notropis cahabae	220-2-.92 (1) (a)
Endangered/ State Protected	Plicate Rocksnail	Leptoxis plicata	220-2-.98 (1) (a)
Endangered/ State Protected	Southern Clubshell	Pleurobema decisum	220-2-.98 (1) (a)
Endangered/ State Protected	Triangular Kidneyshell	Ptychobranchus greenii	220-2-.98 (1) (a)
Endangered/ State Protected	Upland Combshell	Epioblasma metastriata	220-2-.98 (1) (a)
Endangered/ State Protected	Vermilion Darter	Etheostoma chermocki	220-2-.92 (1) (a)
Endangered/ State Protected	Watercress Darter	Etheostoma nuchale	220-2-.92 (1) (a)
State Protected	Cooper's Hawk	Accipiter cooperi	220-2-.92 (1) (d)
Threatened/ State Protected	Blue Shiner	Cyprinella caerulea	220-2-.92 (1) (a)
Threatened/ State Protected	Finelined Pocketbook	Hamiota altilis	220-2-.98 (1) (a)
Threatened/ State Protected	Flattened Musk Turtle	Sternotherus depressus	Section 9-11-269
Threatened/ State Protected	Goldline Darter	Percina aurolineata	220-2-.92 (1) (a)
Threatened/ State Protected	Orangenacre Mucket	Hamiota perovalis	220-2-.98 (1) (a)

Key to codes on list:

Endangered - Federally listed as an endangered species by the U. S. Fish and Wildlife Service

Threatened - Federally listed as a threatened species by the U. S. Fish and Wildlife Service

Candidate - Federally listed as a candidate species by the U. S. Fish and Wildlife Service

Experimental - Species is protected throughout its range, except for the nonessential experimental population, by the U. S. Fish and Wildlife Service

State Protected - It is unlawful to take, capture or kill; possess, sell or trade for anything of monetary value, or offer to sell or trade these species. Alabama Regulations relating to game, fish and furbearing animals. 2009-2010. Alabama Department of Conservation and Natural Resources. See http://www.outdooralabama.com/hunting/regulations/regs.cfm for more information.

Notes:
- Bald eagle (Haliaeetus leucocephalus), red-cockaded woodpecker (Picoides borealis) and the American peregrine falcon (Falco peregrinus anatum) may occur in any county, if habitat exists.
- Wood stork: July - October
- Bald eagle (Haliaeetus leucocephalus) has been delisted. This species is still protected by the non-game species regulation and the migratory bird act. This species distribution is statewide but it is most likely to be observed near large rivers and reservoirs.
- Sea turtles: Only loggerhead is potential nester, the rest are in coastal waters.
- Black bear (Ursus americanus sp.) - known to exist in Mobile County, but not listed.
-Gulf moccasinshell (Mediondus penicillatus), oval pigtoe (Pleurobema pyriforme), Chipola slabshell (El liptio chipolaensis), and purple bankclimber (Elliptoideus sloatianus) are freshwater mussels of the family Unionidae found only in eastern Gulf Slope streams draining the Apalachicolan Region, defined as streams from the Escambia to the Suwannee river systems, and occurring in southeast Alabama, southwest Georgia, and north Florida. All are listed as "Endangered".
- Fanshell (Cyprogenia stegaria), oyster mussel (Epioblasma capsaeformis), and Catspaw (purple cat's paw pearlymussel) (Epioblasma obliquata obliquata) are historically known to be found in the Tennessee River system and drainage.
-Gentian pinkroot (Spigelia gentianoides) has been historically found along the Alabama-Florida border.
-West Indian Manatee (Trichechus manatus) has been known to move north along the gulf coast west to Louisiana.

January 17, 2013

Alabama Department of Conservation and Natural Resources
Attention: Ms. Ashley Peters
64 North Union Street
Montgomery, Alabama 36130

RE: **Best Coal Company, Inc. -- Narley Mine No. 3 -- Initial Project**

We are in the process of applying for a mining permit for the area described below and would like to request comments from your office in order to proceed with this project.

Best Coal Company, Inc. wants to open mining operations in Jefferson County, Alabama. In order to accommodate its business expansion in Jefferson County, Best Coal wants to permit 228 acres at the project site as located in Sections 23 & 24, Township 15 South, Range 4 West, all on the Brookside, Alabama U.S.G.S Quadrangle as found in Jefferson County, Alabama. The proposed site location is shown on the attached 2000' scale project area map attachment "B".

I would like to thank you for your co-operation concerning this matter and would appreciate your comments at your earliest convenience. If you should have any questions or need additional information, please do not hesitate to contact our office. Preferred contact method is email at the following address: amber.tubbs@mcgehee.org. When possible and convenient, you may also send your response to the above email address.

Post Office Box 3431 • 450 19th Street • Jasper, Alabama 35502-3431 • 205-221-0686 • Fax 205-221-7721 •
amber.tubbs@mcgehee.org

Sincerely,

McGehee Engineering Corp.

Amber Tubbs

Amber Tubbs
Project Manager,
amber.tubbs@mcgehee.org

Enclosure:

(A) Project Notification Summary
(B) *Project Area Map 2000 Scale*

Attachment “A”

Project Notification Summary

Post Office Box 3431 • 450 19th Street • Jasper, Alabama 35502-3431 • 205-221-0686 • Fax 205-221-7721 •
amber.tubbs@mcgehee.org

PROJECT NOTIFICATION & PROJECT SUMMARY
REQUEST FOR IDENTIFICATION OF THE AREAS OF SPECIAL CONCERN
FOR A SURFACE OR UNDERGROUND MINING OPERATION

Date: _January 17, 2013

Mining Company Name: Best Coal Company, Inc.

Return Address: P. O. Box 3431, Jasper, Alabama 35502-3431

Return Fax Number: (205) 221-7721

Contact Person: McGehee Engineering Corp., L. Stephen Blankenship

Project Name: Narley Mine No. 3

Number of Acres: 228 Acres

USGS Quad Sheet(s) on which the Mine occurs: Brookside

County: Jefferson County

See Attached Map

Current Landuse of Permit and Adjacent Areas:

Undeveloped/No current use

Dominant Vegetation Communities of Permit and Adjacent Areas:

Virginia and Loblolly Pine, Fescue and other various grasses, weeds & briars.

Project:

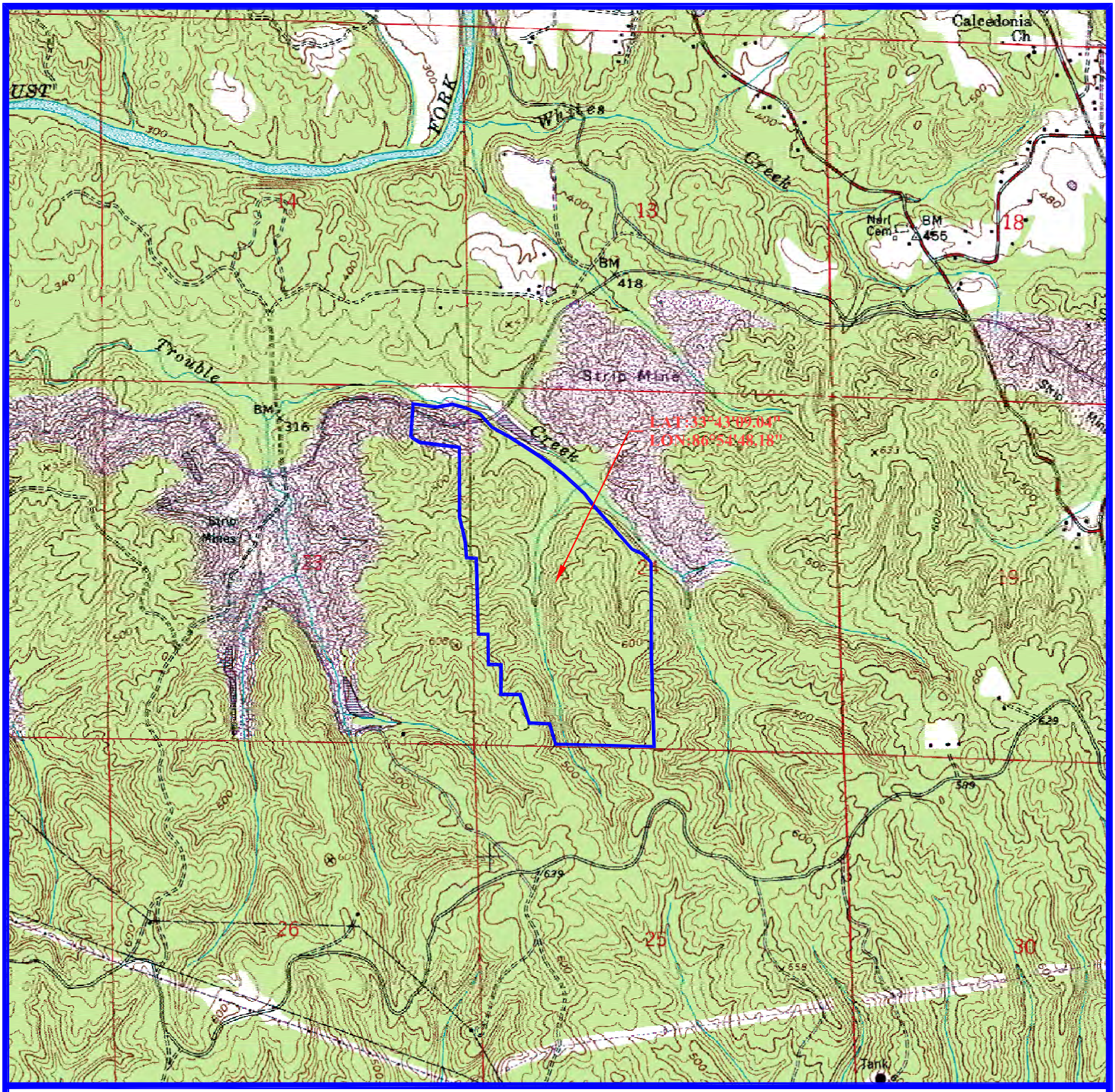
Best Coal Company, Inc. – Narley Mine No. 3 – Initial Project

Post Office Box 3431 • 450 19th Street • Jasper, Alabama 35502-3431 • 205-221-0686 • Fax 205-221-7721 •
amber.tubbs@mcgehee.org

Attachment “B”

Project Area Map 2000 Scale

Post Office Box 3431 • 450 19th Street • Jasper, Alabama 35502-3431 • 205-221-0686 • Fax 205-221-7721 •
amber.tubbs@mcgehee.org



SCALE: 1" = 2000'

BEST COAL, INC.
NARLEY MINE NO. 3

N
W E
S

PROJECT AREA MAP

mcgehee engineering corp
post office box 3431
jasper, alabama 35502-3431
telephone: (205) 221-0686 fax: 221-7721
email: staff@mcgehee.org

SECTION 23 & 24, TOWNSHIP 15 SOUTH, RANGE 4 WEST
ALL IN JEFFERSON COUNTY, ALABAMA
AS FOUND ON THE BROOKSIDE, AL. USGS QUAD.

Proposed Permit Boundary

Latitude: 33°43"09" N
Longitude: 86°54"48" W

Date: 10/25/2012
Drawn By: B.W.Y

ACOE Consultation Letter

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

REPLY TO
ATTENTION OF:

February 14, 2013

Inland Section North
Regulatory Division

SUBJECT: Nationwide Permit Authorization - Permit Number SAM-2010-01027-CHE, Narley Mine No. 3, Best Coal, Inc.

Best Coal, Inc.
c/o McGehee Engineering Corporation
Attention: Mr. Brad Youngblood
Post Office Box 3431
Jasper, Alabama 35502-3431

Dear Mr. Youngblood:

This letter is in response to your November 2, 2012 request for re-verification of this previously authorized project. The project is located near N 33.719628, W 86.914558 in Jefferson County, Alabama.

The original permit verification authorized impacts to 0.01 acre of wetlands, 7,106 linear feet (lf) of ephemeral stream, and 4,080 lf of intermittent stream. According to your submittal, 553 lf of ephemeral stream has been impacted, leaving 6,553 lf of ephemeral stream, 4,080 lf of intermittent stream and 0.01 acre of wetland to be impacted.

Based on your submittal, your project is re-verified pursuant to Nationwide Permit (NWP) 21a (Federal Register, February 21, 2012 Vol. 77, No. 34). In order for this NWP authorization to be valid, you must ensure that the work is performed in accordance with the General Conditions of *Nationwide Permit 21a,* which can be viewed at our website at http://www.sam.usace.army.mil/Missions/Regulatory.aspx, as well as the conditions of the previous authorization.

Work will be accomplished as described in the original permit application and the associated permit authorization dated September 14, 2010. All other provisions and conditions to which the work is made subject shall remain in full force and effect.

Our verification of this NWP authorization is valid until March 18, 2017 unless the NWP is modified, reissued, or revoked prior to that date. If the authorized work has not been completed by that date, please contact us to discuss the status of your authorization. Failure to comply with all terms and conditions of this NWP verification invalidates this authorization and could result in a violation of Section 404 of the Clean Water Act.

A copy of this authorization is being provided to the Alabama Department of Environmental Management, Attention: Mr. Richard Hulcher, Field Operations Division, 1400 Coliseum Boulevard, Montgomery, Alabama 36110.

Please contact me at 205-290-9096 if you have any questions. For additional information about our Regulatory Program, visit our web site at http://www.sam.usace.army.mil/Missions/Regulatory.aspx, 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,

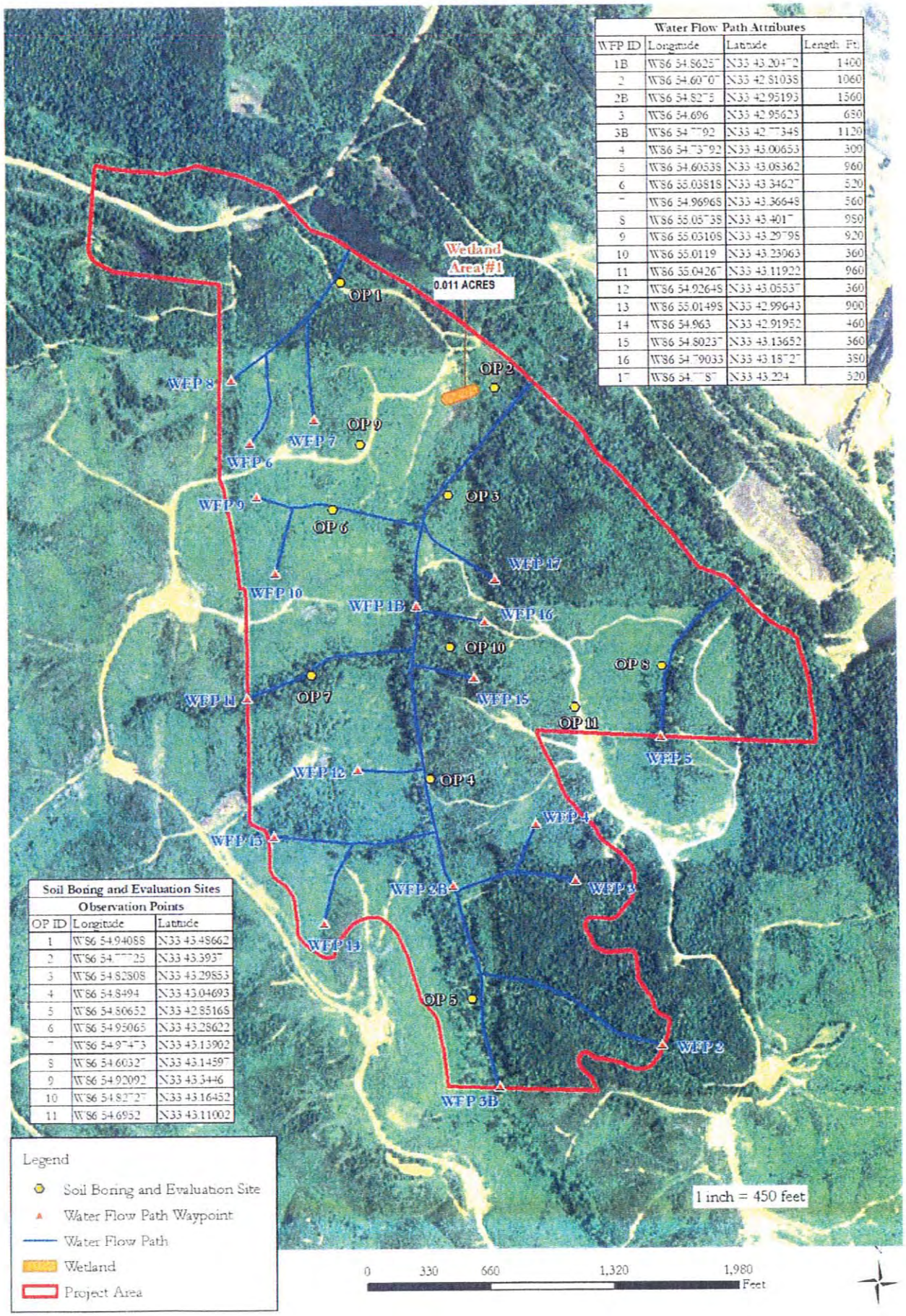
Lewis Brockette

Lewis Brockette
Project Manager
Regulatory Division
Birmingham Field Office

Alabama
Jefferson County
January 2010

Best Coal, Inc.
Narley Mine No. 3
Plan Map

Brookside DOQ
S23, 24 T15S R4W



Water Flow Path Attributes			
WFP ID	Longitude	Latitude	Length Ft.
1B	W86 54.86257	N33 43.20472	1460
2	W86 54.60707	N33 42.81038	1060
2B	W86 54.8275	N33 42.95193	1560
3	W86 54.696	N33 42.95623	650
3B	W86 54.7792	N33 42.77348	1120
4	W86 54.73792	N33 43.00653	300
5	W86 54.60535	N33 43.08362	960
6	W86 55.03818	N33 43.34627	520
7	W86 54.96968	N33 43.36648	560
8	W86 55.05735	N33 43.401	950
9	W86 55.05108	N33 43.29798	920
10	W86 55.0119	N33 43.23063	360
11	W86 55.0426	N33 43.11922	960
12	W86 54.92648	N33 43.05537	360
13	W86 55.01498	N33 42.99643	900
14	W86 54.963	N33 42.91952	460
15	W86 54.8023	N33 43.13652	360
16	W86 54.79033	N33 43.18727	380
17	W86 54.[illegible]87	N33 43.224	520

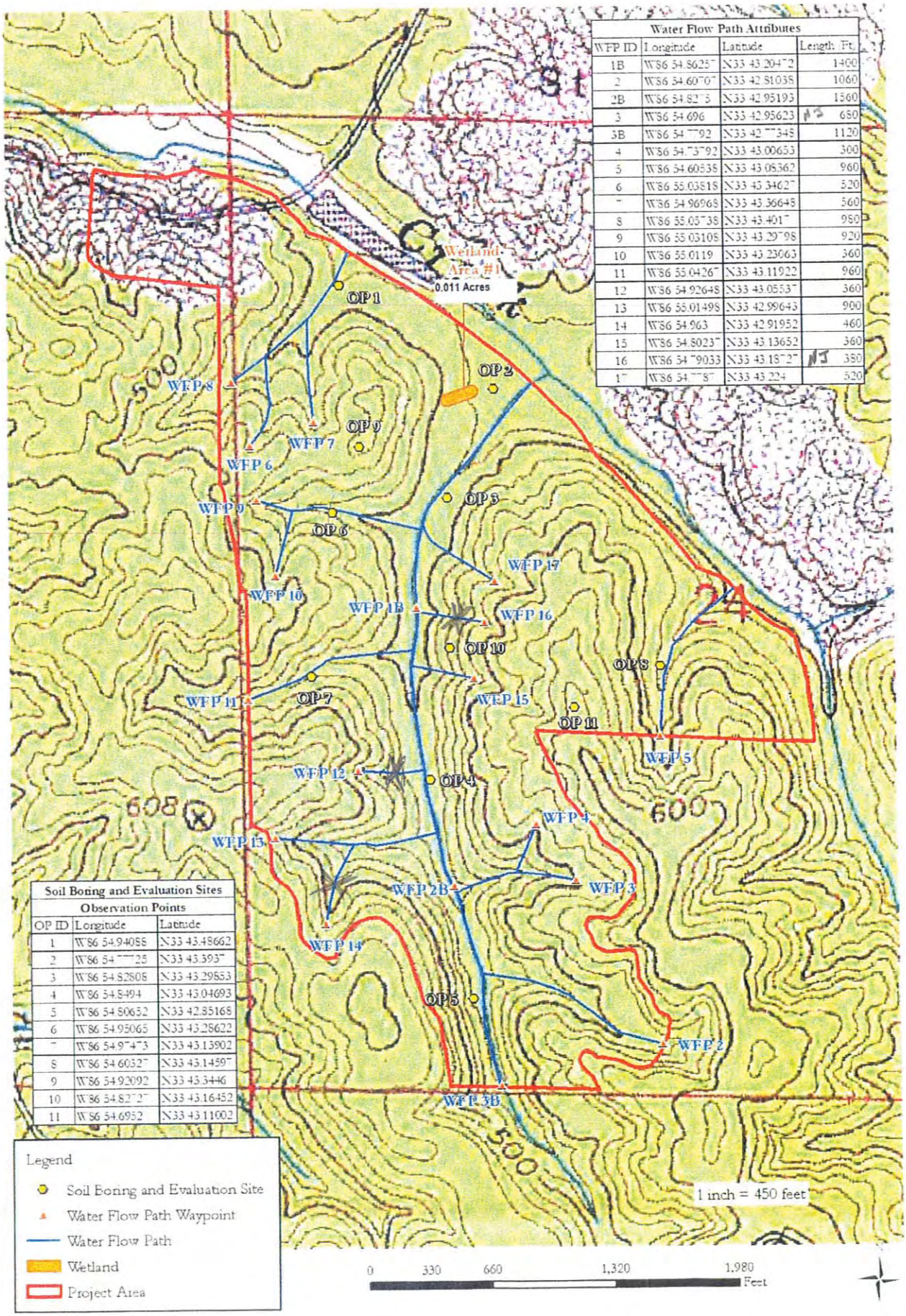
Soil Boring and Evaluation Sites		
Observation Points		
OP ID	Longitude	Latitude
1	W86 54.94088	N33 43.48662
2	W86 54.[illegible]725	N33 43.3937
3	W86 54.82808	N33 43.29853
4	W86 54.8494	N33 43.04693
5	W86 54.80652	N33 42.85168
6	W86 54.95065	N33 43.28622
7	W86 54.97473	N33 43.13902
8	W86 54.6032	N33 43.14597
9	W86 54.92092	N33 43.3446
10	W86 54.82727	N33 43.16452
11	W86 54.6952	N33 43.11002

Legend
- Soil Boring and Evaluation Site
- Water Flow Path Waypoint
- Water Flow Path
- Wetland
- Project Area

Alabama
Jefferson County
January 2010

Best Coal, Inc.
Narley Mine No. 3
Topographic Map

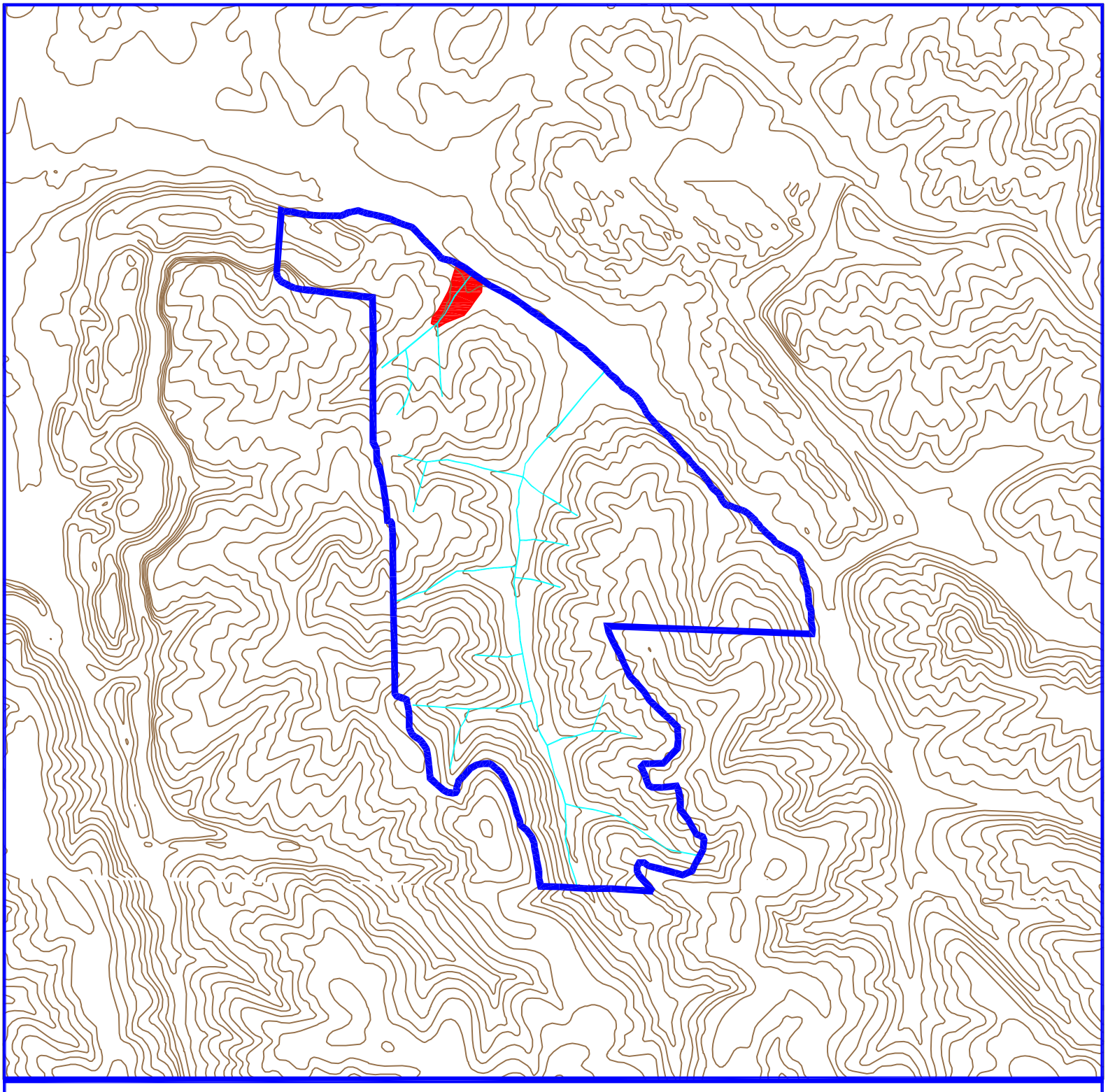
Brookside DOQ
S23, 24 T15S R4W



Water Flow Path Attributes			
WFP ID	Longitude	Latitude	Length Ft.
1B	W86 54.8625"	N33 43.2047"	1400
2	W86 54.6070"	N33 42.81038	1060
2B	W86 54.82"5	N33 42.95193	1560
3	W86 54.696	N33 42.95623	650
3B	W86 54."92	N33 42."348	1120
4	W86 54."3"92	N33 43.00653	300
5	W86 54.60538	N33 43.06362	960
6	W86 55.03818	N33 43.3462"	320
"	W86 54.96968	N33 43.36648	560
8	W86 55.05"38	N33 43.401"	980
9	W86 55.03108	N33 43.29"98	920
10	W86 55.0119	N33 43.23063	360
11	W86 55.0426"	N33 43.11922	960
12	W86 54.92648	N33 43.0553"	360
13	W86 55.01498	N33 42.99643	900
14	W86 54.963	N33 42.91952	460
15	W86 54.8023"	N33 43.13652	360
16	W86 54."9033	N33 43.18"2"	380
1"	W86 54."8"	N33 43.224	520

Soil Boring and Evaluation Sites		
Observation Points		
OP ID	Longitude	Latitude
1	W86 54.94088	N33 43.48662
2	W86 54."25	N33 43.393"
3	W86 54.82808	N33 43.29853
4	W86 54.8494	N33 43.04693
5	W86 54.80652	N33 42.85168
6	W86 54.95065	N33 43.28622
"	W86 54.9"473	N33 43.13902
8	W86 54.6032"	N33 43.1459"
9	W86 54.92092	N33 43.3446
10	W86 54.82"2"	N33 43.16452
11	W86 54.6952	N33 43.11002

Legend
- Soil Boring and Evaluation Site
- Water Flow Path Waypoint
- Water Flow Path
- Wetland
- Project Area



SCALE: 1" = 1000'
February 27, 2013

BEST COAL, INC.
NARLEY MINE NO. 3
(APPROXIMATELY 209 ACRES TOTAL)

N
W E
S

ACOE IMPACTS MAP

SECTION 24, TOWNSHIP 15 SOUTH, RANGE 4 WEST
ALL IN JEFFERSON COUNTY, ALABAMA
AS FOUND ON THE BROOKSIDE, AL. USGS QUAD.

PROJECT BOUNDARY

IMPACTED AREA

mcgehee engineering corp
post office box 3431
jasper, alabama 35502-3431
telephone: (205) 221-0686 fax: 221-7721
email: staff@mcgehee.org

Latitude: 33°43"08" N
Longitude: 86°54"52" W

THIS IS TABLE WE ARE GOING BY.

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

Table of Stream Attributes that are Jurisdictional

WFP ID	LONG	LAT	EPH LENGTH	EPH WIDTH	EPH ACRES	INT LENGTH	INT WIDTH	INT ACRES
1B	W86 54.86257	N33 43.20472				1400	3.3	0.1061
2B	W86 54.8275	N33 42.95195				1560	2.8	0.1002
3B	W86 54.7792	N33 42.7348				1120	2.5	0.0642
2	W86 54.60707	N33 42.81038	1060	1.5	0.0365			
3	W86 54.696	N33 42.95623	680	0.9	0.0141			
5	W86 54.60538	N33 43.08362	960	1.5	0.0331			
6	W86 55.03818	N33 43.3462	212	0.9	0.0045			
7	W86 54.96968	N33 43.36648	320	0.9	0.0066			
8	W86 55.05738	N33 43.401	980	1.2	0. 0269			
9	W86 55.03108	N33 43.29798	510	1.5	0.0175			
11	W86 55.04267	N33 43.11922	960	1.5	0.0331			
13	W86 55.01498	N33 42.99643	620	1.3	0.0185			
14	W86 54.963	N33 42.91952	275	0.9	0.0056			NJ
15	W86 54.80237	N33 43.13652	201	0.9	0.0041			
17	W86 54.7787	N33 43.224	320	0.9	0.0066			
		Total	**7,106**		**0.2071**	**4,080** OK		**0.2705**

Total Acres of Impacts Associated with this Project

Stream Type	Acres of Impact
Ephemeral	0.2071
Intermittent	0.2705
Wetlands	0.011
Total	**0.4886**

4, 12, 14 & 16 - NON-JURIS.

REPLY TO
ATTENTION OF:

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

June 1, 2012

Inland Section North
Regulatory Division

SUBJECT: No Permit Required - File Number SAM-2012-00615-CMS, Narley Mine No. 3 Additional Area, Best Coal, Inc.

Best Coal, Inc.
c/o Delta Natural Resource Service, Inc.
Attention: Mr. Cleo Stubbs
Post Office Box 941
Hartselle, Alabama 35640

Dear Mr. Stubbs:

This letter is in response to your May 10, 2012 letter requesting a jurisdictional determination at the proposed Narley Mine No. 3 additional area. Specifically, the property is situated in Section 24, Township 15 South, Range 4 West (N 33.71581, W 86.90859). The purpose of the project is to expand the existing operation into a 33 acre parcel. A topographic map of the project area is attached.

Based on our desktop review of the information furnished by your office and our review of topographic maps, aerial photographs, Jefferson County soil survey, and National Wetland Inventory maps, it appears that Federally-regulated wetlands or other "waters of the United States" do not occur on the property. Therefore, no permit, pursuant to our regulations, is required for your project. You should note that this determination is primarily based upon the information submitted by you and/or your consultant, and that you are ultimately responsible for its accuracy.

Please be advised that this jurisdictional determination reflects current policy and regulation and is valid for a period of 5 years from the date of this letter. If after the 5-year period this jurisdictional determination has not been specifically revalidated by the U.S. Army Corps of Engineers, it shall automatically expire. Should you disagree with certain terms and/or conditions of this determination, the enclosed Appeal Form outlines the steps to take to file your objection.

The statements contained herein do not convey any property rights or any exclusive privileges, and do not authorize any injury to property or obviate the requirements to obtain other local, State, or Federal assent required by law for the activities discussed above.

If the scope of work or project location changes, you are urged to contact this office for a verification of this determination.

Thank you for your cooperation with our permit program. If you have any questions concerning this matter, please feel free to contact me at (205) 290-9096 and refer to file number SAM-2012-00615-CMS.

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,

Courtney Shea
Project Manager
Regulatory Division
Birmingham Field Office

Enclosures

Alabama
Jefferson County
May 2012

Best Coal, Inc.
Narley Mine No. 3 Addition
Topographic Map

Brookside DOQ
S23, 24 T15S R4W

SAM. 2012-00615-CMS

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Best Coal, Inc.	File Number: SAM-2012-00615-CMS	Date: 6/1/12
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
X	APPROVED JURISDICTIONAL DETERMINATION	D
	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: USACE Mobile District – Birmingham Field Office 218 Summit Parkway, Suite 222 Homewood, Alabama 35209	If you only have questions regarding the appeal process you may also contact: Jason Steele Administrative Appeals Review Officer 60 Forsyth Street, SW (Room 9M10) Atlanta, GA 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:

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): June 1, 2012

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Mobile District CESAM-RD-I-N, Narley Mine NO. 3 Addition, SAM-2012-00615-CMS

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State:Alabama County/parish/borough: Jefferson City:
Center coordinates of site (lat/long in degree decimal format): Lat. 33.71581° N. Long. -86.90859° W.
Universal Transverse Mercator:
Name of nearest waterbody: trouble Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Locust Fork
Name of watershed or Hydrologic Unit Code (HUC): Locust Fork

☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: June 1, 2012 (Corps)
☐ Field Determination. Date(s): April 19, 2012 (agent)

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]

☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are no** *"waters of the U.S."* within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: linear feet: width (ft) and/or acres.
      Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **Not Applicable.**
      Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

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[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: **Pick List**
   Drainage area: **Pick List**
   Average annual rainfall: inches
   Average annual snowfall: inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☐ Tributary flows through **Pick List** tributaries before entering TNW.

   Project waters are **Pick List** river miles from TNW.
   Project waters are **Pick List** river miles from RPW.
   Project waters are **Pick List** aerial (straight) miles from TNW.
   Project waters are **Pick List** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

   Identify flow route to TNW[5]: .
   Tributary stream order, if known: .

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[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: feet
Average depth: feet
Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):

☐ Silts	☐ Sands	☐ Concrete
☐ Cobbles	☐ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain: .		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: **Pick List.** Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☐ Bed and banks
☐ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

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[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☐ Riparian corridor. Characteristics (type, average width):
- ☐ Wetland fringe. Characteristics:
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings:
  - ☐ Fish/spawn areas. Explain findings:
  - ☐ Other environmentally-sensitive species. Explain findings:
  - ☐ Aquatic/wildlife diversity. Explain findings:

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain:

Surface flow is: **Pick List**

Characteristics:

Subsurface flow: **Pick List**. Explain findings:

- ☐ Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

- ☐ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain:
  - ☐ Ecological connection. Explain:
  - ☐ Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List.**

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width):
- ☐ Vegetation type/percent cover. Explain:
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings:
  - ☐ Fish/spawn areas. Explain findings:
  - ☐ Other environmentally-sensitive species. Explain findings:
  - ☐ Aquatic/wildlife diversity. Explain findings:

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

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[8]See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ 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). Cite scale & quad name: Brookside.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Web Soil Survey 2.0. Available online at http://websoilsurvey.nrcs.usda.gov.
☒ National wetlands inventory map(s). Cite name:USFWS NWI map.
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): agent provided .
or ☒ Other (Name & Date): Color digital photographs of the project site.
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: Project occurs in uplands.