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25 April 2013

Zach Wilbanks
DSM Design Group, LLC
1400 Viking Drive
P.O. Box 690
Jasper, AL 35502-0690

Dear Mr. Wilbanks:

This letter is my report of findings from a study to determine if any habitat for federal or state protected species occur on approximately a 375 acre site (broken up in 4 areas) for a proposed surface mining project (Gooden Creek #2 Mine) in Marion and Walker counties, Alabama.

The site is in a rural setting and is adjacent to previously mined areas. It is located northwest of Eldridge between SR-13 & SR-23, north of SR-4. It occurs in the Gooden Creek watershed of Warrior Basin district of the Cumberland Plateau.

As requested I conducted a habitat survey on April 20–21, 2013 for the White Fringeless Orchid (*Platanthera integrilabia*), Mohr's Barbara's-buttons (*Marshallia mohrii*), Harperella (*Ptilimnium nodosum*), Indiana bat (*Myotis sodalis*), Long-tailed Weasel (*Mustela frenata*), Bald Eagle (*Haliaeetus leucocephalus*), Cooper's Hawk (*Accipiter cooperi*), Osprey (*Pandion haliaetus*), Alligator Snapping Turtle (*Macroclemys temminckii*), Flattened Musk Turtle (*Sternotherus depressus*), Black Warrior Waterdog (*Necturus alabamensis*), Paddlefish (*Polyodon spathula*), Frecklebelly Madtom (*Noturus munitus*), Orangenacre Mucket (*Hamiota perovalis*), Ovate Clubshell (*Pleurobema perovatum*), Southern Combshell (*Epioblasma penita*), Triangular Kidneyshell (*Ptychobranthus greenii*), and Finelined Pocketbook (*Hamiota altilis*). **No** potential habitats for these species were located in the study area. Therefore, no impacts or effects are expected at this site from the project.

Habitat Description

A mixed pine/hardwood forest is the most common habitat in the survey area. The composition of pines to hardwood varies with either component being the common canopy tree though pines tend to be dominant. Since the overall plant assemblage is similar in each area of the site, it does not need to be differentiated into separate habitats.

Common canopy trees occurring in various combinations include chestnut oak (*Quercus montana*), black oak (*Quercus velutina*), scarlet oak (*Quercus coccinea*), post oak (*Quercus stellata*), white oak (*Quercus alba*), southern red oak (*Quercus falcata*), mockernut hickory (*Carya tomentosa*), pignut hickory (*Carya glabra*), tulip-poplar (*Liriodendron tulipifera*), sweetgum (*Liquidambar styraciflua*), loblolly pine (*Pinus taeda*), and Virginia pine (*Pinus virginiana*). Associated canopy and subcanopy trees are black gum (*Nyssa sylvatica*), red maple (*Acer rubrum*), sourwood (*Oxydendrum arboreum*), persimmon (*Diospyros virginiana*), black cherry (*Prunus serotina*), red bud (*Cercis canadensis*), bigleaf magnolia (*Magnolia macrophylla*), sassafras (*Sassafras albidum*), winged elm (*Ulmus alata*), flowering dogwood (*Cornus florida*), service berry (*Amelanchier arborea*), and red cedar (*Juniperus virginiana*).

Shrubs and vines that are often encountered include oak-leaf hydrangea (*Hydrangea quercifolia*), Carolina buckthorn (*Rhamnus caroliniana*), devil's-walking-stick (*Aralia spinosa*), low bush blueberry (*Vaccinium pallidum*), sparkleberry (*Vaccinium arboreum*), southern dewberry (*Rubus trivialis*), yellow jasmine (*Gelsemium sempervirens*), muscadine grape (*Vitis rotundifolia*), Virginia creeper (*Parthenocissus quinquefolia*), poison ivy (*Toxicodendron radicans*), rattan vine (*Berchemia scandens*), greenbriers (*Smilax* spp.) and the exotic Japanese honeysuckle (*Lonicera japonica*).

Groundcover is somewhat sparse. Some of the herbaceous vegetation observed (especially in openings) includes greater tickseed (*Coreopsis major*), common blue violet (*Viola sororia*), bird-foot violet (*Viola pedata*), hoary mountain-mint (*Pycnanthemum incanum*), daisy fleabanes (*Erigeron* spp.), needle grass (*Stipa avenacea*), panic grasses (*Dichanthelium* spp.), spikegrass (*Chasmanthium sessiliflorum*), Christmas fern (*Polystichum acrostichoides*), bracken fern (*Pteridium aquilinum*), and ebony spleenwort (*Asplenium platyneuron*).

Portions of the sites consisted of old fields and cleared areas. The vegetation was primarily herbaceous with seedlings and saplings of various trees from the surrounding forest. The common plants included broomsedge (*Andropogon virginicus*), bracted plantain (*Plantago aristata*), bushclovers (*Lespedeza* spp.), Johnson grass (*Sorghum halepense*), daisy fleabanes (*Erigeron* spp.), asters (*Aster* spp.), plume grass (*Erianthus alopecuroides*), Bahia grass (*Paspalum notatum*), panic grasses (*Dichanthelium* spp.), goldenrod (*Solidago altissima*), crossvine (*Bignonia capreolata*), greenbriers (*Smilax* spp.), highbush blackberry (*Rubus argutus*), ragweed (*Ambrosia artemisiifolia*), poor-Joe (*Diodia teres*), Japanese honeysuckle (*Lonicera japonica*), downy oat grass (*Danthonia sericea*), black-eyed-Susan (*Rudbeckia hirta*), smooth sumac (*Rhus glabra*), winged sumac (*Rhus copallinum*), bracken fern (*Pteridium aquilinum*), wild potato vine (*Ipomoea pandurata*), horse-nettle (*Solanum tuberosum*), butterfly-pea (*Clitoria mariana*), golden-aster (*Pityopsis graminifolia*), and cinquefoil (*Potentilla simplex*).

Threatened and Endangered Species

No protected species were observed on the proposed site and no potential habitats were located in the study area. Therefore, no impacts or effects to any listed species or their habitats are expected at this site from the project.

White Fringeless Orchid is found in red maple-blackgum seeps and along sandy, damp stream margins; or on seepy, vegetated slopes. The plant's typical habitat is a seasonally wet, sandy, springhead swamp dominated by red maple and swamp blackgum. No potential habitat for this orchid was located in the study area.

Mohr's Barbara's-Buttons is an erect herbaceous perennial usually less than three feet tall with leaves that have distinctive parallel veins. The flower clusters are showy and are light violet to white. Each plant usually has between 2 and 6 heads. The habitat for this Barbara's-buttons is usually moist, prairie-like openings in woodlands or along streams. The plant typically prefers sandy, clay soils that are alkaline, high in organic matter and are seasonally moist. These combined conditions were not present along the area surveyed.

Harperella is found in scattered localities in Cumberland Plateau of Alabama. It typically grows on the margin of swift flowing streams, in rocky or gravelly shoals or edges of boggy type

wetlands. It is a distinctive species of *Ptilimnium* because of its undivided quill-like leaves. It flowers and fruits May through August. There was no suitable habitat for this species.

The Indiana Bat requires caves or rock shelters for its hibernacula during the winter season and typically needs larger trees with exfoliating bark or old dead to dying trees for summer roosting. The Indiana bat migrates to foraging areas from its hibernacula in the summer and will hibernate in caves during the fall and winter. The habitat of the site was poor for summer roosting and no caves or rock shelters were observed. The rock type in the area rarely has this kind of geologic features. They are mostly found in the limestone regions of northeast Alabama.

The state protected Long-tailed Weasel usually is found in dense understories, edges, and access to waterways or standing water. The abundance and diversity of prey such as rodents and birds are the primary factors that determine where this weasel hunts. The best habitats are the wooded areas around the creek are not included in the proposed mining project.

No birds of prey, other than Red-Tail Hawk (*Buteo jamaicensis*), were seen in the areas of study. Osprey and Bald eagles are most often observed close to large rivers and other large bodies of water. Their aerie (roosting nest) is most often located at the tops of trees near these large bodies of water. Fish make up the bulk of their diet, and this is the reason why its preferred habitat is near large bodies of water. No nests or birds were seen in the area and suitable habitat was not present. The Cooper's Hawk has recovered over the years, as well as the raptors above, since the ban on DDT in the US. The hawk's main diet is song birds that it catches in woodlands. There are plenty of surrounding forests where it can hunt and the removal of trees in at the sites should have little effect on this species.

There was no habitat for any of the listed aquatic species of animals. All the listed mussels, fish, amphibians and turtles require moving water of creeks, streams or rivers, which were not present at the sites. The proposed surface mine are all in upland areas away from any creeks or streams.

Additional Studies And Mitigation Recommendations

Based on literature review and a field survey of the project site, **no** additional studies are required to be in compliance with state and federal endangered species laws associated with project impacts to Threatened & Endangered species.

It is recommended that appropriate Best Management Practices (BMPs) be applied to minimize siltation and in-stream disturbance to sediments. The guidelines and procedures in the following publication, “Best Management Practices for Erosion and Sediment Control” (Roberts 1995. Eastern Federal Lands Highway Design, Federal Highway Administration Report No. FHWA-FLP-94-005, 21400) can help to mitigate impacts to water quality in the project area.

Sincerely,

Daniel D. Spaulding

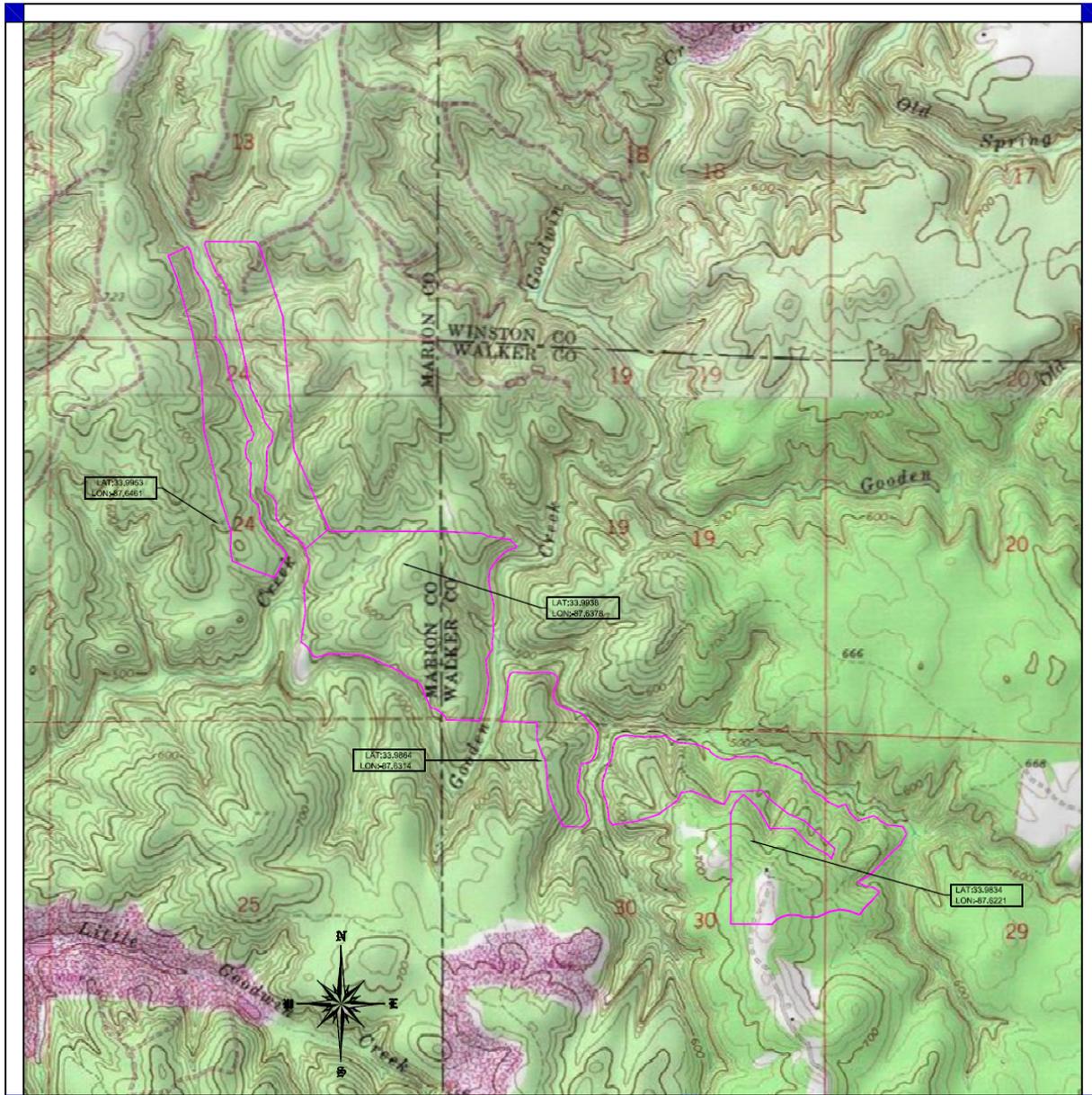
Daniel D. Spaulding

Environmental Consultant

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Attachments

Map of Study Area



Birmingham Coal & Coke, Inc GOODEN CREEK #2 Mine, P-39--

DRAWN BY: J.R.W.	DATE: 03/09/12	T. 12 S., R. 11 W., SECS. 13, 24 & 25 MARION CO., AL T. 12 S., R. 10 W. SECS. 19, 20, 29, & 30 WINSTON CO., AL
APPROVED BY: J.D.M.	DATE: 03/09/12	
SCALE: 1" = 2000'	SHEET: 1 OF 2	CARBON HILL, GLENN ALLEN & GOLD MINE USGS QUADRANGLES



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IMAGE OF SITE



Area 1 & 2



Area 3 & 4