APPENDIX – CEC

INDIANA BAT SURVEY REPORT

DEC 22 2010

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pennsylvania Field Office
315 South Allen Street, Suite 322
State College, Pennsylvania 16801-4850

December 20, 2010

Daniel Maltese
Civil & Environmental Consultants, Inc.
333 Baldwin Road
Pittsburgh, PA 15205-9702

RE: USFWS Project # 2010-0581

Dear Mr. Maltese:

This responds to your letter of September 15, 2010, requesting our review of mist-net survey results for the proposed Foundation Mine Coal Refuse Disposal Alternatives Analysis coal mining complex project, located in Greene County, Pennsylvania. The following comments are provided pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) to ensure the protection of endangered and threatened species.

The proposed project is located within the range of the Indiana bat (*Myotis sodalis*), a species that is federally listed as endangered. Due to proposed forest clearing associated with the construction of the coal complex, mist-netting was recommended to determine whether Indiana bats are present. According to the September 13, 2010 survey report, surveys were conducted at four sites within the project area from August 4 to August 11, 2010, in accordance with the Fish and Wildlife Service's Indiana bat mist-net survey guidelines. During these surveys, 10 bats of three species were captured, but this did not include any Indiana bats. Based on these survey results, we have concluded that Indiana bats are either not present in the project area, or are present in such low densities that they were not detected. Consequently, we have determined that tree-clearing related to installation of the proposed coal mining complex project is not likely to adversely affect the Indiana bat.

This response relates only to endangered or threatened species under our jurisdiction, based on an office review of the proposed project's location. No field inspection of the project area has been conducted by this office. Consequently, this letter is not to be construed as addressing potential Service concerns under the Fish and Wildlife Coordination Act or other authorities.

To avoid potential delays in reviewing your project, please use the above-referenced USFWS project tracking number in any future correspondence regarding this project.

If you have any questions regarding this matter, please contact Kim Faulds of my staff at 814-234-4090.

Sincerely,

Clinton Riley
Field Office Supervisor

INDIANA BAT (*Myotis sodalis*)
SURVEY REPORT

FOUNDATION MINE COMPLEX
GREENE COUNTY, PENNSYLVANIA

Prepared for:

FOUNDATION MINING, LLC
158 PORTAL ROAD
WAYNESBURG, PA 15370

Prepared by:

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
333 BALDWIN ROAD
PITTSBURGH, PA 15205

USFWS PROJECT # 2010-0581

CEC PROJECT 100-931

September 13, 2010

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1.0 INTRODUCTION

This report presents the findings of an Indiana bat (*Myotis sodalis*) presence/probable absence mist net survey conducted for Foundation Mining, LLC (Foundation) by Civil & Environmental Consultants, Inc. (CEC). The survey was completed for the proposed Foundation Mine Complex located in Greene County, Pennsylvania (Figure 1). The proposed mine complex includes refuse disposal areas, shaft and slope mine entries, a coal preparation plant, conveyors, and a railroad siding expansion area.

The proposed project site is in Center Township located approximately 5.7 miles southwest of Waynesburg, Pennsylvania on the Rogersville and Holbrook, Pennsylvania 7.5' Quadrangle map (Figure 1). The proposed project site consists of an approximately 470-acres which includes upland forest habitat as well as open field, immature forested and riparian habitats.

The purpose of this study was to confirm the presence or probable absence of the federally endangered Indiana bat within the project area. This survey was based on CEC's professional judgment and interpretation of the technical criteria outlined in the U.S. Fish and Wildlife Service (USF&WS) (Region 3) agency draft document titled *Indiana bat (Myotis sodalis) Draft Revised Recovery Plan: First Revision* dated April 2007.

2.0 METHODOLOGY

CEC biologists traversed the project area by vehicle and on foot to identify potential bat habitat (roosting areas, feeding areas, drinking pools, and flight corridors). Our field reconnaissance was completed in order to establish mist net sites that would maximize the success of the mist net survey. Given the size, shape, and amount of forested habitat within the project area, a total of four mist net sites were completed for the project. Refer to Appendix A for U.S. Fish & Wildlife Service (USF&WS) correspondence relating to the number of proposed mist net sites and proposed net nights.

The four mist net sites completed by CEC within the project area contained at least two of the following bat habitats: roosting areas, feeding areas, and/or flight corridors. These sites had the highest potential to capture an Indiana bat (Figure 2).

The mist net sites completed by CEC included a minimum of two mist net sets, placed at least 30 meters apart. All mist nets used during the survey were Avinet - USA made 75/2 38mm mesh, polyester, reduced "bag" for bats (Avinet Inc. - Dryden, New York). The mist nets measure 2.6 meters high, contain four shelves, and are various lengths ranging from 3 meters to 18 meters. CEC used Avinet stackable poles for single high net sets and custom built net poles that allow up to three nets to be stacked on top of each other. These custom-built net poles reach a maximum of 30 feet into the canopy. The custom-built net poles and CEC mist net surveying techniques are based upon Gardner, et al. 1989, and Nagorsen, et al. 1980.

The Indiana bat mist net survey was completed under strict adherence to the USF&WS *Indiana bat (Myotis sodalis) Draft Revised Recovery Plan: First Revision* dated April 2007, and was authorized by the Pennsylvania Game Commission Special Use Permit No. 96-2010 (Appendix B). All captured bats were identified by Mr. Ryan Slack, an authorized Collection Permit holder. Photographs of each mist net site and representative species of bats that were captured during the survey are presented in Appendix C. All collections made during the survey were recorded on field data sheets, which are presented in Appendix D.

3.0 RESULTS

CEC sampled a total of 16 net nights (4 survey sites x 2 nights per survey site x 2 net sets per site = 16 net nights) from August 4 through August 11, 2009. The survey sites were sampled starting at sunset and lasted a minimum of five hours. No severe weather (precipitation, strong winds, and/or temperatures dropping below 50 degrees Fahrenheit) was encountered during the surveys.

The following section provides a detailed description of the mist net sites and presents the results of the trapping effort at each site. A table summarizing the survey results follows the site descriptions.

Site 1

Mist net Site 1 was sampled over a 2 day period from August 4 to 5, 2010. On the initial survey night, one mist net set (one 6-meter long, double high net) was erected within a forested flight corridor along an unimproved road. The second net set (one 9-meter long, triple high net) was erected over a forested flight corridor along a driveway that ran through a White Pine stand. No bats were collected during the first night of surveying at Site 1.

On the second survey night, the nets remained in the same locations and were the same sizes as the first survey night. Two northern long eared bats (*Myotis septentrionalis*) were collected during the second survey night at Site 1.

Site 2

Mist net Site 2 was sampled over a 2 day period from August 6 to 7, 2010. On the initial survey night, one mist net set (one 9-meter long, triple high net) was erected within a forested flight corridor over what appeared to be an old ATV trail. The second net set (one 6-meter long, double high net) was erected within a forested flight corridor over what appeared to be an old

ATV trail. One northern long eared bat and one red bat (*Lasiurus borealis*) were collected during the first survey night at Site 2.

On the second survey night, the nets remained in the same locations and were the same sizes as the first survey night. No bats were collected during the second survey night at Site 2.

Site 3

Mist net Site 3 was sampled over a 2 day period from August 8 to 9, 2010. On the initial survey night, one mist net set (one 9-meter long, triple high net) was erected within a forested flight corridor over a trail that ran through a forested woodlot in a cow pasture. The second net set (one 6-meter long, double high net) was erected within a forested flight corridor over a trail that ran through a forested woodlot in a cow pasture. Two northern long eared bats and one red bat were collected during the first survey night at Site 3.

On the second survey night, the nets remained in the same locations and were the same sizes as the first survey night. No bats were captured during the second survey night at Site 3.

Site 4

Mist net Site 4 was sampled over a 2 day period from August 10 to 11, 2010. On the initial survey night, one mist net set (one 6-meter long, double high net) was erected over a third order perennial stream that was forested on the right descending bank and had a mowed hayfield on the left descending bank. The second net set (one 6-meter long, double high net) was erected over the same stream approximately 200 feet upstream from the first net set. No bats were collected during the first survey night at Site 4.

On the second survey night, the nets remained in the same locations and were the same sizes as the first survey night. Two red bats and one big brown bat (*Eptesicus fuscus*) were collected during the second survey night at Site 2.

TABLE 1

INDIANA BAT MIST NET SURVEY SUMMARY

Common Name	Scientific Name	Date	Site	No. of Bats Captured	Federal Status	State Status
Northern Long Eared bat	*Myotis septentrionalis*	8/5/2010	1	2	-	-
Northern Long Eared bat	*Myotis septentrionalis*	8/6/2010	2	1	-	-
Red bat	*Lasiurus borealis*	8/6/2010	2	1	-	-
Northern Long Eared bat	*Myotis septentrionalis*	8/8/2010	3	2	-	-
Red bat	*Lasiurus borealis*	8/8/2010	3	1	-	-
Red bat	*Lasiurus borealis*	8/11/2010	4	2	-	-
Big Brown bat	*Eptesicus fuscus*	8/11/2010	4	1	-	-

4.0 CONCLUSIONS

CEC conducted an Indiana bat (*Myotis sodalis*) presence/probable absence mist net survey within the approximate 470-acre Foundation Mine Complex located in Greene County, Pennsylvania between August 4 and 11, 2010. A total of ten bats representing three species were captured and identified at four mist net sites within the proposed project area. The mist netting effort consisted of a total of 16 net nights. All bats captured were identified, weighed, measured, and released alive. No Indiana bats, or any other threatened or endangered species, were captured during the survey. No additional bat surveys are recommended or warranted at this time.

5.0 LEVEL OF CARE

The Indiana bat survey services performed by CEC were conducted in a manner consistent with the criteria outlined in the USF&WS, Region 3 agency draft document titled *Indiana bat (Myotis sodalis) Draft Revised Recovery Plan: First Revision* dated April 2007, and with the level of care and skill ordinarily exercised by members of the environmental consulting profession practicing contemporaneously under similar conditions in the locality of the project.

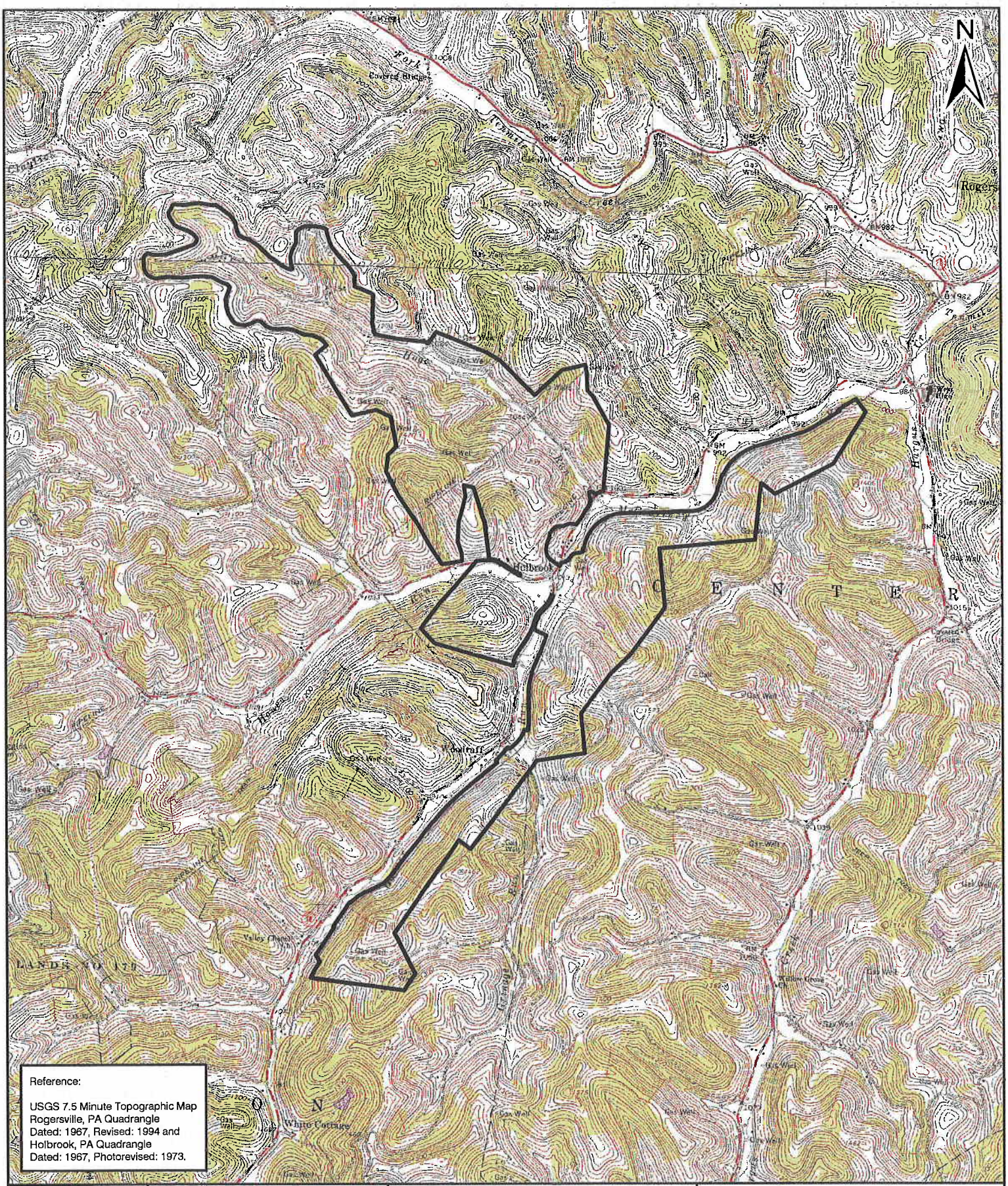
6.0 REFERENCES

Gardner, J. E., J. D. Garner, and J. E. Hofmann. 1989. A Portable Mist-Netting System for Capturing Bats with Emphasis on *Myotis sodalis* (Indiana bat). Bat Research News 30:1-8.

Nagorsen, D. W.; Peterson, R. L., 1980: Mammal Collectors Manual. A Guide for Collecting, Documenting, and Preparing Mammal Specimens For Scientific Research. Belonging to the unnumbered series: Life Sciences Miscellaneous Publications. Royal Ontario Museum, Toronto. ISBN: 0-88854-255-0 pa.

U.S. Fish and Wildlife Service. 2007. *Indiana bat (Myotis sodalis) Draft Revised Recovery Plan: First Revision*. U.S. Fish and Wildlife Service, Fort Snelling, MN. 258 pp.

FIGURES



DRAWN BY: CLC	0 1,500 3,000 Feet	ISSUED FOR:	USGS SITE LOCATION MAP FOUNDATION MINE BAT SURVEY FOUNDATION MINING, LLC GREENE COUNTY, PA
CHECKED BY: SRB	**Legend**	ISSUED BY:	
APPROVED BY: DAM	Study Area	CIVIL & ENVIRONMENTAL CONSULTANTS, INC. 333 Baldwin Road Pittsburgh, PA 15205-9702 1-800-365-2324 www.cecinc.com	PROJECT NO.: 100-931 FIGURE: 1
SCALE: 1 " = 3,000 '			
DATE: 8/17/2010			

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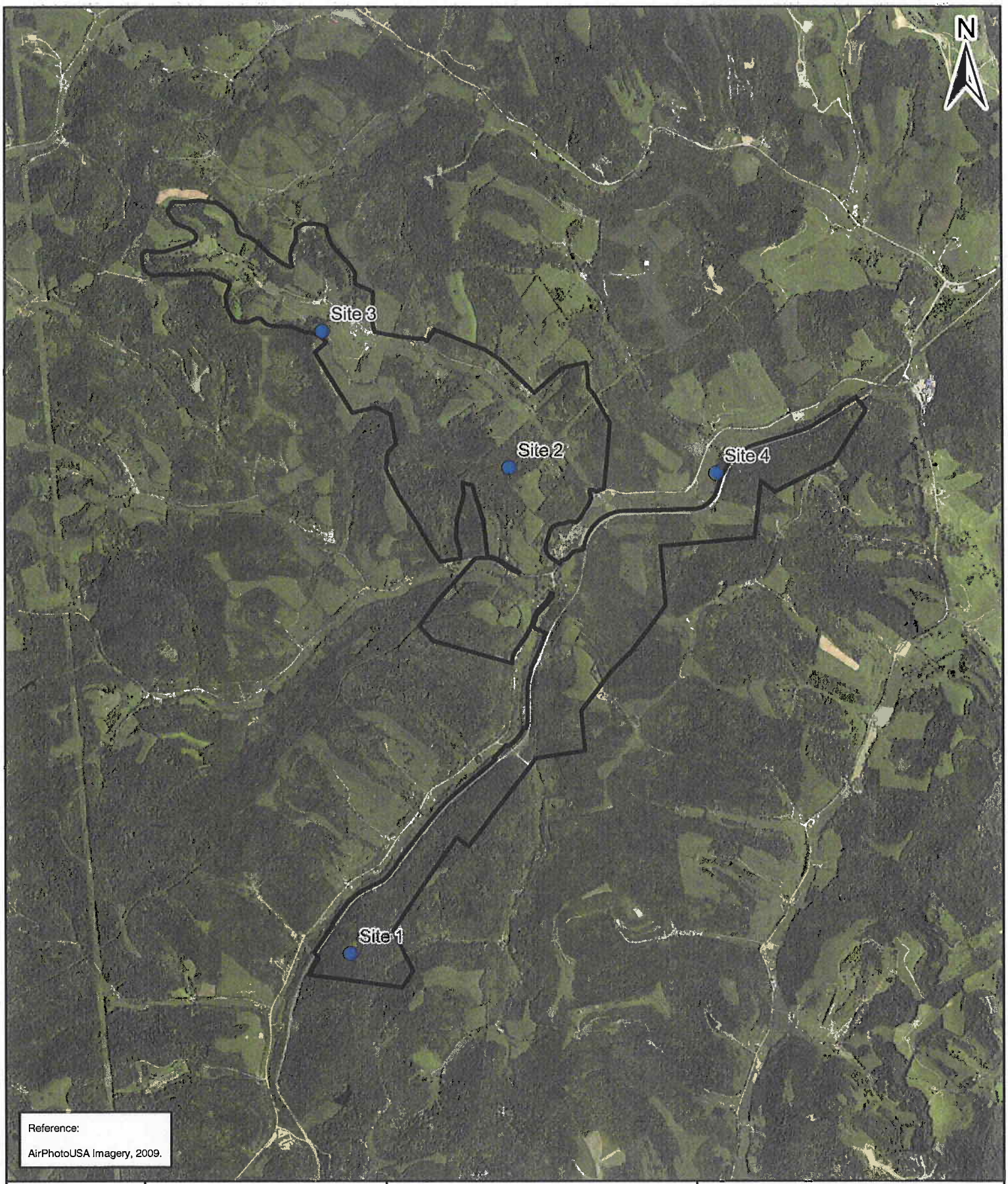

DRAWN BY: CLC	0 1,500 3,000 Feet	ISSUED FOR:	MIST NET SITES FOUNDATION MINE BAT SURVEY FOUNDATION MINING, LLC GREENE COUNTY, PA
CHECKED BY: SRB	**Legend**	ISSUED BY:	
APPROVED BY: DJM	Study Area	CIVIL & ENVIRONMENTAL CONSULTANTS, INC. 333 Baldwin Road Pittsburgh, PA 15205-9702 1-800-365-2324 www.cecinc.com	PROJECT NO.: 100-931 FIGURE: 2
SCALE: 1 " = 3,000 '	Mist Net Site		
DATE: 8/17/2010			

P:\2010\100-931\-GIS\maps\100931_mist_net_sites.mxd

APPENDIX A

U.S. FISH &WILDLIFE SERVICE CORRESPONDENCE

From: Pamela_Spayd%FWS@fws.gov on behalf of Pamela_Shellenberger@fws.gov
Sent: Wed 6/9/2010 10:19 AM
To: Slack, Ryan
Subject: Re: FW: permit application

Ryan,

I have reviewed the brief mist net survey plans for four different sites and concur with the amount of nets vs. the amount of forest disturbance acreage. Please submit survey data in separate reports.

Thank you,
Pamela Shellenberger
Fish and Wildlife Biologist
Endangered Species Program
U.S. Fish and Wildlife Service
315 South Allen Street, Suite 322
State College, PA 16801
P: 814-234-4090 x241
F: 814-234-0748
"Slack, Ryan" <rslack@cecinc.com>

"Slack, Ryan" <rslack@cecinc.com>	To<Pamela_Shellenberger@fws.gov>
06/04/2010 02:10 PM	cc
	SubjectFW: permit application

Hi Pam,

Attached is our PA collectors permit application for conducting mist netting on several coal mining permitting projects. Greg Turner has indicated that we are approved through his agency to begin the work. Our goal is to begin these surveys on the evening of June 7. I was wondering if you would allow us to use the attached application as a study plan to gain concurrence on our level of efforts from your office to take to the field with us. Please let me know if this is not sufficient enough information and/or if the accelerated timeframe cannot be met.

Thanks for your attention to the matter,
Ryan

Ryan Slack / Project Manager
Civil & Environmental Consultants, Inc.
1 North Pennsylvania Street · Suite 1100 · Indianapolis, IN 46204
Toll-Free: 877-746-0749 · Fax: 317-655-7778
Mobile: (513)237-5051 · http://www.cecinc.com
Senior Leadership · Integrated Services · Personal Business Relationships

From: Dunlap, Kathleen
Sent: Tuesday, June 01, 2010 3:22 PM
To: 'bhollis@state.pa.us'
Subject: permit application

Mr. Hollis,

I've attached our permit applications for 4 sites in PA. I attempted to send the application on Thursday night via PDF, but I think the file was just too big. It doesn't look like it ever went through to you. I was able to reduce the size quite a bit, but lost a little of the detail. So, I have backed up this email PDF with a hardcopy that we are sending FedEx today. Hopefully, this will be enough to get things moving.

We had hoped to start on the projects at the end of the week, but since this is a holiday week, we anticipate a mid-June start. If there is anything else that you need from me, please let me know.

Thank you,
Katie

Kathleen Dunlap / Assistant Project Manager
Civil & Environmental Consultants, Inc.
8740 Orion Place, Suite 100 · Columbus, Ohio 43240
Toll-Free: 888-598-6808 · Direct: 614-310-0175 · Fax: 614-540-6638
Mobile: (614)499-3188 · http://www.cecinc.com
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Study Plan For: Foundation Mine (100-931)

Foundation Mine is located southwest of Waynesburg, Pennsylvania. Review of records including aerial photography, topographic maps, and mining maps indicated that approximately 470 acres of forested habitat exist. Please see the attached figure. This estimate includes all potentially forested areas, and may encompass areas of immature or low-suitability forested habitat. We will use our best professional judgment to determine the most-suitable areas to mist net.

Based on the 470 acre scenario, the mist net survey will require a minimum of 16 net-nights (4 survey sites x 2 nights per survey site x 2 nets per survey night = 16 net nights) to complete the survey. Each mist-net survey site will include at least two mist-nets, placed a minimum of 100 feet apart. Each site will be sampled for 2 nights, which will begin at sunset and last for a minimum of 5 hours. In the case of severe weather including precipitation, strong winds, and/or temperatures dropping below 50 degrees Fahrenheit during the initial survey effort, surveys will be terminated and sites will be resurveyed under suitable conditions, in accordance with established protocols.

At this time, we anticipate the survey to commence in early to mid June, weather permitting.

APPENDIX B

SCIENTIFIC COLLECTION PERMIT

Commonwealth of Pennsylvania
PENNSYLVANIA GAME COMMISSION
2001 Elmerton Avenue
Harrisburg, PA 17110-9797

(717) 783-8164

SPECIAL USE PERMIT NO. 96-2010

QUALIFIED INDIANA BAT SURVEYOR:	EFFECTIVE 06/03/2010	EXPIRES 08/15/2010
CEC, INC. RYAN SLACK 8740 ORION PLACE, SUITE 100 COLUMBUS, OHIO 43240 513-237-5051	SCIENTIFIC STUDY BAT SAMPLING - CAPTURE & RELEASE ALL BATS INCLUDING INDIANA BATS (MYOTIS SODALIS)	
ADDITIONAL QUALIFIED INDIANA BAT SURVEYORS: BAT IDENTIFIERS: ASSISTANTS: KATHLEEN DUNLAP, CODY BROUNCE, SCHUYLER BROUNCE, AND BRENT MOCK	RENEWABLE: YES [X] NO [ ] REPORT REQUIRED: [X] AS SPECIFIED [X] UPON COMPLETION	

CONDITIONS AND AUTHORIZATIONS:

A. THE VALIDITY OF THIS PERMIT IS CONDITIONED UPON RECEIPT OF ANY OTHER REQUIRED FEDERAL, STATE OR LOCAL PERMITS.

B. PERMITTEE MAY CONDUCT MIST NET SURVEYS FOR BATS TO INCLUDE INDIANA BATS AT THE FOLLOWING SITES: FREEPORT MINE, FOUNDATION MINE, CUMBERLAND MINE, AND EMERALD MINE. ALL ARE LOCATED IN THE WAYNESBURG AREA, GREENE COUNTY..

C. BATS MAY BE CAPTURED THROUGH THE USE OF MIST NETS AND HARP TRAPS. BATS MAY BE BANDED USING FOREARM BANDS AS PRESCRIBED IN PROJECT OUTLINE. RADIO TELEMETRY MAY BE USED TO DETERMINE ROOST LOCATIONS AND FORAGING AREAS FOR ALL SPECIES. TISSUE SAMPLES MAY NOT BE TAKEN FROM INDIANA BATS (MYOTIS SODALIS).

D. NEW EQUIPMENT SHOULD BE USED IN BAT SURVEYS IN COUNTIES UNAFFECTED BY WHITE NOSE SYNDROME (WNS). COUNTIES CURRENTLY AFFECTED BY WNS INCLUDE BUCKS, FAYETTE, CARBON, HUNTINGDON, LYCOMING, LACKAWANNA, LUZERNE, CENTRE, MONROE, NORTHUMBERLAND, SCHUYLKILL, SULLIVAN, AND MIFFLIN. USED EQUIPMENT THAT CANNOT BE SANITIZED AS DESCRIBED WILL NOT BE TRANSPORTED INTO WNS UNAFFECTED COUNTIES. AFTER EACH USE, ALL HARDWARE AND SOFT SIDED EQUIPMENT (TRAPS, NETS, HANDLING GLOVES, AND BAT RETENTION OR MEASUREMENT EQUIPMENT) SHALL BE 10 WASHED FREE OF COARSE MUD AND DEBRIS; 2) SANITIZED BY SUBMERGING IN A 10% BLEACH SOLUTION FOR AT LEAST 10 MINUTES; 3) RINSED IN CLEAN WATER AT LEAST TWICE; AND 4) AIR-DRIED. ANY EQUIPMENT THAT CANNOT BE SUBMERGED CANNOT BE TRANSPORTED INTO COUNTIES UNAFFECTED BY WNS. AS A REMINDER, THE WHITE FUNGUS IS ONLY ONE SIGN OF WNS. YOU SHOULD NOT EXPECT TO FIND BATS WITH FUNGUS ON THEM DURING THE SUMMER OR FALL. HOWEVER, ALL BATS WITH ABNORMAL WING/TAIL MEMBRANE CHARACTERISTICS DESCRIBED IN THE ATTACHED GUIDELINES SHOULD BE PHOTOGRAPHED AND REPORTED TO THE PENNSYLVANIA GAME COMMISSION WITHIN 24 HOURS (SEE ATTACHED). PERMITTEES ARE REQUIRED TO FOLLOW ALL DECONTAMINATION AND DISINFECTION GUIDELINES INCLUDED WITH THIS PERMIT (BAT HANDLING/DISINFECTION PROTOCOL FOR SUMMER BAT FIELD STUDIES).

E. ALL BATS CAPTURED DURING THE SURVEY SHALL BE HANDLED IN A HUMANE MANNER AND NON TARGET BATS SHALL BE RELEASED UNHARMED. ANY NON TARGET BAT THAT MAY DIE DUE TO HANDLING WILL BE REPORTED TO THE PENNSYLVANIA GAME COMMISSION, BUREAU OF WILDLIFE MANAGEMENT, 2001 ELMERTON AVENUE, HARRISBURG, PA 17110, (717)787-5529, WITHIN 72 HOURS OF ITS DEATH.

F. A REPORT OF THE ACTIVITIES CONDUCTED THROUGH THIS PERMIT SHALL BE PROVIDED TO THE PENNSYLVANIA GAME COMMISSION UPON PROJECT COMPLETION. REPORTS WILL INCLUDE THE PROVIDED MANDATORY REPORTING FORMS. PLEASE SEND TO ADDRESS AS "E" ATTN: CAL BUTCHKOSKI.

SPECIAL USE PERMIT NO. 96-2010

QUALIFIED INDIANA BAT SURVEYOR:	EFFECTIVE	EXPIRES
CEC, INC. RYAN SLACK 8740 ORION PLACE, SUITE 100 COLUMBUS, OHIO 43240 513-237-5051	06/03/2010	08/15/2010
	SCIENTIFIC STUDY BAT SAMPLING - CAPTURE & RELEASE INDIANA BATS (MYOTIS SODALIS) & ALL OTHER BATS	
ADDITIONAL QUALIFIED INDIANA BAT SURVEYORS: BAT IDENTIFIERS: ASSISTANTS: KATHLEEN DUNLAP, CODY BROUNCE, SCHUYLER BROUNCE, AND BRENT MOCK	RENEWABLE: YES [X] NO [ ] REPORT REQUIRED: [X] AS SPECIFIED [X] UPON COMPLETION	

CONDITIONS AND AUTHORIZATIONS:

G. A COPY OF THIS PERMIT MUST BE CARRIED AT ALL TIMES AND PRESENTED TO ANY AUTHORIZED PERSON UPON REQUEST.
H. A QUALIFIED INDIANA BAT SURVEYOR MUST BE PRESENT DURING THE TIMES OF SURVEYS AND IS RESPONSIBLE FOR OVERSEEING ALL ASPECTS OF THE PROJECT INCLUDING ADHERANCE TO PGC NETTING STANDARDS AND EFFORT REQUIREMENTS. THIS PERSON SHALL BE LISTED ON THE USFWS QUALIFIED INDIANA BAT SURVEYORS LIST.
I. ONLY QUALIFIED INDIANA BAT SURVEYORS AND APPROVED BAT IDENTIFIERS WILL IDENTIFY BATS. BAT IDENTIFIERS SHALL BE LISTED ON THE USFWS BAT IDENTIFIER LIST.
J. PROJECT AREA MAY BE EXTENDED TO STATE GAME LANDS WITH PRIOR PERMISSION OF REGIONAL LAND MANAGEMENT SUPERVISOR (LMS), WHO CAN BE CONTACTED THROUGH THE APPROPRIATE REGIONAL OFFICE.
K. ONCE PERMISSION FROM THE LMS IS OBTAINED, WHEN PARKING OR LEAVING A VEHICLE UNATTENDED IN AN AREA NOT OPEN TO PUBLIC TRAVEL, PERMITTEE SHALL DISPLAY A LOGO OR CARD IN AN OBVIOUS LOCATION IN OR ON YOUR VEHICLE TO IDENTIFY ITS AFFILIATION AND LEAVE A COPY OF THIS PERMIT ON THE DASHBOARD, VISIBLE FROM OUTSIDE THE VEHICLE.
L. ACCESS WILL ONLY BE GRANTED FOR OFFICIAL PURPOSES AND NO UNAUTHORIZED PERSONS SHALL BE TRANSPORTED BEHIND COMMISSION GATES OR INTO OTHER AREAS CLOSED TO THE PUBLIC.
M. NO ACTIVITY SHALL OCCUR BEFORE NOON ON ALL SATURDAYS DURING THE SPRING TURKEY SEASON. ACCESS MAY BE DENIED AT OTHER TIMES DUE TO HUNTING SEASONS, INCLEMENT WEATHER, ROAD CONDITIONS OR OTHER CONFLICTS AS DETERMINED BY THE LMS. CONSENT FOR RIGHT OF ENTRY SHALL NOT INTERFERE WITH LAWFUL PUBLIC HUNTING AND TRAPPING ACTIVITIES.

GIVEN UNDER MY HAND AND THE SEAL OF THE PENNSYLVANIA GAME COMMISSION THIS 3RD DAY OF JUNE, 2010 AT HARRISBURG, DAUPHIN COUNTY, PENNSYLVANIA.

Richard R Palmer

DIRECTOR, BUREAU OF WILDLIFE PROTECTION

c: CAL BUTCHKOSKI
LES TOMLINSON, WMS TRUSSO
WCO BURNS

APPENDIX C

PHOTOGRAPHS

Photo 1: View of forested flight corridor at Mist Net Site 1, Net Set A.

Photo 2: View of forested flight corridor at Mist Net Site 1, Net Set B.

Photo 3: View of flight corridor over ATV trail at Mist Net Site 2, Net Set A.

Photo 4: View of forested flight corridor over ATV trail at Mist Net Site 2, Net Set B.

Photo 5: View of 3rd order stream at Mist Net Site 4, Net Set A.

Photo 6: View of 3rd order stream at Mist Net Site 4, Net Set B.

Photo 7: Northern Myotis bat (*Myotis septentrionalis*) captured at Mist Net Site 1.

Photo 8: Northern Myotis bat (*Myotis septentrionalis*) captured at Mist Net Site 2.

Photo 9: Eastern Red bat (*Lasiurus borealis*) captured at Mist Net Site 2.

Photo 10: Northern Myotis bat (*Myotis septentrionalis*) captured at Mist Net Site 3.

Photo 11: Eastern Red bat (*Lasiurus borealis*) captured at Mist Net Site 3.

Photo 12: Big Brown bat (*Eptesicus fuscus*) captured at Mist Net Site 4.

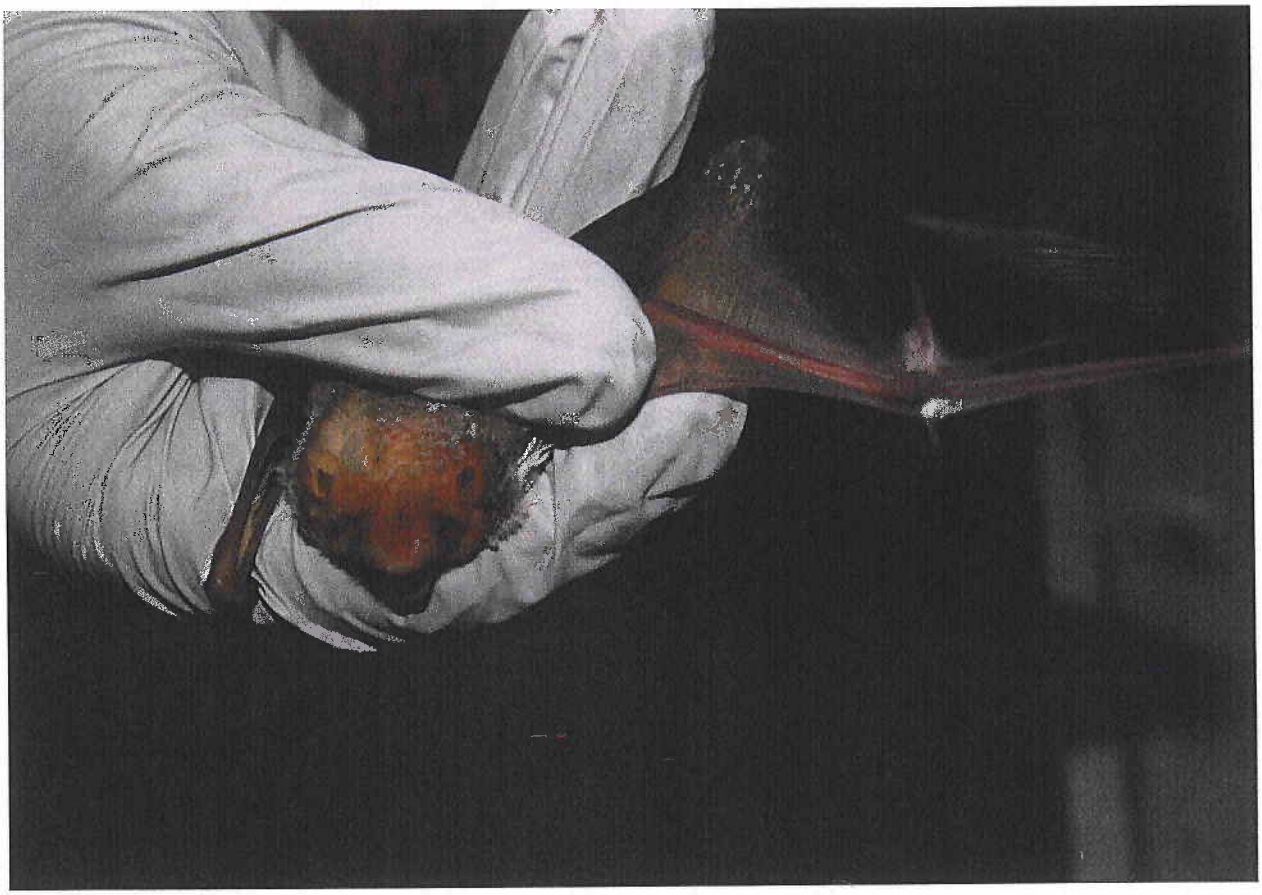

Photo 13: Eastern Red bat (*Lasiurus borealis*) captured at Mist Net Site 4.

APPENDIX D

PENNSYLVANIA GAME COMMISSION REPORT

COMMONWEALTH OF PENNSYLVANIA
Pennsylvania Game Commission
Bureau of Law Enforcement, Technical Services Division
2001 Elmerton Avenue, Harrisburg, PA 17110-9797

Section 1 - Cover

PERMITTEE BAT CAPTURE REPORT

Permit Number 96-2010

Project Name: Foundation Mine

Company/
Organization/
Permittee Name: Civil and Environmental Consultants, Inc.

Address: 333 Baldwin Road
Pittsburgh, PA 15205

Phone: (412) 429-2324 **Fax:** (412) 429-2114

E-Mail: rslack@cecinc.com

Project Supervisor Name: Dan Maltese

Supervisor Contact: Phone: (412) 429-2324

E-Mail: dmaltese@cecinc.com

If this is contracted work, provide the name & address of the individual/organization work is being performed for:

Alpha Natural Resources
158 Portal Road
Waynesburg, PA 15370

FORM P-70008-N/T
12/09
Section 2

COMMONWEALTH OF PENNSYLVANIA
Pennsylvania Game Commission

BAT NETTING/TRAPPING SITE SURVEY RECORD

1. **Survey Date:** 8/4/2010 2. **Company Name:** Civil and Environmental Consultants

3. **Bat Identifier:** (Responsible Recorder) Ryan Slack 4. **Assistants:** Stay Bounce

5. **Site Name and/or Number:** Foundation Site 1

6. **Site is (circle one):** hibernation site (summer habitat)

7a. **If hibernation site circle one:** limestone mine, coal mine, limestone cave, sandstone cave, RR tunnel, other structure, describe - _____.

7b. **If summer habitat, describe area being sampled** (e.g. forested stream or forest clearing with stream):
Forested Unimproved Roads

8. **County:** Greene 9. **7.5' Quad.:** Rogersville and Holbrook

10. **Was site GPS'd (required) ?** (YES) - NO

11. **Geographic Coordinates (D-M-S):** Latitude: 39 °- 49 '- 47.9"N, Longitude: 80 °- 19 '- 49.4"W

Datum *(circle one)*: (NAD27) (Preferred), NAD83, WGS84, Other: _____

12. **Ownership and Access:** *(Who owns site or controls access? Give name and address.)* _____
Alpha Natural Resources

13. **Time** *(military)* **& Temperature:** Start Time 21:30 h Stop Time 01:30 h Total Minutes: 30

Start Temp. 20 °C End Temp. 18 °C *(must stay ≥10 °C for summer netting)*

14. **General Weather** *(circle one)*: Clear; (Partly Cloudy;) Mostly Cloudy; Cloudy; Drizzle; Intermittent Rain; Steady Rain; Thunderstorms; Snow; Other: _____.
(suspend netting during periods of rain)

15. **General Wind Conditions** *(circle one)*: (Calm,) Breezy (Leaves Rustling), Windy (Trees Swaying).

16. **Capture Setup at Site:**

Set #	Type	Count	Dimensions	Description	TOTAL AREA (m)
1	Nets	4	12m x 2.6m	Stacked over trail	124.8 sq. m
A	Nets	2	6m x 2.6m	Stacked over Unimproved Road	31.2
B	Nets	3	9m x 2.6m	Stacked over Camp Driveway	70.2

Total Capture Area: 101.4 sq. m

(Site Survey Record – Continued) **Site Name/No.:** Foundation mine Site 1 **Date:** 8/4/2010

17. Describe habitat 150 m around site: *(topography and vegetation including dominant tree species.)*
White Pine Stand and open old field with transecting unimproved Road/
Dominant Tree species is white Pine, White Ash and Sugar maple.

18. Was reproductive status checked? YES / NO *(if "NO" only enter numbers in Total columns)*

***CAPTURE RESULTS**

Species	Number of Adult Females				No. Juv. Fem.	Total No. Fem.	Number of Adult Males		No. Juv. Male	Total No. Males	Species Totals
	NR	PG	L	PL			SCR	NR			
Eptesicus fuscus	2		1			3	2	1	1	4	7
Myotis lucifugus											
Myotis septentrionalis											
Myotis leibii											
Myotis sodalis											
Eptesicus fuscus											
Perimyotis subflavus											
Lasiurus borealis											
Lasiurus cinereus											
Lasionycteris noctivagans											
Other – specify:											
Other – specify:											

Reproductive Status: NR= nonreproductive, PG= pregnant, L= lactating, PL= post lactating, SCR= scrotal/epididymis swollen.

***Complete Measurement and Capture Data Form for all:**
(1) Myotis sodalis, (2) Myotis leibii, (3) bats you are banding or band recaptures, (4) radio-tagged bats and (5) bat species not usually found in PA.

Grand Total: No Bats

19. BAT DETECTORS & OTHER MONITORING DEVICES: *Tallies of bat passes / hour. One to 5 hours required for Indiana bat hibernacula surveys. Monitor one hour after 22:00 hrs when trapping/netting hibernacula and 5 hours when only monitoring with bat detectors, night vision or infrared device (when site can not be trapped/netted). Describe procedure & equipment used in remarks.*

1st hour	2nd hour	3rd hour	4th hour	5th hour
Start Time:	Start Time:	Start Time:	Start Time:	Start Time:
End Time:	End Time:	End Time:	End Time:	End Time:
Tallies:	Tallies:	Tallies:	Tallies:	Tallies:

20. REMARKS:

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COMMONWEALTH OF PENNSYLVANIA
Pennsylvania Game Commission

BAT NETTING/TRAPPING SITE SURVEY RECORD

1. Survey Date: 8/5/2010 2. Company Name: Civil and Environmental Consultants

3. Bat Identifier: Ryan Slack (Responsible Recorder) 4. Assistants: _____

5. Site Name and/or Number: Foundation Mine Site 1

6. Site is (circle one): hibernation site (summer habitat)

7a. If hibernation site circle one: limestone mine, coal mine, limestone cave, sandstone cave, RR tunnel, other structure, describe - _____.

7b. If summer habitat, describe area being sampled (e.g. forested stream or forest clearing with stream):

Forested Unimproved Roads

8. County: Greene 9. 7.5' Quad.: Rogersville and Holbrook

10. Was site GPS'd (required) ? (YES) NO

11. Geographic Coordinates (D-M-S): Latitude: 39 °- 49 '- 47.9 "N, Longitude: 80 °- 19 '- 49.4 "W

Datum *(circle one)*: (NAD27) (Preferred), NAD83, WGS84, Other: _____

12. Ownership and Access: *(Who owns site or controls access? Give name and address.)* _____

Alpha Natural Resources

13. Time *(military)* & Temperature: Start Time 21:30 h Stop Time 01:30 h Total Minutes: 300

Start Temp. 21 °C End Temp. 19 °C *(must stay ≥10°C for summer netting)*

14. General Weather *(circle one)*: (Clear); Partly Cloudy; Mostly Cloudy; Cloudy; Drizzle; Intermittent Rain; Steady Rain; Thunderstorms; Snow; Other: _____.
(suspend netting during periods of rain)

15. General Wind Conditions *(circle one)*: (Calm.) Breezy (Leaves Rustling), Windy (Trees Swaying).

16. Capture Setup at Site:

Set #	Type	Count	Dimensions	Description	TOTAL AREA (m)
1	Nets	1	12m x 2.6m	Stacked over trail	124.8 sq. m
A	Nets	2	6m x 2.6m	Stacked over Unimproved Road	31.2
B	Nets	3	9m x 2.6m	Stacked over Camp Driveway	70.2

Total Capture Area: 101.4 sq. m

(Site Survey Record – Continued) Site Name/No.: Foundation Mine Site 1 Date: 8/5/2010

17. Describe habitat 150 m around site: *(topography and vegetation including dominant tree species.)*
White Pine Stand and Open Old Field with transecting Unimproved Roads.
Dominate Tree Species: White Pine, White Ash and Sugar Maple.
(Interior Upland Second Growth Forest)

18. Was reproductive status checked? (YES) NO *(if "NO" only enter numbers in Total columns)*

*CAPTURE RESULTS

Species	Number of Adult Females				No. Juv. Fem.	Total No. Fem.	Number of Adult Males		No. Juv. Male	Total No. Males	Species Totals
	NR	PG	L	PL			SCR	NR			
Eptesicus fuscus	2		1			3	2	1	1	4	7
Myotis lucifugus											
Myotis septentrionalis								1	1		2
Myotis leibii											
Myotis sodalis											
Eptesicus fuscus											
Perimyotis subflavus											
Lasiurus borealis											
Lasiurus cinereus											
Lasionycteris noctivagans											
Other – specify:											
Other – specify:											

Reproductive Status: NR= nonreproductive, PG= pregnant, L= lactating, PL= post lactating, SCR= scrotal/epididymis swollen.

*Complete Measurement and Capture Data Form for all:
(1) Myotis sodalis, (2) Myotis leibii, (3) bats you are banding or band recaptures, (4) radio-tagged bats and (5) bat species not usually found in PA.

Grand Total: 2

19. BAT DETECTORS & OTHER MONITORING DEVICES: *Tallies of bat passes / hour. One to 5 hours required for Indiana bat hibernacula surveys. Monitor one hour after 22:00 hrs when trapping/netting hibernacula and 5 hours when only monitoring with bat detectors, night vision or infrared device (when site can not be trapped/netted). Describe procedure & equipment used in remarks.*

1st hour	2nd hour	3rd hour	4th hour	5th hour
Start Time:	Start Time:	Start Time:	Start Time:	Start Time:
End Time:	End Time:	End Time:	End Time:	End Time:
Tallies:	Tallies:	Tallies:	Tallies:	Tallies:

20. REMARKS:
M. Sept: Net B - 5.1g RFA = 36.0mm Wing Score Ø Juv
M. Sept: Net B - 5.5g RFA = 33.8mm Wing Score Ø Adult

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COMMONWEALTH OF PENNSYLVANIA
Pennsylvania Game Commission

BAT NETTING/TRAPPING SITE SURVEY RECORD

1. **Survey Date:** 8/6/10 2. **Company Name:** CEC

3. **Bat Identifier:** (Responsible Recorder) Ryan Slack 4. **Assistants:** Katie Dunlap

5. **Site Name and/or Number:** Foundation Mine / site 2

6. **Site is (circle one):** hibernation site (summer habitat)

7a. **If hibernation site circle one:** limestone mine, coal mine, limestone cave, sandstone cave, RR tunnel, other structure, describe - _____

7b. **If summer habitat, describe area being sampled** (e.g. forested stream or forest clearing with stream): forested trail

8. **County:** Greene 9. **7.5' Quad.:** Rogersville and Holbrook

10. **Was site GPS'd (required) ?** (YES) - NO

11. **Geographic Coordinates (D-M-S):** Latitude: 39 °- 51 '- 43.0 "N, Longitude: 80 °- 19 '- 5.2 "W

Datum *(circle one)*: **NAD27** (Preferred), NAD83, WGS84, Other: _____

12. **Ownership and Access:** *(Who owns site or controls access? Give name and address.)* Alpha Natural Resources

13. **Time** *(military)* **& Temperature:** Start Time 2045 h Stop Time 0145 h Total Minutes: 300

Start Temp. 22 °C End Temp. 15.1 °C *(must stay ≥10 °C for summer netting)*

14. **General Weather** *(circle one)*: (Clear); Partly Cloudy; Mostly Cloudy; Cloudy; Drizzle; Intermittent Rain; Steady Rain; Thunderstorms; Snow; Other: _____.
(suspend netting during periods of rain)

15. **General Wind Conditions** *(circle one)*: (Calm), Breezy (Leaves Rustling), Windy (Trees Swaying).

16. **Capture Setup at Site:**

Set #	Type	Count	Dimensions	Description	TOTAL AREA (m)
1	Nets	4	12m x 2.6m	Stacked over trail	124.8 sq. m
A	Nets	3	9m X 2.6m	Stacked over trail	70.2
B	Nets	2	6m X 2.6m	Stacked over trail	31.2

Total Capture Area: 101.4 sq. m

(Site Survey Record – Continued) **Site Name/No.:** Foundation Mine / Site 2 **Date:** 8/6/10

17. Describe habitat 150 m around site: *(topography and vegetation including dominant tree species.)*

upland interior forest

red oaks, black walnuts, white ash, American Elm

18. Was reproductive status checked? (YES) / NO *(if "NO" only enter numbers in Total columns)*

***CAPTURE RESULTS**

Species	Number of Adult Females				No. Juv. Fem.	Total No. Fem.	Number of Adult Males		No. Juv. Male	Total No. Males	Species Totals
	NR	PG	L	PL			SCR	NR			
Eptesicus fuscus	2		1			3	2	1	1	4	7
Myotis lucifugus											
Myotis septentrionalis					1						1
Myotis leibii											
Myotis sodalis											
Eptesicus fuscus											
Perimyotis subflavus											
Lasiurus borealis									1		1
Lasiurus cinereus											
Lasionycteris noctivagans											
Other – specify:											
Other – specify:											

Reproductive Status: NR= nonreproductive, PG= pregnant, L= lactating, PL= post lactating, SCR= scrotal/epididymis swollen.

***Complete Measurement and Capture Data Form for all:**
(1) Myotis sodalis, (2) Myotis leibii, (3) bats you are banding or band recaptures, (4) radio-tagged bats and (5) bat species not usually found in PA.

Grand Total: 2

19. BAT DETECTORS & OTHER MONITORING DEVICES: *Tallies of bat passes / hour. One to 5 hours required for Indiana bat hibernacula surveys. Monitor one hour after 22:00 hrs when trapping/netting hibernacula and 5 hours when only monitoring with bat detectors, night vision or infrared device (when site can not be trapped/netted). Describe procedure & equipment used in remarks.*

1st hour	2nd hour	3rd hour	4th hour	5th hour
Start Time:	Start Time:	Start Time:	Start Time:	Start Time:
End Time:	End Time:	End Time:	End Time:	End Time:
Tallies:	Tallies:	Tallies:	Tallies:	Tallies:

20. REMARKS:

Myo. sept. Not A wt - 6.25g RFA 34.5mm wing scars ⊗
Lasiurus Not B wt - 8.25g RFA 38.5mm wing scars ⊗

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COMMONWEALTH OF PENNSYLVANIA
Pennsylvania Game Commission

BAT NETTING/TRAPPING SITE SURVEY RECORD

1. **Survey Date:** 8/7/2010 2. **Company Name:** CEC

3. **Bat Identifier:** Ryan Stack (Responsible Recorder) 4. **Assistants:** Katie Dunlap

5. **Site Name and/or Number:** Foundation Mine Site 2

6. **Site is (circle one):** hibernation site (summer habitat)

7a. **If hibernation site circle one:** limestone mine, coal mine, limestone cave, sandstone cave, RR tunnel, other structure, describe - _____.

7b. **If summer habitat, describe area being sampled** (e.g. forested stream or forest clearing with stream):
Forested Trail

8. **County:** Greene 9. **7.5' Quad.:** Rogersville and Holbrook

10. **Was site GPS'd (required) ?** YES - NO

11. **Geographic Coordinates (D-M-S):** Latitude: 39 °- 51 '- 43.0"N, Longitude: 80 °- 19 '- 5.2 "W

Datum *(circle one)*: (NAD27) (Preferred), NAD83, WGS84, Other: _____

12. **Ownership and Access:** *(Who owns site or controls access? Give name and address.)* _____
Alpha Natural Resources

13. **Time** *(military)* **& Temperature:** Start Time 20:45 h Stop Time 01:45 h Total Minutes: 300

Start Temp. 21 °C End Temp. 15 °C *(must stay ≥10 °C for summer netting)*

14. **General Weather** *(circle one)*: (Clear); Partly Cloudy; Mostly Cloudy; Cloudy; Drizzle; Intermittent Rain; Steady Rain; Thunderstorms; Snow; Other: _____.
(suspend netting during periods of rain)

15. **General Wind Conditions** *(circle one)*: (Calm) Breezy (Leaves Rustling), Windy (Trees Swaying).

16. **Capture Setup at Site:**

Set #	Type	Count	Dimensions	Description	TOTAL AREA (m)
1	Nets	4	12m x 2.6m	Stacked over trail	124.8 sq. m
A	Nets	3	9m x 2.6m	Stacked Over Trail	70.2
B	Nets	2	6m x 2.6m	Stacked Over Trail	31.2

Total Capture Area: 101.4 sq. m

(Site Survey Record – Continued) **Site Name/No.:** Foundation Mine Site 2 **Date:** 8/7/2010

17. Describe habitat 150 m around site: *(topography and vegetation including dominant tree species.)*

Upland Interior Forest

Dominant Tree Species: Red oaks, Black Walnuts, White Ash and American Elm

18. Was reproductive status checked? YES / NO *(if "NO" only enter numbers in Total columns)*

***CAPTURE RESULTS**

Species	Number of Adult Females				No. Juv. Fem.	Total No. Fem.	Number of Adult Males		No. Juv. Male	Total No. Males	Species Totals
	NR	PG	L	PL			SCR	NR			
Eptesicus fuscus	2		1			3	2	1	1	4	7
Myotis lucifugus											
Myotis septentrionalis											
Myotis leibii											
Myotis sodalis											
Eptesicus fuscus											
Perimyotis subflavus											
Lasiurus borealis											
Lasiurus cinereus											
Lasionycteris noctivagans											
Other – specify:											
Other specify:											

Reproductive Status: NR= nonreproductive, PG= pregnant, L= lactating, PL= post lactating, SCR= scrotal/epididymis swollen.

***Complete Measurement and Capture Data Form for all:**

(1) Myotis sodalis, (2) Myotis leibii, (3) bats you are banding or band recaptures, (4) radio-tagged bats and (5) bat species not usually found in PA.

Grand Total: No Bats

19. BAT DETECTORS & OTHER MONITORING DEVICES: *Tallies of bat passes / hour. One to 5 hours required for Indiana bat hibernacula surveys. Monitor one hour after 22:00 hrs when trapping/netting hibernacula and 5 hours when only monitoring with bat detectors, night vision or infrared device (when site can not be trapped/netted). Describe procedure & equipment used in remarks.*

1st hour	2nd hour	3rd hour	4th hour	5th hour
Start Time:	Start Time:	Start Time:	Start Time:	Start Time:
End Time:	End Time:	End Time:	End Time:	End Time:
Tallies:	Tallies:	Tallies:	Tallies:	Tallies:

20. REMARKS:

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COMMONWEALTH OF PENNSYLVANIA
Pennsylvania Game Commission

BAT NETTING/TRAPPING SITE SURVEY RECORD

1. **Survey Date:** 8/8/10 2. **Company Name:** CEC

3. **Bat Identifier:** (Responsible Recorder) Ryan Slack 4. **Assistants:** Katie

5. **Site Name and/or Number:** Foundation/Site [redacted] 3

6. **Site is (circle one):** hibernation site (summer habitat)

7a. **If hibernation site circle one:** limestone mine, coal mine, limestone cave, sandstone cave, RR tunnel, other structure, describe - _____

7b. **If summer habitat, describe area being sampled** (e.g. forested stream or forest clearing with stream):
forested trail in cow pasture

8. **County:** Greene 9. **7.5' Quad.:** Rogersville and Holbrook

10. **Was site GPS'd (required) ?** (YES) NO

11. **Geographic Coordinates (D-M-S):** Latitude: 39°-52'-13.8"N, Longitude: 80°-20'-3.1"W

Datum *(circle one)*: (NAD27 (Preferred), NAD83, WGS84, Other: _____

12. **Ownership and Access:** *(Who owns site or controls access? Give name and address.)* _____
Alpha Natural Resources

13. **Time** *(military)* **& Temperature:** Start Time 2040 h Stop Time 0145 h Total Minutes: 300
Start Temp. 20 °C End Temp. 15 °C *(must stay ≥10 °C for summer netting)*

14. **General Weather** *(circle one)*: (Clear); Partly Cloudy; Mostly Cloudy; Cloudy; Drizzle; Intermittent Rain; Steady Rain; Thunderstorms; Snow; Other: _____.
(suspend netting during periods of rain)

15. **General Wind Conditions** *(circle one)*: Calm, (Breeze (Leaves Rustling)), Windy (Trees Swaying).

16. **Capture Setup at Site:**

Set #	Type	Count	Dimensions	Description	TOTAL AREA (m)
1	Nets	1	12m x 2.6m	Stacked over trail	124.8 sq. m
A	Nets	3	9m x 2.6m	Stacked over trail	70.2
B	Nets	2	6m x 2.6m	Stacked over trail	31.2

Total Capture Area: 101.4 sq. m

(Site Survey Record – Continued) **Site Name/No.:** Foundation / Site 3 **Date:** 8/8/10

17. Describe habitat 150 m around site: *(topography and vegetation including dominant tree species.)*

open wooded cow pasture to ~~east~~ north
dense forest to south

18. Was reproductive status checked? (YES) / NO *(if "NO" only enter numbers in Total columns)*

***CAPTURE RESULTS**

Species	Number of Adult Females				No. Juv. Fem.	Total No. Fem.	Number of Adult Males		No. Juv. Male	Total No. Males	Species Totals
	NR	PG	L	PL			SCR	NR			
Eptesicus fuscus	2		1			3	2	1	1	4	7
Myotis lucifugus											
Myotis septentrionalis					1			1			2
Myotis leibii											
Myotis sodalis											
Eptesicus fuscus											
Perimyotis subflavus											
Lasiurus borealis				1							1
Lasiurus cinereus											
Lasionycteris noctivagans											
Other – specify:											
Other – specify:											

Reproductive Status: NR= nonreproductive, PG= pregnant, L= lactating, PL= post lactating, SCR= scrotal/epididymis swollen.

***Complete Measurement and Capture Data Form for all:**
(1) Myotis sodalis, (2) Myotis leibii, (3) bats you are banding or band recaptures, (4) radio-tagged bats and (5) bat species not usually found in PA.

Grand Total 3

19. BAT DETECTORS & OTHER MONITORING DEVICES: *Tallies of bat passes / hour. One to 5 hours required for Indiana bat hibernacula surveys. Monitor one hour after 22:00 hrs when trapping/netting hibernacula and 5 hours when only monitoring with bat detectors, night vision or infrared device (when site can not be trapped/netted). Describe procedure & equipment used in remarks.*

1st hour	2nd hour	3rd hour	4th hour	5th hour
Start Time:	Start Time:	Start Time:	Start Time:	Start Time:
End Time:	End Time:	End Time:	End Time:	End Time:
Tallies:	Tallies:	Tallies:	Tallies:	Tallies:

20. REMARKS:

L. borealis RFA-39.5mm wt.-15.8g wing score Ø Not A
M. sept RFA-35.55 wt-6.3g wing score Ø Not A
M. sept RFA-34.10 wt, 5.2g wing score Ø Not B

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COMMONWEALTH OF PENNSYLVANIA
Pennsylvania Game Commission

BAT NETTING/TRAPPING SITE SURVEY RECORD

1. **Survey Date:** 8/9/10 2. **Company Name:** CEC

3. **Bat Identifier:** (Responsible Recorder) Ryan Slack 4. **Assistants:** Sky Brouncu

5. **Site Name and/or Number:** Foundation Mine / Site 3

6. **Site is (circle one):** hibernation site (summer habitat)

7a. **If hibernation site circle one:** limestone mine, coal mine, limestone cave, sandstone cave, RR tunnel, other structure, describe - _____.

7b. **If summer habitat, describe area being sampled** (e.g. forested stream or forest clearing with stream):
forested run improved road

8. **County:** Greene 9. **7.5' Quad.:** Rogersville and Holbrook

10. **Was site GPS'd (required) ?** (YES) - NO

11. **Geographic Coordinates (D-M-S):** Latitude: 39 °- 52 '- 18.8 "N, Longitude: 80 °- 20 '- 3.1 "W

Datum *(circle one)*: (NAD27) (Preferred), NAD83, WGS84, Other: _____

12. **Ownership and Access:** *(Who owns site or controls access? Give name and address.)*
Alpha Natural Resources

13. **Time** *(military)* **& Temperature:** Start Time 2045 h Stop Time 0145 h Total Minutes: 300

Start Temp. 21 °C End Temp. 17 °C *(must stay ≥10 °C for summer netting)*

14. **General Weather** *(circle one)*: (Clear); Partly Cloudy; Mostly Cloudy; Cloudy; Drizzle; Intermittent Rain; Steady Rain; Thunderstorms; Snow; Other: _____.
(suspend netting during periods of rain)

15. **General Wind Conditions** *(circle one)*: (Calm,) Breezy (Leaves Rustling), Windy (Trees Swaying).

16. **Capture Setup at Site:**

Set #	Type	Count	Dimensions	Description	TOTAL AREA (m)
1	Nets	#	12m x 2.6m	Stacked over trail	124.8 sq.m
B	Nets	2	6m X 2.6m	Stacked over trail	31.2
A	Nets	3	9m X 2.6m	Stacked over trail	70.2

Total Capture Area: 101.4 sq. m

(Site Survey Record – Continued) **Site Name/No.:** Foundation Mine / Site 3 **Date:** 8/9/10

17. Describe habitat 150 m around site: *(topography and vegetation including dominant tree species.)*
Open Wooded Cow Pasture to North dense forest to South.

18. Was reproductive status checked? YES / NO *(if "NO" only enter numbers in Total columns)*

*CAPTURE RESULTS

Species	Number of Adult Females				No. Juv. Fem.	Total No. Fem.	Number of Adult Males		No. Juv. Male	Total No. Males	Species Totals
	NR	PG	L	PL			SCR	NR			
Eptesicus fuscus	2		1			3	2	1	1	4	7
Myotis lucifugus											
Myotis septentrionalis								1	1		
Myotis leibii											
Myotis sodalis											
Eptesicus fuscus											
Perimyotis subflavus											
Lasiurus borealis											
Lasiurus cinereus											
Lasionycteris noctivagans											
Other – specify:											
Other – specify:											

Reproductive Status: NR= nonreproductive, PG= pregnant, L= lactating, PL= post lactating, SCR= scrotal/epididymis swollen.

***Complete Measurement and Capture Data Form for all:**
(1) Myotis sodalis, (2) Myotis leibii, (3) bats you are banding or band recaptures, (4) radio-tagged bats and (5) bat species not usually found in PA.

Grand Total: No Bats

19. BAT DETECTORS & OTHER MONITORING DEVICES: *Tallies of bat passes / hour. One to 5 hours required for Indiana bat hibernacula surveys. Monitor one hour after 22:00 hrs when trapping/netting hibernacula and 5 hours when only monitoring with bat detectors, night vision or infrared device (when site can not be trapped/netted). Describe procedure & equipment used in remarks.*

1st hour	2nd hour	3rd hour	4th hour	5th hour
Start Time:	Start Time:	Start Time:	Start Time:	Start Time:
End Time:	End Time:	End Time:	End Time:	End Time:
Tallies:	Tallies:	Tallies:	Tallies:	Tallies:

20. REMARKS:

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COMMONWEALTH OF PENNSYLVANIA
Pennsylvania Game Commission

BAT NETTING/TRAPPING SITE SURVEY RECORD

1. **Survey Date:** 8/10/2010 2. **Company Name:** Civil and Environmental Consultants

3. **Bat Identifier:** (Responsible Recorder) Ryan Slack 4. **Assistants:** Sky Branca

5. **Site Name and/or Number:** Foundation Mine Site 4

6. **Site is (circle one):** hibernation site (summer habitat)

7a. **If hibernation site circle one:** limestone mine, coal mine, limestone cave, sandstone cave, RR tunnel, other structure, describe - _____.

7b. **If summer habitat, describe area being sampled** (e.g. forested stream or forest clearing with stream):

Forested Stream with Mowed Field on Left descendary Bank

8. **County:** Greene 9. **7.5' Quad.:** Rogersville and Holbrook

10. **Was site GPS'd (required) ?** (YES) - NO

11. **Geographic Coordinates (D-M-S):** Latitude: 39 °-51 '-43.1 "N, Longitude: 80 °-18 '-2.2 "W

Datum *(circle one)*: **NAD27** (Preferred), NAD83, WGS84, Other: _____

12. **Ownership and Access:** *(Who owns site or controls access? Give name and address.)* _____

Alpha Natural Resource Group

13. **Time** *(military)* **& Temperature:** Start Time 21:45 h Stop Time 01:45 h Total Minutes: 300

Start Temp. 21 °C End Temp. 17 °C *(must stay ≥10 °C for summer netting)*

14. **General Weather** *(circle one)*: (Clear); Partly Cloudy; Mostly Cloudy; Cloudy; Drizzle; Intermittent Rain; Steady Rain; Thunderstorms; Snow; Other: _____.
(suspend netting during periods of rain)

15. **General Wind Conditions** *(circle one)*: (Calm,) Breezy (Leaves Rustling), Windy (Trees Swaying).

16. **Capture Setup at Site:**

Set #	Type	Count	Dimensions	Description	TOTAL AREA (m)
1	Nets	4	12m x 2.6m	Stacked over trail	124.8 sq. m
A	Nets	2	6m x 2.6m	Stacked over Stream	31.2
B	Nets	3	6m x 2.6m	Stacked over Stream	46.8

Total Capture Area: 78.0 sq. m

(Site Survey Record – Continued) **Site Name/No.:** Foundation Min Site 4 **Date:** 8/10/2010

17. Describe habitat 150 m around site: *(topography and vegetation including dominant tree species.)*
Right Descendry Bank, Forested Riparian Habitat Left Descendry Bank a mowed Hayfield
Dominant Tree Species:

18. Was reproductive status checked? (YES) NO *(if "NO" only enter numbers in Total columns)*

***CAPTURE RESULTS**

Species	Number of Adult Females				No. Juv. Fem.	Total No. Fem.	Number of Adult Males		No. Juv. Male	Total No. Males	Species Totals
	NR	PG	L	PL			SCR	NR			
Eptesicus fuscus	2		1			3	2	1	1	4	7
Myotis lucifugus											
Myotis septentrionalis											
Myotis leibii											
Myotis sodalis											
Eptesicus fuscus											
Perimyotis subflavus											
Lasiurus borealis											
Lasiurus cinereus											
Lasionycteris noctivagans											
Other -- specify:											
Other – specify:											

Reproductive Status: NR= nonreproductive, PG= pregnant, L= lactating, PL= post lactating, SCR= scrotal/epididymis swollen.

***Complete Measurement and Capture Data Form for all:**
(1) Myotis sodalis, (2) Myotis leibii, (3) bats you are banding or band recaptures, (4) radio-tagged bats and (5) bat species not usually found in PA.

Grand Total No Bats

19. BAT DETECTORS & OTHER MONITORING DEVICES: *Tallies of bat passes / hour. One to 5 hours required for Indiana bat hibernacula surveys. Monitor one hour after 22:00 hrs when trapping/netting hibernacula and 5 hours when only monitoring with bat detectors, night vision or infrared device (when site can not be trapped/netted). Describe procedure & equipment used in remarks.*

1st hour	2nd hour	3rd hour	4th hour	5th hour
Start Time:	Start Time:	Start Time:	Start Time:	Start Time:
End Time:	End Time:	End Time:	End Time:	End Time:
Tallies:	Tallies:	Tallies:	Tallies:	Tallies:

20. REMARKS:

70 0 -N/T

/ 9

Section 2

WEAL O PENNSYLVANIA
sylvania m Commission

BAT NETTIN PPING SITE SURVEY REC RD

Pag of 2

1. Survey Date: 8 1 201 2. Company Name: C il and Environmental Consultants

3. a nti : Ryan Stack ssistants: Ky Brounce
(Respo s or

5. ite Name and/o Number: o ndation u Ste4

6. Site is (cir o : ernation site summe habitat

7a. If hiberna o ci one: limestone ine, coal mine, stone cave, sandstone cave, RR tunnel,

other s uc ur be -

7b. If s mer t g s l d (g. fo sted stream or fores c ari g with stream):

Forested tram wi h Mowe Hayt d on ft descending Bank

8. County: Greene 9. 7.5' Quad.: Rogersville and Holbrook

10. Was site GPS'd (required) ? YES - NO

11. Geographic Coordinates (D-M-S): Latitude: 39 °-51 '-43.1 "N, Longitude: 80 °-18 '-2.2 "W

D tum (ci cl o e): (erred , NAD83, WGS84 Oth r:

12 Ownership and A cess: (Wh o v s te or n ols access? e name na dress.)

Alpha Natural Resources

13. Time (milita) & Temperat re Start Time 21.45 h Stop Time 01 45 h T tal Mi es: 300

Start Temp 22 °C nd Temp. 17 °C (must stay ≥10°C fo summer netting)

14. General e ther (circle one): Clear artly Cl ud Mostly C oudy; Clou y, D zzle; Intermittent R in;
(sus end netting d ring
pe ods of rain) Steady R in; Th dersto ms, Snow; Other:

15. ener l Wind Conditio s (circle one.: Calm, Breezy (Leaves Ru tl ng), indy (Trees Swaying).

16 apt r Setup at Site:

Set #	Type	Count	Dimensions	Description	TOTAL AREA (m)
1	Nets	4	12m x 2.6m	Stacked over trail	124.8 sq. m
A	Nets	2	6m x 2.6m	Stacked over Stream	31.2
B	Nets	3	6m x 2.6m	Stacked over Stream	46.8

T tal Captur A a: 7 0 sq. m

(Site Survey Record – Continued) **Site Name/No.:** Foundation Mine Site 4 **Date:** 8/11/2010

17. Describe habitat 150 m around site: *(topography and vegetation including dominant tree species.)*

Right Descending Bank, Forested Riparian Habitat, Left Descending Bank a mowed Hay Field. Dominant Tree species: Black Walnut, Black Willow, & Sycamore

18. Was reproductive status checked? (YES) / NO *(if "NO" only enter numbers in Total columns)*

***CAPTURE RESULTS**

Species	Number of Adult Females				No. Juv. Fem.	Total No. Fem.	Number of Adult Males		No. Juv. Male	Total No. Males	Species Totals
	NR	PG	L	PL			SCR	NR			
Eptesicus fuscus	2		1			3	2	1	1	4	7
Myotis lucifugus											
Myotis septentrionalis											
Myotis leibii											
Myotis sodalis											
Eptesicus fuscus								1			1
Perimyotis subflavus											
Lasiurus borealis	11										2
Lasiurus cinereus											
Lasionycteris noctivagans											
Other – specify:											
Other – specify											

Reproductive Status: NR = non-reproductive, PG = pregnant, L = lactating, PL = post lactating, SCR = scrotal/epididymis swollen.

***Complete Measurement and Capture Data Form for all:**
(1) Myotis sodalis, (2) Myotis leibii, (3) bats you are banding or band recaptures, (4) radio-tagged bats and (5) bat species not usually found in PA.

Grand Total: 3

19. BAT DETECTORS & OTHER MONITORING DEVICES: *Tallies of bat passes / hour. One to 5 hours required for Indiana bat hibernacula surveys. Monitor one hour after 22:00 hrs when trapping/netting hibernacula and 5 hours when only monitoring with bat detectors, night vision or infrared devic (when site can not be trapped/netted). Describe procedure & equipment used in remarks.*

1st hour	2nd hour	3rd hour	4th hour	5th hour
Start Time:	Start Time:	Start Time:	Start Time:	Start Time:
End Time:	End Time:	End Time:	End Time:	End Time:
Tallies:	Tallies:	Tallies:	Tallies:	Tallies:

20. REMARKS:

L. borealis 12.8g RFA 41.50mm wing score Ø Not A
E. fuscus 16.5g RFA 44.45mm wing score Ø Not B
L. Borealis 10.75g RFA 40.8mm wing score Ø Not B