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31 May 2012

Jerry W. Williams, P.E.
TASK Engineering Management Inc.
P.O. Box 660548
Birmingham, Alabama 35266-0548

Dear Mr. Williams:

This letter is my report of findings from a study to determine if any habitat for the federally listed Indiana bat (*Myotis sodalis*) occurs on approximately 1173 acres in Walker County, Alabama for a proposed surface coal mining operation called Little Spring Creek Mine. I conducted a survey on foot May 26-28, 2012. **No** bats were observed in the study area and no suitable habitat was available, therefore, no impacts to are expected from the project.

The site is west of Curry and located between Bird Farm Road and Little Spring Creek. The area is in a rural setting and it occurs in the Warrior Basin district of the Cumberland Plateau.

Habitat Description

Most of the site has been logged in the past and the vegetation when present is a secondary growth forest. A portion of the area surveyed included disturbed habitat and consisted of old fields, young pine forest, and former clear-cuts. The forested areas consist mostly of loblolly pine (*Pinus taeda*) with a hardwood understory. Common understory trees include sweetgum (*Liquidambar styraciflua*), southern red oak (*Quercus falcata*), black oak (*Quercus velutina*), chestnut oak (*Quercus montana*), scarlet oak (*Quercus coccinea*), white oak (*Quercus alba*),

black jack oak (*Quercus marilandica*), post oak (*Quercus stellata*), mockernut hickory (*Carya tomentosa*) pignut hickory (*Carya glabra*), sand hickory (*Carya pallida*), black gum (*Nyssa sylvatica*), red maple (*Acer rubrum*), sourwood (*Oxydendrum arboreum*), persimmon (*Diospyros virginiana*), black cherry (*Prunus serotina*), red bud (*Cercis canadensis*), sassafras (*Sassafras albidum*), winged elm (*Ulmus alata*), red cedar (*Juniperus virginiana*), smooth sumac (*Rhus glabra*), flowering dogwood (*Cornus florida*) and mimosa (*Albizia julibrissin*).

Shrubs and vines that were often encountered include oak-leaf hydrangea (*Hydrangea quercifolia*), low bush blueberry (*Vaccinium pallidum*), piedmont azalea (*Rhododendron canescens*), dwarf pawpaw (*Asimina parviflora*), sparkleberry (*Vaccinium arboreum*), Deerberry (*Vaccinium stamineum*), Elliott's blueberry (*Vaccinium elliotii*), maple-leaf viburnum (*Viburnum acerifolium*), Chinese Privet (*Ligustrum sinense*), strawberry-bush (*Euonymus americana*), highbush blackberry (*Rubus arguta*), southern dewberry (*Rubus trivialis*), yellow jessamine (*Gelsemium sempervirens*), muscadine grape (*Vitis rotundifolia*), crossvine (*Bignonia capreolata*), Virginia creeper (*Parthenocissus quinquefolia*), poison ivy (*Toxicodendron radicans*), rattan vine (*Berchemia scandens*), greenbriers (*Smilax* spp.) and Japanese honeysuckle (*Lonicera japonica*).

Herbaceous plants were more common in openings. Groundcover was somewhat sparse under the canopy of the forest. Some of the herbaceous vegetation observed includes witchgrasses (*Dichanthelium* spp.), spikegrass (*Chasmanthium sessilifolium*), plumegrass (*Erianthus alopecuroides*), broom-sedge (*Andropogon virginicus*), little bluestem (*Schizachyrium scoparium*), needle grass (*Stipa avenacea*), goldenrods (*Solidago* spp.), dark-eye sunflower (*Helianthus atropurpurea*), small-head sunflower (*Helianthus microcephalus*), beggars lice (*Desmodium paniculatum*), grass-leaved golden-aster (*Pityopsis graminifolia*), black-eyed-

Susan (*Rudbeckia hirta*), round-leaved thoroughwort (*Eupatorium rotundifolium*), late-purple aster (*Aster patens*), greater tickseed (*Coreopsis major*), mountain mint (*Pycnanthemum incanum*), spotted wintergreen (*Chimaphila maculata*), daisy fleabanes (*Erigeron* spp.), dwarf iris (*Iris verna*), creeping bushclover (*Lespedeza procumbens*), elephant's-foot (*Elephantopus tomentosus*), pussy-toes (*Antennaria* sp.), hairy phlox (*Phlox amoena*), common blue violet (*Viola sororia*), bird-foot violet (*Viola pedata*), upland sedges (*Carex* spp.), Flowering Spurge (*Euphorbia corollata*), old-field cinquefoil (*Potentilla simplex*), wild yam (*Dioscorea villosa*), partridgeberry (*Mitchella repens*), ebony spleenwort (*Asplenium platyneuron*), Christmas fern (*Polystichum acrostichoides*), and bracken fern (*Pteridium aquilinum*).

Threatened and Endangered Species

The Indiana bat closely resembles the little brown bat (*Myotis lucifugus*) but differs in coloration. Its fur is dull gray to chestnut rather than bronze, with the basal portion of the hairs of the back dull lead colored. This bat's belly is pinkish to cinnamon, and its hind feet smaller and more delicate than in little brown bat. No species of bats were observed and no good habitat was located in the study area. The Indiana bat require caves or rock shelters for its hibernacula in the winter and usually larger trees with exfoliating bark or old dead to dying trees for summer roosting. The Indiana bat migrates to foraging areas from it 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 these kinds of geologic features. They are mostly found in the limestone regions of northeast Alabama.

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

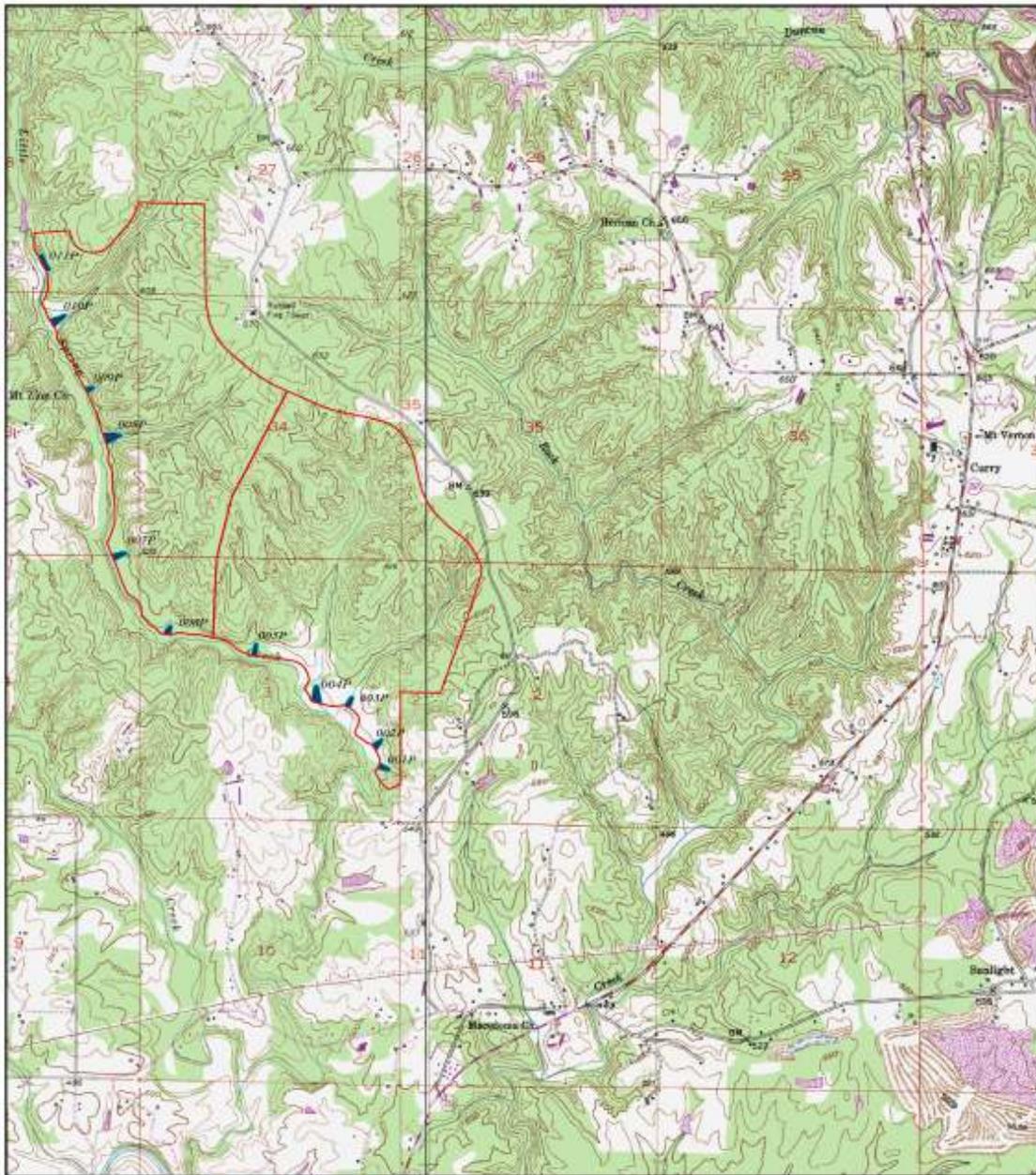
Daniel D. Spaulding

Environmental Consultant

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Attachments

Map of Study Area



GENERAL SITE LOCATION & MINE BOUNDARIES

SECTIONS 27, 28, 33, 34 & 35
 TOWNSHIP 12 SOUTH, RANGE 7 WEST
 SECTIONS 2, 3 & 4
 TOWNSHIP 13 SOUTH, RANGE 7 WEST
 WALKER COUNTY, ALABAMA



TOTAL PROPOSED DISTURBED AREA - 1173 ACRES

BASE MAP: MANCHESTER & SUNLIGHT U.S.G.S. QUADRANGLE MAPS

- PERMIT BOUNDARY
- FUTURE PERMIT BOUNDARY
- SEDIMENT BASIN / OUTFALL

SHEET	SCALE	CLIENT / MINE	TASK EMI CONSULTING ENGINEERS P.O. BOX 650548 BIRMINGHAM, ALABAMA 35266 (205) 978-5070
1 OF 1	1" = 2000'	CEDAR LAKE MINING, INC. LITTLE SPRING CREEK MINE	

AERIAL IMAGE OF AREA

