

Landuse:
Unmanaged Timberland

The predominant pre-disturbance land use which exists within the "Area of Interest" is undeveloped forest. The overstory is predominantly composed of a mixture of typical deciduous and pine species. Dominant species are as follows: red oak, white oak, post oak, hickory, beech, sweet gum, yellow and tulip poplar, sycamore, virginia pine, buttermilk pine, and loblolly pine. Understory in these areas consists mainly of dogwood, redbud, mimosa, and muskiedine. Ground cover in these areas consists mainly of immature species mentioned above and fallen leaves from the above species, but also includes such species as sawbriar, greenbriar, purpletop, dog fennel, black nightshade, curled doc, and mullein.

LEGEND

- ORIGINAL PERMIT AREA
- PROPOSED ADDITIONAL PERMIT AREA



**GLADE PROCESSING, INC.
GLADE PREPARATION PLANT
SECTION 25, TOWNSHIP 3 SOUTH,
RANGE 8 EAST, SECTION 30,
TOWNSHIP 3 SOUTH, RANGE 9 EAST,
JACKSON COUNTY, ALABAMA**

DRAWN BY: C.M.O.	DATE: 5-2-07
DWG. NAME: GPGPPSLM	
APPROVED BY: W.K.M.	SCALE: 1"=1000'

C:\DRAWING\2007\GPGPPSLM.dwg, 05/02/07, 02:56



United States Department of the Interior

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

JUN 18 2009

IN REPLY REFER TO:
2007-TA-0848

Mr. John Taylor
PERC Engineering Co., Inc.
P.O. Box 1712
Jasper, Alabama 35502

Dear Mr. Taylor:

This responds to your May 19, 2009, request for an updated letter from our office concerning a proposed permit area for the Glade Preparation Plant, located southwest of Flat Rock, Jackson County, Alabama. The subject property is located upslope from Big Glade Branch, a tributary stream to Flat Rock Creek, a tributary stream in the Raccoon Creek watershed. Raccoon Creek is a large tributary to Gunterville Reservoir at Tennessee River Mile 396.0, Left Bank. 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.).

Federally Listed Species

We concur with your description of the current habitat and vegetation conditions located on the subject property and do not believe that the property provides suitable habitat for any federally threatened and/or endangered (T&E) species. Therefore, we anticipate that the proposed operation would have no adverse impacts on any T&E species or any designated critical habitat. Additionally, our records indicate that no aquatic or terrestrial endangered, threatened, or candidate species, or critical habitat occurs within one mile of the project area. Therefore, no further endangered species consultation will be required for the project unless: 1) the identified action is subsequently modified in a manner that causes an effect on a listed species or on proposed or designated critical habitat; 2) new information reveals the identified action may affect federally protected species or designated critical habitat in a manner or to an extent not previously considered; or 3) a new species is listed.

Since the proposed project is located in northeast Alabama, an area known for its cave and karst topography, we recommended a thorough site investigation for any karst features on the site (i.e., sinkholes, sinking streams, caves) in our October 22, 2007, letter. Please send us the results of any such investigation.

www.fws.gov

PHONE: 251-441-5181



FAX: 251-441-6222

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act authorizes the U.S. Fish and Wildlife Service to provide assistance to, and cooperate with, federal, State, and public or private agencies in the protection of all species of wildlife and their habitat, and to make surveys and investigations of such wildlife on lands and waters (including wetland and riparian areas) acquired or regulated by any agency of the United States.

Upon review of the National Wetland Inventory (NWI) maps, it appears that there may be wetlands in or near the project area. The U.S. Army Corps of Engineers (USACE) recommends that a developer contact them if any amount of fill material may be placed in a water of the United States, including any wetland. This includes mechanical land clearing and temporary stream rerouting or diversion. This also includes temporary or permanent basins constructed in intermittent or perennial streams for erosion control or storm water management purposes. If the project involves a discharge of fill material into waters of the United States, the developer will be required to apply for a Department of the Army permit. For very small impacts, the project could possibly be authorized under one of the USACE's Nationwide Permits or Regional Permits (with verification by the USACE). However, projects impacting more than 0.5 acres of wetlands or 300 feet of stream will likely require an Individual Department of the Army Permit. The USACE will work with the developer to assess and minimize the impacts and determine possible mitigation requirements to compensate for stream and wetland or other losses and protect water quality and fish and wildlife.

Additional Recommendations

We strongly recommend that Glade Processing, Inc. closely adhere to Alabama Surface Mining Commission Administrative Code, Chapter 880-X-10C, PERFORMANCE STANDARDS SURFACE MINING ACTIVITIES, and develop an erosion control plan tailored to the mining site. We also recommend development of mine plans that closely adhere to protective measures in ADEM regulations sections 335-6-10-.06(a) and (c), to maintain minimum water quality conditions applicable to all State waters.

We recommend the following best management practices (BMPs) to control erosion and minimize impacts to aquatic systems:

- provide 100-ft naturally vegetated buffers adjacent to any streams, ditches, or drainages consisting of trees, shrubs, and grasses, or other herbaceous species to protect surface waters from soil runoff and mining contaminants.
- inspect BMP structures within 24 hours of each significant rainfall event and take immediate corrective action if erosion or soil runoff is observed.
- monitor water quality (especially turbidity or total suspended solids) to assure that discharges/runoff do not increase stream turbidity above background levels.
- immediately revegetate any disturbed areas not actively mined.

- execute any work that results in exposed earth on slopes leading to wetlands or other waters during periods when significant rainfall is not predicted.
- maintain at all times the State's standard for pH ("Wastes shall not cause the pH to deviate more than one unit from the normal or natural pH, nor be less than 6.0, nor greater than 8.5" (ADEM 1992)). This is particularly important for sustaining a healthy ecosystem and aquatic fauna.
- for specific design information on reducing soil loss/erosion, the "Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas" (2003) is available from the Alabama Soil and Water Conservation Committee.

If you have any questions or need additional information, please contact Ms. Karen Marlowe at (205) 726-2667. Please refer to the project number located at the top of this letter.

Sincerely,

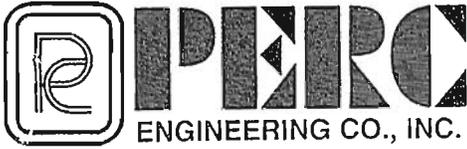


Rob W. Tawes
Deputy Field Supervisor
Alabama Ecological Services Field Office

cc: ACOE, Birmingham, AL

Ref 2007-TA-0840 KM

1/1
-40
8



Telephone: (205) 384-5553
Facsimile: (205) 295-3114 - Main Building
(205) 295-3115 - Water Lab
Web Address: www.percengineering.com

June 26, 2009

Mr. Rob W. Tawes
United States Department of the Interior
FISH AND WILDLIFE SERVICE
1208-B Main Street
Daphne, AL 36526

Post-it® Fax Note	7671	Date	7/23/09	# of pages	1
To	A. P. Henry	FROM:	Sandy M		
Co./Dept	PERC	Co.:	USFWS		
Phone #		Phone #:	251-441-5184		
Fax #	205-295-3114	Fax#:	251-441-6222		

RE: Glade Preparation Plant

Dear Mr. Tawes:

Per your June 18, 2009 letter to Mr. John Taylor (PERC), this letter is in regard to the concern of possible karst features located at the subject site. Based on a site visit Friday morning, June 26, 2009 to observe the area, the Glade Preparation Plants is located on sandstone of the Pottsville Formation, not karst topography. Two drill holes (GTMMW-3 and GTMMW-4; attached) were drilled in this vicinity. The drill holes were drilled to an approximate depth of 50 feet below ground surface. Both drill holes encountered sandstone immediately below the surface material and was continuous down to the 50 foot depth where the borings were terminated. Caves and sinkholes are generally formed where there is karst topography. This area is not indicative of karst topography. Eroded sandstone in the vicinity has been caused from the physical process of water being transported over the bedrock.

Caves in the southeast United States are formed where there is karst topography, which is formed over limestone, dolomite or gypsum (carbonate rocks) by dissolving or solution, and that is characterized by closed depressions or sinkholes, and underground drainage. Acidified surface water travels through cracks in limestone or dolomite and slowly dissolves the solid rock and enlarges crevices. This water runoff descends to the water table. As acidic water moves, it dissolves more limestone and increases the area of the underground channel and drawing more groundwater with it. In time, an underground stream is formed. More erosion drops the water level more and the cave drains through the floor. Cave formations begin in the drained cavern and a new cavern begins at the new level of the water.

Sinkholes are common where the rock below the land surface is limestone, carbonate rock, salt beds or rocks that can naturally be dissolved by groundwater circulating through them.

If you have any questions regarding this information, please do not hesitate to contact me at your convenience.

Sincerely,
PERC Engineering Co., Inc.

Alexander P. Henry, P.G.



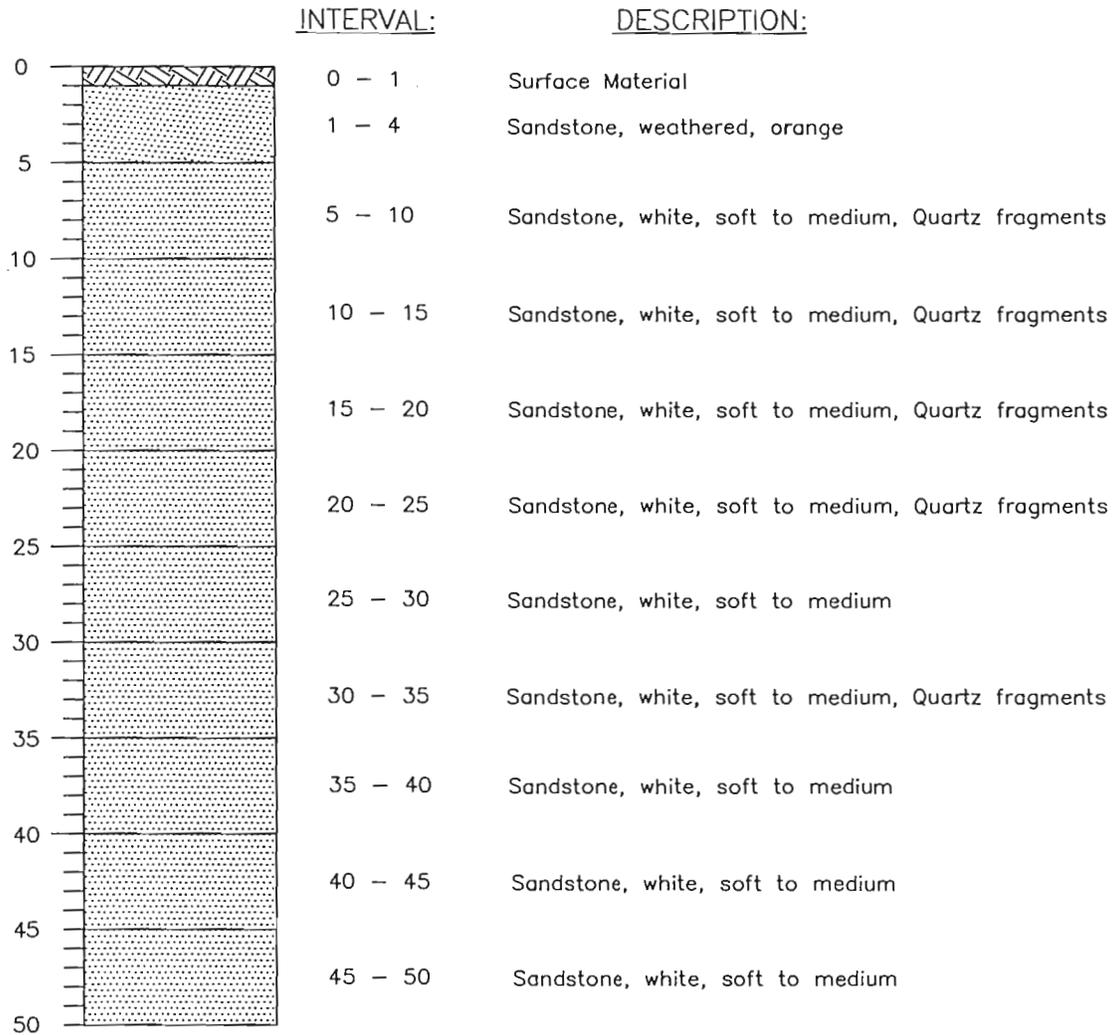
U.S. Fish and Wildlife Service
1208-B - Daphne, Alabama 36526
Phone: 251-441-5181 Fax: 251-441-6222

Based upon our records and the information provided in your letter, we agree with your findings that no federally listed species/critical habitat occur in the project area. If project design changes are made, please submit new plans for review.

William J. Pearson, Field Supervisor

7/23/09
Date

6



SHEET 1 OF 1

DRILL: -----

SURFACE ELEVATION: ±1315 ft. MSL



GTM
Glade Preparation Plant
Lithologic Description for
GTMMW-3

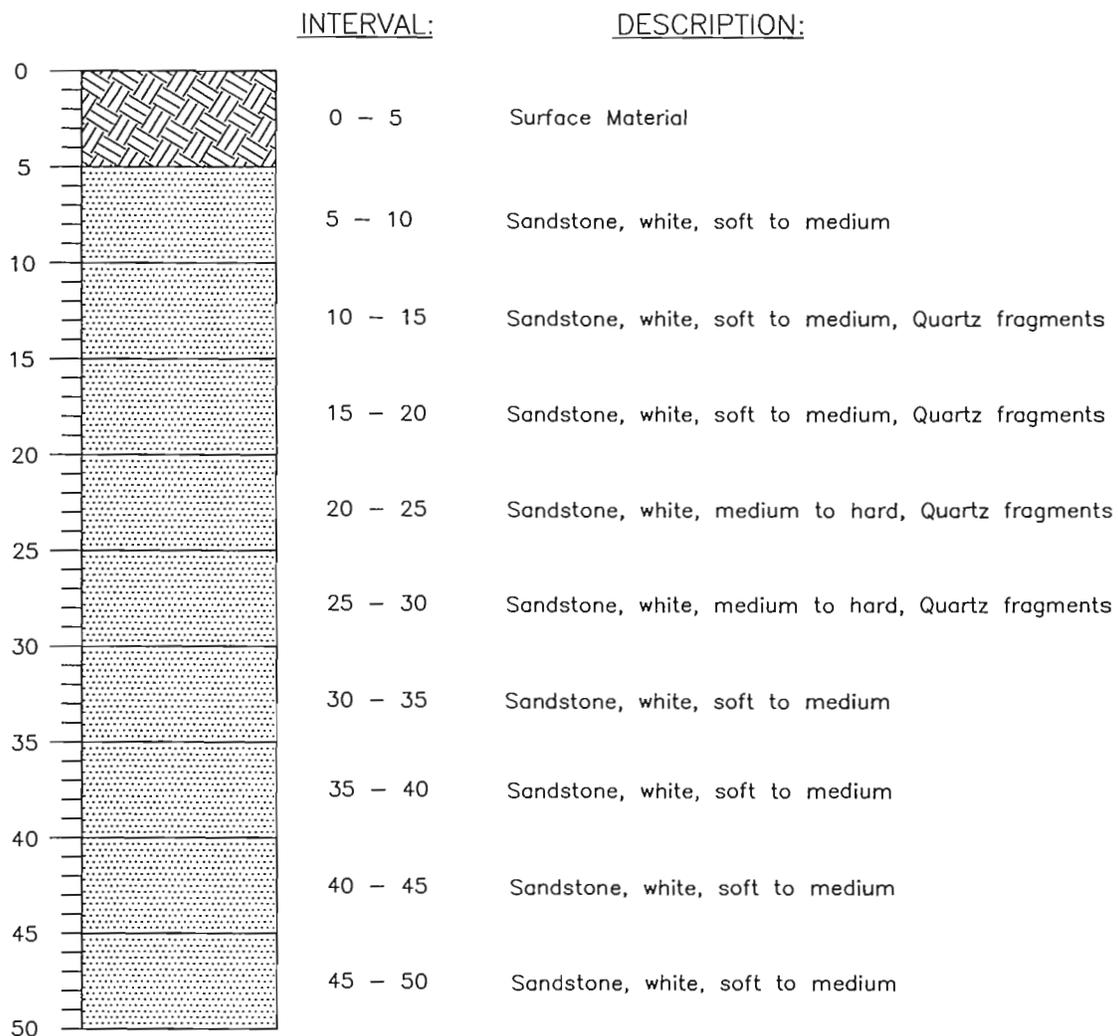
DRAWN BY: JNG
DWG. NAME: GTMLITH

DATE: 3-3-09

APPROVED BY: ---

SCALE: 1" = 10' vertical

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SHEET 1 OF 1

DRILL: -----

SURFACE ELEVATION: ±1315 ft. MSL



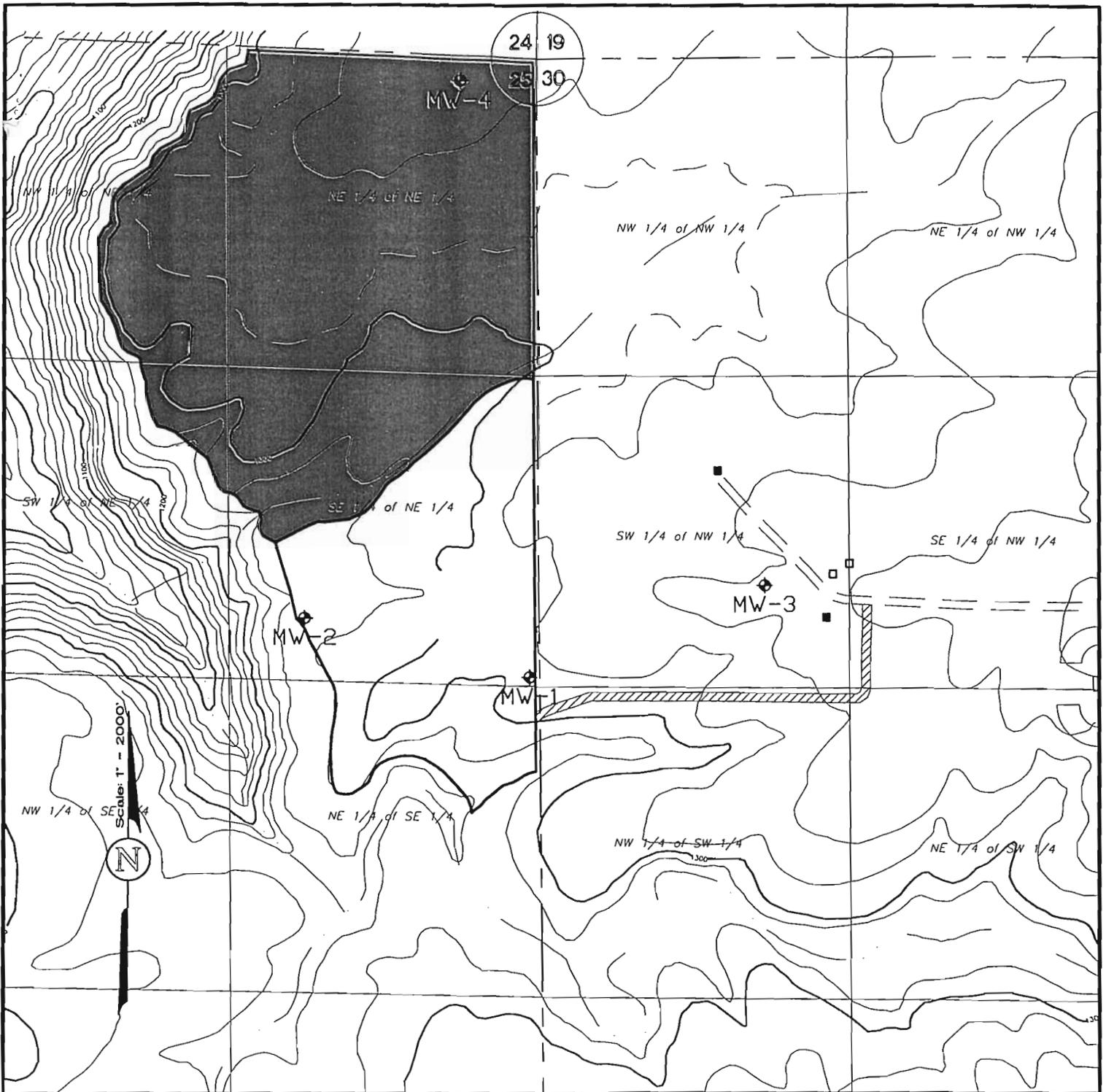
GTM
Glade Preparation Plant
Lithologic Description for
GTMMW-4

DRAWN BY: JNG
DWG. NAME: GTMLITH

DATE: 3-3-09

APPROVED BY: ---

SCALE: 1" = 10' vertical



LEGEND

-  ORIGINAL PERMIT AREA
-  AREA OF INTEREST



GLADE PROCESSING, INC.
GLADE PREPARATION PLANT
SECTION 25, TOWNSHIP 3 SOUTH,
RANGE 8 EAST, SECTION 30,
TOWNSHIP 3 SOUTH, RANGE 9 EAST,
JACKSON COUNTY, ALABAMA

DRAWN BY: C.M.O.
 DWG. NAME: GPGPPSLM

DATE: 5-2-07

APPROVED BY: W.K.M.

SCALE: 1"=1000'



United States Department of the Interior

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

OCT 22 2007

IN REPLY REFER TO:

2007-TA-0848

Ms. Janet Adams
PERC Engineering Co., Inc.
P.O. Box 1712
Jasper, Alabama 35502

Dear Ms. Adams:

Thank you for your letter dated September 14, 2007, which we received on September 19, 2007, requesting our review of a proposed permit area for the Glade Preparation Plant, located southwest of Flat Rock, Jackson County, Alabama. The subject property is located upslope from Big Glade Branch, a tributary stream to Flat Rock Creek, a tributary stream in the Raccoon Creek watershed. Raccoon Creek is a large tributary to Gunter's Reservoir at Tennessee River Mile 396.0, Left Bank. 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.).

Federally Listed Species

We reviewed the 2006 satellite imagery (aerial photographs) of the proposed surface mining operation site. Based on that review, we concur with your description of the current habitat and vegetation conditions located on the subject property and do not believe that the property provides suitable habitat for any federally threatened and/or endangered (T&E) species. Therefore, we anticipate that the proposed surface mining operation would have no adverse impacts on any T&E species or any designated critical habitat. Additionally, our records indicate that no aquatic or terrestrial endangered, threatened, or candidate species, or critical habitat occurs within one mile of the project area. Therefore, no further endangered species consultation will be required for the project unless: 1) the identified action is subsequently modified in a manner that causes an effect on a listed species or on proposed or designated critical habitat; 2) new information reveals the identified action may affect Federally protected species or designated critical habitat in a manner or to an extent not previously considered; or 3) a new species is listed.

Since the proposed project is located in northeast Alabama, an area known for its cave and karst topography, we recommend a thorough site investigation for any karst features on the site (i.e., sinkholes, sinking streams, caves). If such topographic features are located on or near the subject

www.fws.gov

PHONE: 251-441-5181



FAX: 251-441-6222

property, we request that you inform our agency of their location so that we may determine if further consultation is necessary.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act authorizes the U.S. Fish and Wildlife Service to provide assistance to, and cooperate with, Federal, State, and public or private agencies in the protection of all species of wildlife and their habitat, and to make surveys and investigations of such wildlife on lands and waters (including wetland and riparian areas) acquired or regulated by any agency of the United States.

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Additional Recommendations

We strongly recommend that Glade Processing, Inc. closely adhere to Alabama Surface Mining Commission Administrative Code, Chapter 880-X-10C, PERFORMANCE STANDARDS SURFACE MINING ACTIVITIES, and develop an erosion control plan tailored to the mining site. We also recommend development of mine plans that closely adhere to protective measures in ADEM regulations sections 335-6-10-.06(a) and (c), to maintain minimum water quality conditions applicable to all State waters.

We recommend the following best management practices (BMPs) to control erosion and minimize impacts to aquatic systems:

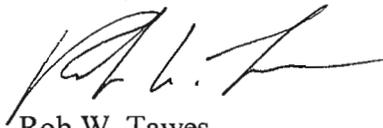
- provide 100-ft naturally vegetated buffers adjacent to any streams, ditches, or drainages consisting of trees, shrubs, and grasses, or other herbaceous species to protect surface waters from soil runoff and mining contaminants.
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- maintain at all times the State's standard for pH ("Wastes shall not cause the pH to deviate more than one unit from the normal or natural pH, nor be less than 6.0, nor greater than 8.5" (ADEM 1992)). This is particularly important for sustaining a healthy ecosystem and aquatic fauna.
- for specific design information on reducing soil loss/erosion, the "Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas" (2003) is available from the Alabama Soil and Water Conservation Committee and on-line at:

http://www.swcc.state.al.us/pdf/ASWCC_June_2003_Alabama_Handbook_Construction_E&S_Control.pdf

If you have any questions or need additional information, please contact Mr. Rob Hurt at (256) 353-7243 ext. 29. Please refer to the reference number located at the top of this letter.

Sincerely,



Rob W. Tawes
Assistant Field Supervisor
Alabama Ecological Services Field Office

cc: Mr. Rob Hurt, USFWS, Decatur, AL



ROBERT LEE
GOVERNOR
M. BARNETT LAWLEY
COMMISSIONER

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

JAMES H. GROSS, DIRECTOR
GREGORY M. LEIN, ASSISTANT DIRECTOR FOR
STATE LANDS DIVISION
TELEPHONE: (205) 262-3311
FAX NO.: (205) 262-0999

September 14, 2007

Mr. Janet Adams
PERC Engineering Co., Inc.
P.O. Box 1712
Jasper, AL 35502

RE: Sensitive Species Information request
Glade Processing, Inc., Glade Processing Plant

Dear Mr. Adams:

The Natural Heritage Section office received your e-mail dated September 11, 2007 addressed to Jo Lewis on September 11, 2007 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 Jackson 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 Jackson 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. This federally listed endangered species (Gray Bat) will forage over land and water and occurs throughout the Tennessee River system habitat.*

I hope this information will be useful to you. The provided information is to help you in fulfilling your necessary legal obligations. 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



Mr. Janet Adams
9/14/2007
Page 2

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,



Jo Lewis
Chief
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 species deemed sensitive by the Alabama State Lands Division's Natural Heritage Section (SLD-NHS) believed to occur in the designated county and the legal protection status of either State protected or federally listed. This list is a combination of the April 2007 U.S.F.W. Service (Daphne field Office) federally listed species by county list and the Alabama State Lands Division's Natural Heritage Section Database of species distributions data. This list is continually being updated, and, therefore, it may be incomplete or inaccurate and is provided strictly for informational purposes. It does not constitute any form of Section 7 consultation. We recommend that the U.S.F.W. Service Field Office in Daphne be contacted for Section 7 consultations. Site specific information can be provided by the Alabama SLD-NHS and/or the U.S.F.W. 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 reflects only our current understanding of species distributions.

Jackson

Protection Status	Common name	Scientific Name	State Regulation Applicable
Candidate	Slabside Pearlymussel	<i>Lexingtonia dolabelloides</i>	220-2-.98 (1) (a)
Candidate	White Fringeless Orchid	<i>Platanthera integrilabia</i>	
Endangered	Gray Bat	<i>Myotis grisescens</i>	220-2-.92 (1) (e)
Endangered	Green Pitcher-plant	<i>Sarracenia oreophila</i>	
Endangered	Hine's Emerald Dragonfly (P)	<i>Somatochlora hineana</i>	
Endangered	Indiana Bat	<i>Myotis sodalis</i>	220-2-.92 (1) (e)
Endangered	Morefield's Leather Flower	<i>Clematis morefieldii</i>	
Endangered	Orangefoot (Pearlymussel) Pimple	<i>Plethobasus cooperianus</i>	220-2-.98 (1) (a)
Endangered	Pale (Pearlymussel) Lilliput	<i>Toxolasma cylindrellus</i>	220-2-.98 (1) (a)
Endangered	Palezone Shiner	<i>Notropis albizonatus</i>	220-2-.92 (1) (a)
Endangered	Pink (Pearlymussel) Mucket	<i>Lampsilis abrupta</i>	220-2-.98 (1) (a)
Endangered / Experimental	Alabama Lampmussel	<i>Lampsilis virescens</i>	220-2-.98 (1) (a)
Endangered / Experimental	Anthony's Riversnail	<i>Athearnia anthonyi</i>	220-2-.98 (1) (a)
Endangered / Experimental	Finerayed Pigtoe	<i>Fusconaia cuneolus</i>	220-2-.98 (1) (a)
Endangered / Experimental	Shiny Pigtoe	<i>Fusconaia cor</i>	220-2-.98 (1) (a)
State Protected	Bald Eagle	<i>Haliaeetus leucocephalus</i>	220-2-.92 (1) (d)
State Protected	Cumberland Moccasinshell	<i>Medionidus conradicus</i>	220-2-.98 (1) (a)
State Protected	Green Salamander	<i>Aneides aeneus</i>	220-2-.92 (1) (b)
State Protected	Lollipop Darter	<i>Etheostoma neopterum</i>	220-2-.92 (1) (a)
State Protected	Osprey	<i>Pandion haliaetus</i>	220-2-.92 (1) (d)
State Protected	Paddlefish	<i>Polyodon spathula</i>	220-2-.94
State Protected	Rabbitsfoot	<i>Quadrula cylindrica</i>	220-2-.98 (1) (a)

Jackson

Protection Status	Common name	Scientific Name	State Regulation Applicable
State Protected	Rafinesque's Big-eared Bat	<i>Corynorhinus rafinesquii</i>	220-2-.92 (1) (e)
State Protected	Sheepnose	<i>Plethobasus cyphus</i>	220-2-.98 (1) (a)
State Protected	Slippershell Mussel	<i>Alasmidonta viridis</i>	220-2-.98 (1) (a)
State Protected	Southern Cavefish	<i>Typhlichthys subterraneus</i>	220-2-.92 (1) (a)
State Protected	Spring Pygmy Sunfish	<i>Elassoma alabamae</i>	220-2-.92 (1) (a)
State Protected	Tennessee Cave Salamander	<i>Gyrinophilus palleucus</i>	220-2-.92 (1) (b)
State Protected	Tuscumbia Darter	<i>Etheostoma tuscumbia</i>	220-2-.92 (1) (a)
Threatened	American Hart's-tongue Fern	<i>Asplenium scolopendrium americanum</i>	
Threatened	Price's Potato Bean	<i>Apios priceana</i>	
Threatened	Snail Darter	<i>Percina tanasi</i>	220-2-.92 (1) (a)

Key to codes on list:

Endangered - Federally listed as Endangered
Threatened - Federally listed as Threatened
Candidate - Federally listed as Candidate
State Protected - It is unlawful to take, capture, or kill; possess, sell, trade for anything of monetary value, or offer to sell or trade these species. Alabama Regulations relating to game, fish, and furbearing animals. 2005-2006.
Alabama Department of Conservation and Natural Resources.

(P) - Possible Occurrence
(S/A) - Similarity of Appearance to a listed species
(PE) - Proposed for federal listing as Endangered
(PT) - Proposed for federal listing as Threatened
(CH) - Critical Habitat has been designated
(PCH) - Critical Habitat has been proposed
(H) - Historically known to have occurred in the

Experimental - Species is protected through its range including Colbert and Lauderdale counties except for the nonessential experimental population. Endangered and Threatened Wildlife and Plants; Establishment of Nonessential Experimental Population Status for 16 Freshwater Mussels and 1 Freshwater Snail in the Free-Flowing Reach of the Tennessee River below the Wilson Dam, Colbert and Lauderdale Counties, Alabama. [Federal Register; June 14, 2001 (Volume 66, Number

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 (*Elliptio chipolaensis*), and purple bankclimber (*Elliptioideus sloatianus*) are freshwater mussels of the family Unionidae found only in eastern Gulf Slope streams draining the Apalachicola 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.



STATE OF ALABAMA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
WILDLIFE AND FRESHWATER FISHERIES DIVISION

64 NORTH UNION STREET, SUITE 567
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(334) 242-3465
FAX (334) 242-3032
www.outdooralabama.gov



BOB RILEY
GOVERNOR

M. BARNETT LAWLEY
COMMISSIONER

The mission of the Wildlife and Freshwater Fisheries Division is to manage, protect, conserve, and enhance the wildlife and aquatic resources of Alabama for the sustainable benefit of the people of Alabama.

M. N. 'CORKY' PUGH
DIRECTOR

FRED R. HARDERS
ASST. DIRECTOR

September 17, 2007

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

Re: Glade Processing, Inc.
Glade Preparation Plant

Dear Mr. Madison:

Your letter of September 14, 2007 regarding operations at the Glade Preparation site does not specify whether wetlands greater than 0.10 acre or streams will be impacted by the project. Based on a review of the project proposal, the Division of Wildlife and Freshwater Fisheries provides the following recommendations and guidelines:

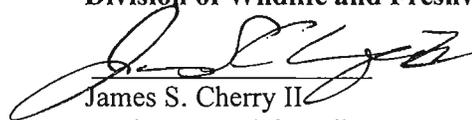
1. Wetland losses associated with this activity are mitigated at a compensatory ratio of 2:1 (restoration option where all functions of an impaired wetland are restored), 3:1 (creation option where a fully functional wetland is created), or 4:1 to 8:1 (enhancement option, where the ratio is dependent on the number of functions actually enhanced). We object to the use of preservation as a stand-alone mitigation option. However, should preservation be used to offset project impacts, a mitigation ratio of 20:1 or greater should be utilized. The Corps advises that all wetlands on mine sites, whether on previously disturbed or pristine areas, fall within the category of jurisdictional wetlands; however, dredge and fill activities might be permitted under specified conditions. We have no objection to the use of a wetland mitigation protocol such as WRAP (the Wetland Rapid Assessment Procedure), provided it is properly applied and provided that temporal losses are correctly accounted for. We do not oppose the purchase of mitigation credits from a Corps-sanctioned wetland mitigation bank which has been approved by the Department of Conservation and Natural Resources.
2. No net loss of stream functions occurs as a result of the project. Adverse functional impacts may result from physical impacts to a stream, from the alteration of a stream's natural flow regime, or from the impairment of wetland hydrology. Appropriate siltation barriers such as: green zones, sod strips, silt fences, or a superior means of erosion control should be used to minimize siltation downstream of the project site. Additionally, channel realignment, excavation, diversion or alteration of flow, impoundment, or excessive sedimentation of streams should not occur as a result of mining activities.
3. The density or diversity of aquatic biota is not adversely impacted and that aquatic habitat quality in streams and wetlands is not diminished: excessive siltation resulting from uncontrolled erosion at a mine site can be as destructive to the aquatic ecosystem of a stream or wetland as acid mine discharges. We are very concerned about the degradation/loss of aquatic habitat which may occur as a result of siltation associated with mining operations. We are also concerned about the loss of stream habitat and stream functions which

occur when settling ponds are constructed on intermittent or perennial streams. Such ponds not only result in the loss of stream functions within the impounded areas, but downstream flows below the dam are altered (during low rainfall periods, there is often no flow or inadequate flow in the stream downstream of the dam) and the upstream movement of fish is restricted except during floods, resulting in aquatic habitat fragmentation. The best way to protect aquatic habitat is to prevent sediment from entering a stream or wetland, not to contain the sediment within the stream or wetland once it has entered the aquatic ecosystem. We therefore recommend that spoil banks or other slopes be grassed as early as possible (well prior to reclamation), that silt barriers, terraces, and check dams be properly installed and maintained, that streamside buffer zones be 100 feet in width and well vegetated in order to function properly, that sedimentation ponds not be constructed in streams or wetlands, and that the mine owner/operator should be responsible for in-kind restoration or mitigation if streams or wetlands are adversely impacted by mining activities.

4. Water quality should not be adversely impacted. Particular attention should be paid to those measures related to erosion control, water turbidity, and dissolved oxygen.

In conclusion, should flowing streams, ditches, or wetlands be impacted by the proposed activity, the Mobile District, Army Corps of Engineers must be contacted at 251-690-3188 to determine if the activity falls under a Corps regulation requiring mitigation for adverse ecological, morphological, or hydrological impacts.

Sincerely yours,
Division of Wildlife and Freshwater Fisheries



James S. Cherry II
Environmental Coordinator

**BIOLOGY MALACOLOGY ICHTHYOLOGY ENTOMOLOGY
TAXONOMY ORNITHOLOGY BOTANY**

ENVIRONMENTAL ASSESSMENTS

YOKLEY ENVIRONMENTAL CONSULTING SERVICE

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Florence, Alabama 35630**

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August 8, 2012

Environmental Assessment

On August 6, 2012, an environmental assessment for habitat and the possible presence of the following species federally listed as endangered, threatened, or of concern was conducted on the proposed site of the Glade Preparation Plant P-3829, Revision R-8, Alabama Carbon, LLC., Jackson County, Alabama:

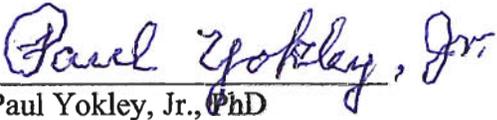
Indiana Bat *Myotis sodalis*

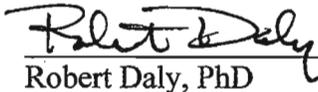
A topographic map, a labeled satellite photo, and photos of the proposed site revision location are included with this assessment. The proposed project site is a somewhat flat hilltop location with a sandstone rock glade habitat. The location has a thin layer of soil/organic matter over sandstone rock. The location was clear cut a few years ago and was allowed to re-vegetate naturally. Clear cutting and other activities has produced small areas of exposed sandstone rock. Most of the site has a thicket type cover of small trees, shrubs, vines, and various herbaceous plants. The trees are predominately Virginia pine with some loblolly pine, hickory, chestnut oak, red maple, sweet gum, black gum, and winged elm. Privet, sumac, and other shrubs are present. Due to the sandstone rock substrate and the xeric nature of the site, the herbaceous vegetation is composed of plants tolerant of very hot/dry conditions. The more open areas have large numbers of flowering plants. The trees are somewhat stunted due to the xeric habitat and very thin soil layer. Habitat for the Indiana Bat does not exist on the proposed site.

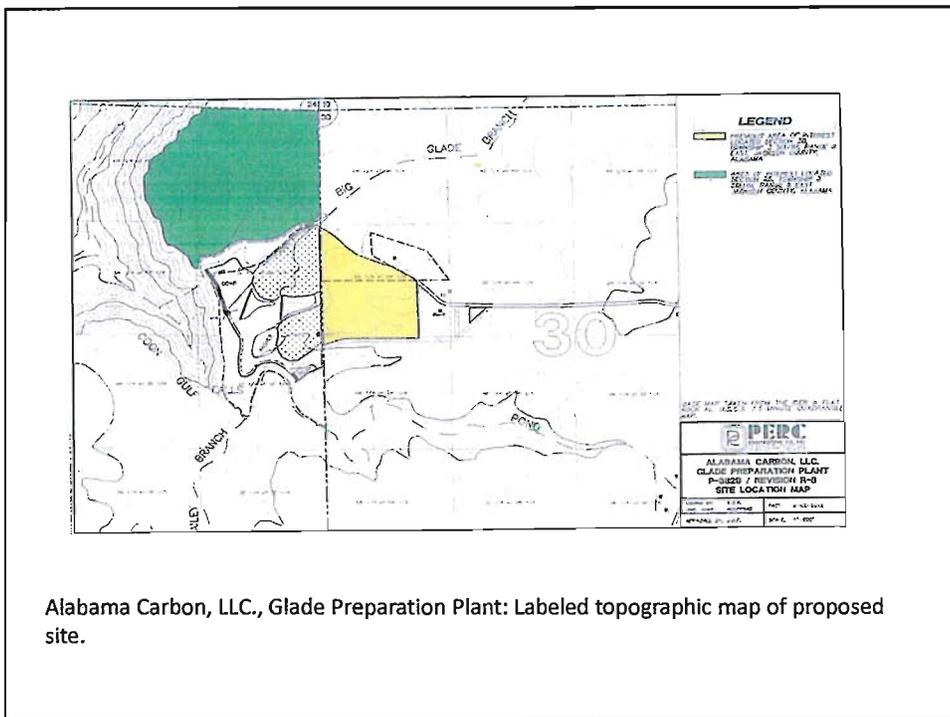
Immediately east of the proposed site is a dense thicket region of mixed hardwoods/pine that has been selectively cut or clear cut in the past and allowed to re-vegetate naturally. This area has slightly older and larger trees. This area has the same sandstone rock substrate. Immediately to the north of the proposed site is the same glade habitat and re-growth forest. The western boundary of the proposed site is the edge of a sandstone bluff hillside with Flat Rock Creek in the bottom of this canyon location. This canyon is called Coon Gulf. Coon Gulf at this location is a narrow canyon. There is at least a 400 foot elevation change from the proposed site boundary downhill to Flat Rock Creek. Due to the extreme slope and lack of easy access, this steep hillside/bluff region has a mature hardwood forest. The south boundary of the proposed

site is next to the location of a reclaimed mine site that has several large sedimentation ponds. An active coal processing facility is located next to the reclaimed region. At this time, this facility operates during the daytime Monday through Friday. More distant locations to the north, east, and south of the proposed site have been surface mined in the past. The hilltop region to the west directly across Coon Gulf from the proposed site has been surface mined. The previous and current surface mine activity and other sources of disturbance immediately above this section of Coon Gulf prohibits the existence of suitable habitat for the Indiana Bat. The areas immediately north, east, and south of the proposed site do not have habitat suitable for the Indiana Bat.

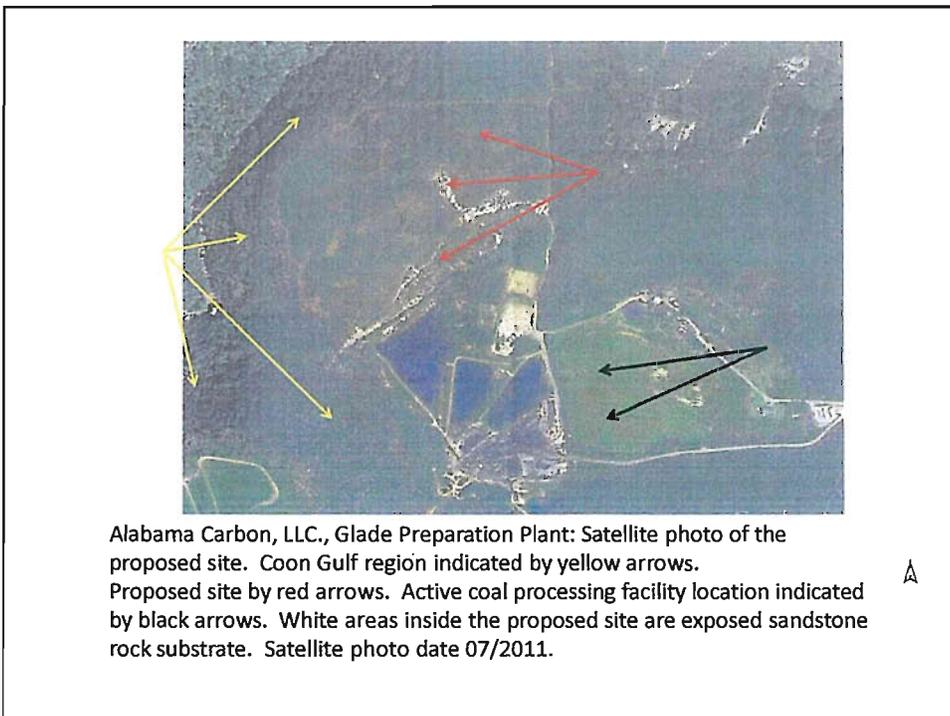
No Indiana bats were observed on or near the proposed site during the survey. The proposed site and immediately adjacent land areas do not have habitat suitable for Indiana bats due to type and age of vegetation, current and previous land use, and immediate proximity to the active mine.


Paul Yokley, Jr., PhD
Biologist


Robert Daly, PhD
Biologist



Alabama Carbon, LLC., Glade Preparation Plant: Labeled topographic map of proposed site.





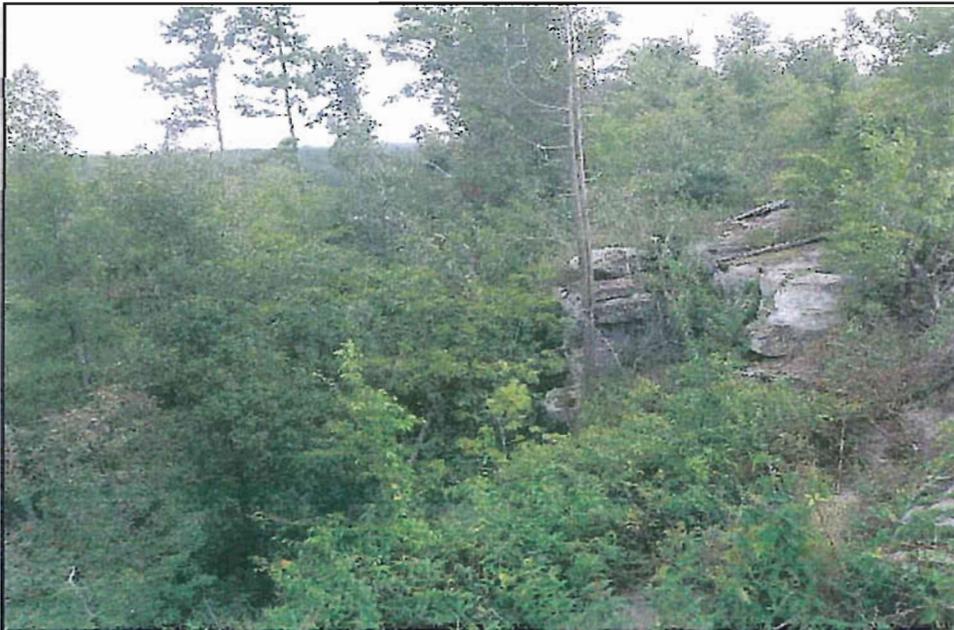
Alabama Carbon, LLC., Glade Preparation Plant: View into habitat of land area immediately east of the proposed site. GPS: N 34 45.304, W 085 44.491.



Alabama Carbon, LLC., Glade Preparation Plant: View into habitat of land area immediately north of the proposed site. GPS: N 34 45.304, W 085 44.491.



Alabama Carbon, LLC., Glade Preparation Plant: View into habitat of the proposed site. Typical vegetation. View is to the west down an access road. GPS: N 34 45.304, W 085 44.491.



Alabama Carbon, LLC., Glade Preparation Plant: View into Coon Gulf from edge of sandstone bluff, photo from western edge of site. Typical vegetation. GPS: N 34 45.283, W 085 44.738.



Alabama Carbon, LLC., Glade Preparation Plant: View into habitat of the proposed site. Typical vegetation. View to the south down an access road. Coon Gulf, sandstone bluff is just to right of photo. GPS: N 34 45.283, W 085 44.738.



Alabama Carbon, LLC., Glade Preparation Plant: View of exposed sandstone rock substrate habitat of the proposed site. Location is near southern boundary of site, adjacent to sedimentation pond region. GPS: N 34 45.156, W 085 44.602.



Alabama Carbon, LLC., Glade Preparation Plant: View of sandstone bluff edge along western boundary of site, adjacent to sedimentation pond location. View down into a branch of Coon Gulf. GPS: N 34 45.021, W 085 44.744.



Alabama Carbon, LLC., Glade Preparation Plant: View of active coal preparation facility. Location is near south east corner of site, adjacent to sedimentation pond region. Proposed site is behind camera location.