



Commonwealth of Pennsylvania  
Pennsylvania Historical and Museum Commission  
**Bureau for Historic Preservation**  
Commonwealth Keystone Building, 2<sup>nd</sup> Floor  
400 North Street  
Harrisburg, PA 17120-0093  
[www.phmc.state.pa.us](http://www.phmc.state.pa.us)

April 28, 2010

Michael L. Shema  
Civil & Environmental Consultants, Inc.  
333 Baldwin Road  
Pittsburgh, PA 15205

TO EXPEDITE REVIEW USE  
BHP REFERENCE NUMBER

Re: File No. ER 2009-0199-125-E  
COE Individual Chapter 105  
Permit, Section 404 Permit &  
E&S Permit: Templeton Fork  
Stream Restoration & Wetland  
Mitigation, East Finley Twp.,  
Washington Co.

2010 APR 28 11:30

Dear Mr. Shema:

The Bureau for Historic Preservation has reviewed the above named project under the authority of the Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 *et seq.* (1988), and in accordance with relevant Federal legislation. This legislation includes Section 106 of the National Historic Preservation Act of 1966, as amended in 1980 and 1992, the regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation, the Surface Mining Control and Reclamation Act, and OSM's regulations. This review includes comments on the project's potential effect on both historic and archaeological resources.

As a result of a project review by Mark McConaughy of our staff, it has been established that potentially significant archaeological sites are located in or near your project area and others are likely to exist. These resources could be adversely affected by project activities. A Phase I archaeological survey to verify the extent of known sites and to locate other sites is needed to determine their eligibility for listing in the National Register of Historic Places. Guidelines and instructions for conducting Phase I surveys are available on our web site at <http://www.phmc.state.pa.us/bhp/Inventories/ArchaeologyGuidelines.pdf> or from our office upon request. The recorded sites in the area are listed below.

P.A.S.S. # 36WH1022 (see attached map)

At this time, we recommend that the permit be denied and we request a conference to discuss the effects to archaeological resources within the permit area. We also recommend that, if the Phase I survey is not undertaken, that the permit be conditioned to require that archaeological investigations be conducted if

Page 2  
April 28, 2010  
Michael L. Shema

sites are discovered after the mining permit is issued. We also request that you provide us with written justification for your decision if you elect not to conduct the Phase I survey.

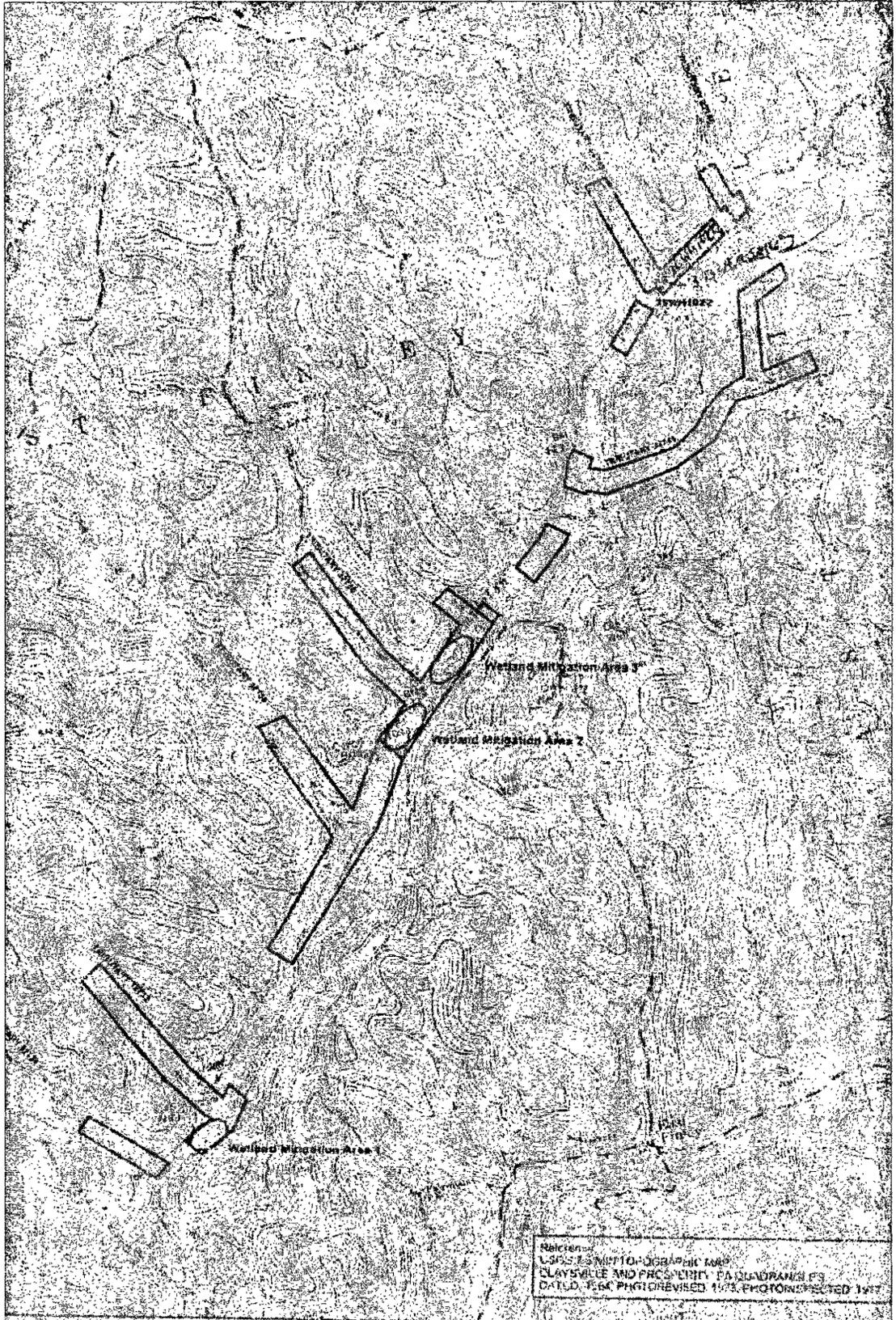
If you need further information in this matter please consult Kira Presler at (717) 705-0700. If you need further information regarding archaeological survey please contact Mark McConaughy at (724) 527-5585 x103.

Sincerely,

A handwritten signature in black ink, appearing to read "Douglas C. McLearn (for)". The signature is written in a cursive style and is positioned above the typed name.

Douglas C. McLearn, Chief  
Division of Archaeology &  
Protection

Cc: Consol Pennsylvania Coal Company, LLC, 1525 Pleasant Grove Road,  
P.O. Box J, Claysville, PA 15323  
~~COE, Pittsburgh District~~  
DEP, Southwest Regional Office  
Mark A. McConaughy



Reference:  
 USGS 7.5-MINUTE TOPOGRAPHIC MAP  
 CLAYSVILLE AND PRECINCT, PA. QUADRANGLE #3  
 DATED 1964 PHOTO REVISÉD 1974 PHOTO REVISÉD 1977

SHEET NO. 100	<b>Legend</b>  Stream Restoration Areas	CONSOLIDATED ENERGY COMPANY 1000 PENNSYLVANIA AVENUE PITTSBURGH, PA. 15222	STREAM RESTORATION AND WETLAND MITIGATION LOCATION MAP CONSOLIDATED PENNSYLVANIA COAL COMPANY
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Pennsylvania Historical and Museum Commission  
**Bureau for Historic Preservation**  
Commonwealth Keystone Building, 2<sup>nd</sup> Floor  
400 North Street  
Harrisburg, PA 17120-0093  
[www.phmc.state.pa.us](http://www.phmc.state.pa.us)

October 7, 2008

Gregory Heilman, PE  
Michael Baker Jr., Inc.  
Airside Business Park  
100 Airside Drive  
Moon, PA 15108

TO EXPEDITE REVIEW USE  
BHP REFERENCE NUMBER

Re: File No. ER 2002-1693-059-M  
COE New Coal Refuse Disposal  
Area Permit: Bailey Coal Refuse  
Disposal Area No. 5-Sediment  
Pond Development, Richhill Twp.,  
Greene Co.

Dear Mr. Heilman:

The Bureau for Historic Preservation has reviewed the above named project under the authority of the Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 *et seq.* (1988), and in accordance with relevant Federal legislation. This legislation includes Section 106 of the National Historic Preservation Act of 1966, as amended in 1980 and 1992, the regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation, the Surface Mining Control and Reclamation Act, and OSM's regulations. This review includes comments on the project's potential effect on both historic and archaeological resources.

As a result of a recent field visit on October 3, 2008, by Mark McConaughy of our staff, it has been established that potentially significant historic sites are located in or near your project area and others are likely to exist. These resources could be adversely affected by project activities. A Phase IA archaeological survey is required to verify the extent of the 19<sup>th</sup> Century Farmstead that will be destroyed by the project and determine its eligibility for listing in the National Register of Historic Places. Also, the Zollar (or Sollar) cemetery needs to be documented since it could potentially be indirectly impacted by the project. Guidelines and instructions for conducting Phase I surveys are available on our web site at <http://www.phmc.state.pa.us/bhp/Inventories/ArchaeologyGuidelines.pdf> or from our office upon request. The historic sites in the area are listed below.

Existing 19<sup>th</sup> century farmstead.  
Zollar Cemetery (19<sup>th</sup> century)

2007-463 Main

Page 2  
October 7, 2008  
Gregory A. Heilman, PE

At this time, we recommend that the permit be denied and we request a conference to discuss the effects to archaeological resources within the permit area. We also recommend that, if the Phase IA survey is not undertaken, that the permit be conditioned to require that archaeological investigations be conducted if sites are discovered after the mining permit is issued. We also request that you provide us with written justification for your decision if you elect not to conduct the Phase IA survey.

If you need further information in this matter please consult Kira Presler at (717) 705-0700. If you need further information regarding archaeological survey please contact Mark McConaughy at (724) 527-5585 x103.

Sincerely,

A handwritten signature in black ink, appearing to read "Douglas C. McLearn", with a stylized flourish extending upwards and to the right.

Douglas C. McLearn, Chief  
Division of Archaeology &  
Protection

Cc: Mr. Edward Suter, Consol Pennsylvania Coal Company, LLC  
1525 Pleasant Grove Road, PO Box J, Claysville, PA 15323  
DEP California District Office  
David Hamilton, OSM Harrisburg Office  
COE Pittsburgh Office  
Mark A. McConaughy



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Pennsylvania Field Office  
315 South Allen Street, Suite 322  
State College, Pennsylvania 16801-4850

March 20, 2009

Craig Burda  
Pennsylvania Department of Environmental Protection  
25 Technology Drive  
California Technology Park  
Coal Center, Pennsylvania 15423

RE: USFWS Project #2007-1928  
Consol's Bailey Mine: Phases 1 and 2 of CRDA 5 and 6  
Coal Refuse Conveyor (DEP permit #30810703; CRDA 1 and 2) and Sedimentation  
Pond Development (CMAP #30080701)

Dear Mr. Burda:

This documents ongoing discussions between the Fish and Wildlife Service and Consol Pennsylvania Coal Company regarding the proposed coal refuse conveyor and sedimentation pond, which are being permitted as Phases 1 and 2, respectively, of Coal Refuse Disposal Areas (CRDA) 5 and 6. The subject mining activities are associated with the operation of Consol's Bailey Mine, located in Richhill Township, 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.

### Project Description

On March 6 and 11, 2009, project information was provided to this office by Consol's consultant, Environmental Solutions & Innovations, Inc. (hereinafter referred to as ESI). The 1.4-mile long coal refuse conveyor will transport coal refuse from the Bailey Processing Plant to CRDA 5 and 6, while the sedimentation pond will store runoff from CRDA 5 and 6. The permit areas associated with the conveyor and pond are 88 acres and 91.5 acres, respectively.

### Federally Listed Species

The proposed project areas contain Indiana bats and Indiana bat maternity habitat, as documented by mist-net and radio-telemetry studies conducted by Civil and Environmental Consultants, Inc., in the summer of 2007, and by ESI in the summer of 2008. Study methods and results are detailed in the reports entitled "Indiana Bat (*Myotis sodalis*) Survey Report – Bailey Coal Refuse Disposal Areas No. 5 & 6, Richhill Township, Greene County, Pennsylvania" and "Summer Mist Net and Radio-telemetry Studies of the Federally Endangered Indiana Bat on the Consol Pennsylvania Coal Company LLC Bailey Mine Crabapple Overland Belt Project in Greene County, Pennsylvania."

Based on the 2007 and 2008 study reports, Indiana bats have been documented to forage and roost within the permit areas associated with the proposed sediment pond and conveyor. Construction of these project phases will result in the loss of approximately 40 acres of forest within the 88-acre permit area associated with the conveyor, and approximately 72 acres of forest within the 91.5-acre permit area associated with the sedimentation pond. A roost-tree assessment of 130.5 acres of the 179.5-acre Phase 1 and Phase 2 project areas resulted in the identification of 627 potential roost trees, of which 15 percent was considered high quality. In total, 113.5 acres of forest habitat will be destroyed along with 66 acres of non-forest habitat (open fields, shrublands). The forest habitat is currently suitable for both foraging and roosting, although its quality for roosting ranges from low to moderate based on the density of high quality roost trees. The non-forest habitat is occasionally used for foraging, although obviously to a lesser extent than the forests.

Due to the destruction and fragmentation of occupied Indiana bat foraging and roosting habitat, it is our determination that take of Indiana bats will occur. This take is likely to occur in the form of harm and harassment, since tree-cutting and land-clearing in the project area will reduce habitat availability for individual Indiana bats and for the maternity colony as a whole. Considering only a small number of individuals associated with the maternity colony were radio-tracked in 2007 and 2008, and two of these individuals were documented to use forest habitat in the project area, it is likely that other females and their young use the project area as well. Consequently, several Indiana bats may experience the loss of at least a portion of their individual foraging and roosting areas as a result of the construction of Phases 1 and 2 of CRDA 5 and 6. Indiana bats that currently forage and roost in the project area will have to shift to nearby forest areas, potentially increasing competition or displacing other resident bats. Bats that lose a significant amount of foraging habitat may experience a reduction in fitness sufficient to compromise their survival or reduce their reproductive potential. Furthermore, habitat loss is not limited to these particular project phases. Past, ongoing, and future mining activities associated with the Bailey Mine are expected to further reduce habitat, resulting in cumulative adverse effects on this species.

The loss of forest in the conveyor and sediment pond project areas will also fragment and isolate the nearby foraging habitat that was identified within CRDA 5 and 6 in 2008. As a result, this habitat is likely to become unavailable for Indiana bat use well before it is proposed for clearing during Phases 3 and 4 of CRDA 5 and 6. A combination of habitat loss and fragmentation are expected to cause bats to increase travel distances or further shift their habitat use, negatively affecting survival and reproduction. In addition, noise from blasting, conveyor operation, and use of the associated mine lands will affect the use of foraging and roosting habitat nearby, unless or until bats eventually acclimate to the noise.

Although it is not possible to quantify take at this time, it is likely that the proposed project will adversely affect female Indiana bats and their young. Effects are expected to be most significant in the first year following tree-clearing as bats return to find portions of their foraging areas cut or fragmented. They will be facing the effects of habitat loss and fragmentation upon their arrival in the spring; this is a time when they are in relatively poor body condition, with depleted fat reserves following the winter hibernation period. Bats that lose a significant amount of foraging or roosting habitat are likely to experience an increased risk of mortality, as well as a

reduction in reproductive potential. While several individual members of the maternity colony are likely to be affected, we expect the maternity colony itself to persist. The implementation of species-specific protective measures will minimize the risk of taking individual bats, and reduce adverse effects on the maternity colony as a whole.

#### Incidental Take Authorization

In 1996, the Service issued a biological opinion to the Office of Surface Mining on the approval and implementation of surface coal mining and reclamation operations under State and Federal regulatory programs adopted pursuant to the Surface Mining Control and Reclamation Act of 1977 (SMCRA). In that opinion, the Service determined that mining operations conducted pursuant to SMCRA were not likely to jeopardize the continued existence of federally listed species due to the protective provisions within SMCRA, and the associated State regulatory programs which were developed to be consistent with SMCRA. Some of these provisions include the following:

- The requirement that permit applications include site-specific information about listed and proposed, endangered and threatened species, as well as measures to minimize impacts on and enhance these resources.
- The requirement that the regulatory authority provide written notification to State and Federal fish and wildlife agencies whenever the State receives an application for a new permit, significant revisions of a permit, or permit renewal. Furthermore, the regulatory authority must document consideration of all comments received in response to the notifications.
- The requirement that the regulatory authority make a written finding that the proposed operation would not affect the continued existence of endangered or threatened species, or result in destruction or adverse modification of their critical habitats, as determined under the Endangered Species Act.
- The requirement that operators minimize disturbance of and adverse impacts on fish and wildlife.
- The requirement that operators enhance and restore habitats of high value for fish and wildlife.
- The requirement that the operator notify the regulatory authority of the presence of a protected species within the permit area.
- The requirement that the regulatory authority consult with State and Federal fish and wildlife agencies to determine whether and under what conditions a coal mining operation may proceed when listed species are present.

Sections 4(d) and 9 of the Endangered Species Act prohibit the taking of listed species of fish and wildlife without a special exemption. Under the terms of §§7(b)(4) and 7(o)(2) of the Act, a taking that is incidental to and not intended as part of the agency action is not a prohibited taking if the taking is in compliance with the terms and conditions of the incidental take statement in the Service's biological opinion. To be exempt from the take prohibitions of §9 of the Act, the SMCRA regulatory authorities must comply with the terms and conditions of the 1996 biological opinion, which require 1) implementation and compliance with species-specific protective measures; 2) quantification of take, whenever possible; and 3) notification to the Service when dead or injured individuals of a listed species are found. The species-specific protective measures must be included in and enforceable under the State mining permit.

To minimize adverse effects on Indiana bats, we have developed the following species-specific protection and enhancement measures and Consol has agreed to implement them. Incorporation of these measures into the Pennsylvania Department of Environmental Protection (PADEP) mining permit for the coal refuse conveyor (Phase 1) and sedimentation pond (Phase 2) of CRDA 5 and 6, and implementation of these measures by Consol, will ensure that incidental take resulting from this project is in compliance with the terms and conditions of the 1996 biological opinion, and therefore not considered a prohibited taking:

- 1) *Avoid Impacts to Known Day Roosts.* Consol Pennsylvania Coal Company (CPCC) and its contractors will avoid all direct and indirect impacts to all known day roosts used by Indiana bats during project construction, operation and maintenance. The proposed removal of any *known* day roosts will require an assessment of their use, and further consultation with the Fish and Wildlife Service.
- 2) *Seasonal Tree-cutting Restriction.* Trees will not be cut between April 1 and September 30. During initial Project clearing (March 2009), CPCC will cut all of the 627 potential roost trees identified during the February 2009 roost tree inventory. CPCC may need to clear some of the remaining trees in the project area between April 1 and April 10 to meet Project deadlines and provide for human health and safety during clearing. If an extension beyond March 31 is required, CPCC will notify the Fish and Wildlife Service of the need for an extension in writing, and CPCC will partially compensate for the increased risk of harm to Indiana bats by increasing the amount of land protected in Item 5 below from 260 forest acres to 373.5 forest acres. This increase includes a 3:1 compensation ratio for the 113.5 acres of forest impacts and 0.5:1 ratio for the 66 acres of non-forest impacts. If an extension is not required, the ratio will remain at 2:1 for the 113.5 acres of forest impacts (see Item 5 below).
- 3) *Hazardous Materials.* Follow strict guidelines dictating the use and handling of hazardous materials and other contaminants, to minimize the potential for onsite or downstream impacts to water quality and/or the bat prey base. Project-specific spill prevention, control, and countermeasures (SPCC) plans are required by the USEPA, and the mining company will make these available upon request.

- 4) *E&S Controls.* Implement comprehensive sediment and erosion control measures in accordance with approved PADEP and U.S. Army Corps of Engineers permits for the project to minimize downstream impacts to waterways. Project-specific erosion and sediment control plans will be used, and the mining company will make these available upon request.
- 5) *Habitat Conservation.* To partially compensate for the long-term loss of Indiana bat habitat in the project area, permanently protect forest habitat off-site by conferring a permanent conservation easement or fee-simple land transfer to the Pennsylvania Game Commission or another land conservation entity approved by the U.S. Fish and Wildlife Service (*e.g.*, Western Pennsylvania Conservancy, The Nature Conservancy). CPCC will permanently protect at least 260 acres of forest habitat off-site (2:1 ratio for the 113.5 acres of forest impacts, 0.5:1 ratio for the 66 acres of non-forest impacts).
  - a. In selecting properties for conservation, CPCC will consider contiguity to existing CPCC conservation easements (*i.e.*, Crabapple Beltline Conservation Easements), State Game Lands, and other conservation features in the area. CPCC will also consider habitat quality (*e.g.*, presence of high quality roost trees, wetlands, streams, mature forest, *etc.*) and Indiana bat habitat use as reflected in the Indiana bat study reports. CPCC will submit a map, and description of the parcels to be conferred to conservation easements, to the Fish and Wildlife Service for approval.
  - b. The conservation easements will be conferred prior to putting the coal refuse conveyor and sedimentation pond into operation (tentatively November 2011). CPCC will inform the Fish and Wildlife Service of any project delays.
  - c. The easements will confer the following rights to the easement holder: a) all recreational rights, including, but not limited to hunting, fishing, hiking, and bird watching; b) forest management consistent with a current management plan that has been reviewed and approved by the Fish and Wildlife Service, and determined by the Service to be beneficial to, and in the best interests of, Indiana bats; c) habitat management, including, but not limited to, management of forests, shrublands, and grasslands; and d) wildlife monitoring and management.
  - d. The easement will cover each land parcel in its entirety, except where lesser coverage is determined by the Fish and Wildlife Service and easement holder to be acceptable.
  - e. The easement will provide for access by the Pennsylvania Game Commission, the Fish and Wildlife Service, and their contractors or permittees for the purposes of studying, monitoring, and managing Indiana bats and their habitat.
  - f. The easement holder will have first right of refusal.
  - g. No subdivision of land parcels will occur within the easement area.

- h. Easement lands will be enrolled in the Pennsylvania Game Commission's Cooperative Public Access Program.
  - i. CPCC will provide funding to the easement holder for the purpose of monitoring, managing, and enforcing the conservation easement, as well as providing for the conservation needs of the resident Indiana bat maternity colony. Funding will be negotiated between CPCC and the easement holder for the purposes of managing the easement and the easement lands, which will dictate funding.
  - j. CPCC may remove up to 10 acres of forest within the easement area to address maintenance or operational needs associated with mining. This will be done in coordination with the Fish and Wildlife Service and easement holder. Forest habitat removal within the easement lands will be compensated at a 10:1 ratio.
  - k. CPCC agrees to use the same mitigation ratios for the remaining portions of CRDA 5 and 6 as those project phases are developed.
- 6) *Phased Forest Removal.* Because the entire CRDA 5 and 6 project is permitted in phases, timber removal will be staged by project phase (Phase 1 and 2 = refuse conveyor and sedimentation pond, Phase 3 = CRDA 5, Phase 4 = CRDA 6).
- 7) *Restoration of Conveyor Project Area.* Following the life of the coal refuse conveyor (conveyor use is estimated at 20 years), CPCC will remove the conveyor, and the conveyor area will be reclaimed and allowed to re-vegetate with native woody vegetation. The conveyor will be removed within two years after its use has ceased.
- 8) *Indiana Bat Monitoring.* CPCC will contract with a qualified Indiana bat surveyor to monitor the effects of project construction and operation on Indiana bats and their use of foraging habitat, roosting habitat, and travel corridors for five years post-construction. Monitoring will be done in accordance with a study plan to be reviewed and approved by the Fish and Wildlife Service. The monitoring study will include radio-telemetry of Indiana bats, and monitor an average of 5 to 10 Indiana bats annually. Reports will be submitted to the Service and PGC.
- 9) *Take Reporting.* Any dead or injured Indiana bats must be reported to the Fish and Wildlife Service, Pennsylvania Game Commission, and PADEP within 48 hours of discovery.
- 10) *Conservation Plan.* CPCC will prepare an Indiana bat conservation plan. The purpose of this plan is to identify the needs of the resident Indiana bat maternity colony, particularly with respect to foraging, roosting, and travel corridors. This plan is subject to review and approval by the Fish and Wildlife Service, and will assist CPCC, the Service, and the PGC in identifying and prioritizing habitat for conservation.

To complete our administrative file for this project, we request that you provide us with a copy of that portion of the PADEP mining permit(s) containing the species-specific protective measures, along with the PADEP permit number(s) for this project.

These comments relate only to endangered and threatened species under our jurisdiction. Consequently, this letter is not to be construed as addressing Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities. Additional comments related to anticipated stream impacts associated with CRDA 5 and 6 will be provided under separate cover.

Please contact Carole Copeyon of my staff at 814-234-4090 if you have any questions or require further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "David Densmore", followed by a long horizontal line extending to the right.

David Densmore  
Supervisor



# United States Department of the Interior



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

May 24, 2010

Craig Burda  
Pennsylvania Department of Environmental Protection  
25 Technology Drive  
California Technology Park  
Coal Center, Pennsylvania 15423

RE: USFWS Project #2007-1928  
Consol's Bailey and Enlow Fork Mine Complexes: Coal Refuse Disposal Areas 5 and 6  
PA DEP Permit #30080701

Dear Mr. Burda:

This documents ongoing discussions between the Department, the Fish and Wildlife Service, the Office of Surface Mining, and Consol Pennsylvania Coal Company (CPCC) regarding CPCC's proposed Coal Refuse Disposal Areas (CRDA) 5 and 6, located in Richhill Township, Greene County, Pennsylvania. The subject mining activities are associated with the operation of CPCC's Bailey and Enlow Fork Mine Complexes. 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.

## Project Permitting and Agency Coordination

It is our understanding that the Department is permitting this project in four stages, as follows: Coal Refuse Conveyor (Phase 1), Sedimentation Pond (Phase 2), CRDA 5 Slurry Pond (Phase 3), and CRDA 6 Coarse Refuse Disposal (Phase 4). Phases 1 through 4 will affect 706 acres of land. We previously submitted comments to the Department on Phases 1 and 2 in our letter of March 20, 2009. On May 12, 2010, we provided the Department with a revision to one of the species-specific protective measures associated with Phases 1 and 2. Our comments below relate primarily to Phases 3 and 4 of this project.

On April 30, 2009, we provided comments to the Corps of Engineers in response to their March 16, 2009, Public Notice on permit CELRP-OP-F 2007-463. Phases 1 through 4, as described above, are currently under review by the Corps as a single and complete project and are therefore the subject of a single Section 404 permit application under the Clean Water Act. With respect to Endangered Species Act comments, we determined that the proposed project would result in the "take" of Indiana bats due to the anticipated loss of several hundred acres of foraging and roosting habitat.

On several occasions between 2007 and 2009, the Service expressed concerns to CPCC and the Department that the Service understood the use of areas 5 and 6 (Phases 3 and 4) for coal refuse

disposal would be inconsistent with Section 4.1(b) of Pennsylvania's Coal Refuse Disposal Control Act (CRDCA), which categorically prohibits coal refuse disposal on non-preferred sites that contain federally listed threatened or endangered species<sup>1</sup>. Based on radio-telemetry studies conducted in 2007 and 2008, foraging and roosting habitat used by Indiana bats, as well as Indiana bats themselves, are found within the project area. It is our understanding that the CRDCA was amended in February 2010, and that pursuant to these amendments<sup>2</sup>, the project area could be considered a "preferred site" rather than a "non-preferred site" for coal refuse disposal because it is an "area adjacent to or an expansion of an existing coal refuse disposal site" (House Bill 1847). Preferred sites can be used for coal refuse disposal provided such use does not result in the "take" of federally listed threatened or endangered species in violation of Section 9 of the Endangered Species Act.

On November 29, 2009, the Service received CPCC's *Biological Assessment*, which concluded this project is likely to adversely affect Indiana bats due to the loss of documented foraging habitat for an Indiana bat maternity colony. On February 25, 2010, the Service received CPCC's proposed *Protection and Enhancement Plan (PEP) for Federally Endangered Indiana Bats on the CPCC Bailey Mine LLC Coal Refuse Disposal Areas 5 and 6*.

On several occasions in February 2010, CPCC contacted the Service's Pennsylvania Field Office and Regional Office to stress their urgent need of Endangered Species Act clearance for this project in light of their desire to cut trees by April 1 to avoid direct impacts to Indiana bats. CPCC emphasized that the subject site was now eligible for permitting due to recent amendments to the CRDCA. However, at that time OSM and the Service concluded that it would be premature to proceed with an Endangered Species Act consultation on this project until OSM had reviewed the subject amendments to determine their consistency with the Surface Mining Control and Reclamation Act (SMCRA). The Service advised CPCC against clearing Indiana bat habitat until they had a valid State mining permit with an approved Indiana Bat Protection and Enhancement Plan (PEP). In the absence of this permit, CPCC was advised that they had no incidental take coverage under the Endangered Species Act.

In March 2010, OSM requested project file information from the Service to assist in their investigation of tree clearing activities occurring within CRDA 5 and 6. In light of OSM's determination that this tree clearing constituted a mining activity and was being done without a State mining permit, OSM issued a Cessation Order to CPCC on March 30.<sup>3</sup> On May 6, a CPCC representative stated that approximately 200 acres of forest had been cut by CPCC within CRDA 5 and 6 in March 2010.

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<sup>1</sup> This statutory language was the subject of a programmatic consultation between OSM and the Service, in which the Service concluded that OSM's approval of the CRDCA amendments establishing this language was "not likely to adversely affect" federally listed species due to the protective provisions detailed in Section 4.1(b) of the CRDCA.

<sup>2</sup> The 2010 amendments are currently under review by the Office of Surface Mining to determine whether they are consistent with the Surface Mining Control and Reclamation Act (SMCRA).

<sup>3</sup> The Service recognizes that PADEP has asserted that tree clearing is not a mining activity. The Service also recognizes that resolution of this matter is within the federal purview of OSM in light of that agency's regulatory oversight responsibilities under SMCRA. Regardless, the subject tree clearing did not have incidental take coverage from the Service.

On May 6, 2010, representatives from the Fish and Wildlife Service, Office of Surface Mining, Pennsylvania Department of Environmental Protection, Consol Pennsylvania Coal Company, Environmental Solutions and Innovations, Inc. (CPCC's consultant), Senator Robert Casey's office and Senator Arlen Specter's office met to discuss regulatory, permitting, and biological issues related to the project. At that meeting, the Service committed to provide Endangered Species Act comments on the project, regardless of the status of OSM's review of the Department's recent amendments to the CRDCA. On May 10, the Service and Pennsylvania Game Commission met with CPCC to discuss and finalize species-specific protective measures related to the project.

As discussed below (see *Incidental Take Authorization*), agency coordination procedures have been established to evaluate and condition mining permits to ensure mining activities implemented consistent with SMCRA do not result in the "take" of federally listed species in violation of Section 9 of the Endangered Species Act. The comments in this letter are provided in accordance with those coordination and review procedures, specifically as they are detailed in 1) the Fish and Wildlife Service's 1996 biological opinion to OSM on the approval and implementation of surface coal mining and reclamation operations under State and Federal regulatory programs adopted pursuant to SMCRA, and 2) the *Range-wide Indiana Bat Protection and Enhancement Plan Guidelines*. However, this letter does not speak to the consistency of Pennsylvania's coal mining program with SMCRA, since that is a matter under OSM's purview. Such consistency is a necessary condition for comments offered using the procedures of the 1996 biological opinion to provide incidental take coverage under the Endangered Species Act. Consequently, any incidental take coverage pursuant to these comments shall only be effective to the extent the project is determined to be within the program covered by the 1996 biological opinion to OSM.

### Project Description

Phases 3 and 4 encompass 526.4 acres adjacent to existing CPCC coal refuse disposal areas. Within the 414.8-acre permit area associated with Phase 3 (CRDA 5), fine coal refuse generated from CPCC's Bailey and Enlow Fork Mines will be deposited in a reservoir contained by a dam. Phase 4 (CRDA 6) will include a valley fill and dam consisting of coarse refuse within a 111.6-acre permit area. The life of the project is estimated at 20 years, after which the project area will be reclaimed in accordance with reclamation standards for coal refuse disposal areas.

### Federally Listed Species

The proposed project area is occupied by Indiana bats and Indiana bat maternity habitat, as documented by mist-net and radio-telemetry studies conducted by Civil and Environmental Consultants, Inc., in the summer of 2007, and by ESI in the summer of 2008. Study methods and results are detailed in the reports entitled "Indiana Bat (*Myotis sodalis*) Survey Report – Bailey Coal Refuse Disposal Areas No. 5 & 6, Richhill Township, Greene County, Pennsylvania" and "Summer Mist Net and Radio-telemetry Studies of the Federally Endangered Indiana Bat on the Consol Pennsylvania Coal Company LLC Bailey Mine Crabapple Overland Belt Project in Greene County, Pennsylvania."

Based on the 2007 and 2008 study reports, Indiana bats have been documented to forage and roost within the permit areas associated with the proposed CRDA 5 and 6. Construction of these

project phases will result in the loss of approximately 350 acres of forest and 176.4 acres of non-forest habitat (e.g., fields) within the 526.4-acre project area. The forest habitat is suitable for both foraging and roosting, while the non-forest habitat is occasionally used for foraging, although obviously to a lesser extent than the forests.

Due to the destruction of occupied Indiana bat foraging and roosting habitat, it is our determination that take of Indiana bats will occur. This take is likely to occur in the form of harm and harassment, since tree cutting and land clearing in the project area will reduce habitat availability for individual Indiana bats and for the maternity colony as a whole. Considering only a small proportion of the maternity colony was radio-tracked (3 of 205 bats in 2007, 6 of 97 bats in 2008, and 5 of 29 bats in 2009), and two of the 14 radio-tracked individuals (14%) were documented to use forest habitat in the project area, it is likely that other females and their young use the project area as well. Based on the proportion of Indiana bats captured or radio-tracked within the project area, the *Biological Assessment* concludes that 10 to 15 percent of the Indiana bats associated with this maternity colony forage in the project area (BA, p. 19). Based on a maternity colony of 205 Indiana bats, this would mean 20 to 31 Indiana bats use the project area for foraging (BA, p. 21).

Indiana bats that use the project area will experience the loss of at least a portion of their individual foraging and roosting areas as a result of the construction of Phases 3 and 4 of CRDA 5 and 6. Bats which forage and roost in the project area will have to shift to nearby forest areas, potentially increasing inter-specific and intra-specific competition or displacing other resident bats. Bats that lose a significant amount of foraging habitat may experience a reduction in fitness sufficient to compromise their survival or reduce their reproductive potential. Furthermore, habitat loss is not limited to these particular project phases. Past, ongoing, and future mining activities associated with the Bailey and Enlow Fork Mines are expected to further reduce habitat, resulting in cumulative adverse effects on this species.

In addition to the loss of forest habitat suitable for foraging and roosting, this project will impact the prey base for bats, including Indiana bats, due to the loss and degradation of streams. According to the BA, the project will result in the loss of 41 streams, totaling 20,115 linear feet. The valley fill associated with Tributary 32705 comprises about 20 percent of the Owens Run watershed. With respect to water quality effects in Owens Run, we would expect impacts similar to those documented in Enlow Fork (due to the operation of CRDA 3 and 4), namely, elevated levels of sulfates, sulfites, manganese, pH, total suspended solids, selenium, and Polycyclic Aromatic Hydrocarbons (PAHs). The operation of CRDA 5 and 6 is expected to impact aquatic life in Owens Run, a stream where pre-project sampling has documented high levels of aquatic diversity, including species indicative of high water quality. Stream loss and degradation will occur within the home range of the affected Indiana bat maternity colony, reducing the abundance and availability of important prey items for foraging bats, including mayflies and caddisflies.

As discussed above, this project is likely to adversely affect 10 to 15 percent of the Indiana bats (females and their young) associated with the maternity colony. Effects are expected to be most significant in the first year following tree clearing as bats return to find portions of their foraging areas cut. They will be facing the effects of habitat loss and fragmentation upon their arrival in the spring; this is a time when they are in relatively poor body condition, with depleted fat reserves following the winter hibernation period and potentially suffering from the effects of

white-nose syndrome. Bats that lose a significant amount of foraging or roosting habitat are likely to experience an increased risk of mortality, as well as a reduction in reproductive potential. In addition, noise from blasting, heavy equipment and machinery operation, and use of the associated mine lands will affect the use of foraging and roosting habitat nearby, unless or until bats eventually acclimate to the noise.

In addition to effects on individual bats, the proposed project is expected to result in adverse effects on the maternity colony which may not ameliorate over time. Over the past three years it appears that this maternity colony has declined significantly. The maximum emergence count was 205 bats in 2007 (on July 30). In 2008, a maximum of 97 bats emerged from two trees (on August 5). In 2009, the maximum emergence count was 29 bats between July 15 and 31.

There are at least three possible explanations for the decline in colony size, each of which may be operating to some degree. First, white-nose syndrome is rapidly expanding through the range of the Indiana bat. It has been documented in Pendleton County, West Virginia, where one of the females associated with this maternity colony was found hibernating in 2009. The 86 percent decline in maternity colony size between 2007 and 2009 is within the range of mortality levels associated with white-nose syndrome. Second, the ongoing loss of foraging and roosting habitat is likely to be a contributing factor in the decline of this colony. For example, forest loss associated with CPCC's Crabapple Beltline project was 230.5 acres, while forest loss associated with Phases 1 and 2 of CRDA 5 and 6 was 113.5 acres. Phases 3 and 4 of CRDA 5 and 6 will result in the loss of an additional 350 acres of forest. Also, at least five known roost trees were cut in 2008 and 2009. A third possible explanation for the reduction in maternity colony size may be a failure to find all primary maternity roost trees, since this is necessary to obtain an accurate emergence count. Based on the available data and study reports, the Service finds it most plausible that the colony has declined due to a combination of effects related to habitat loss and white-nose syndrome, although the relative contribution of each cannot be determined.

At the observed rate of decline, the maternity colony is at serious risk of extirpation within the next few years. Habitat loss and white-nose syndrome will continue to contribute to this decline. The implementation of species-specific protective measures will minimize the risk of taking individual bats, but may not be sufficient to prevent the loss of the maternity colony. However, the species-specific protective measures do provide for significant off-site compensation measures which will benefit the species overall. Such measures include the permanent protection of an Indiana bat hibernaculum and the contribution of monies for white-nose syndrome research and abatement (see enclosed PEP).

#### Incidental Take Authorization

In 1996, the Service issued a biological opinion to the Office of Surface Mining on the approval and implementation of surface coal mining and reclamation operations under State and Federal regulatory programs adopted pursuant to the Surface Mining Control and Reclamation Act of 1977 (SMCRA). In that opinion, the Service determined that mining operations conducted pursuant to SMCRA were not likely to jeopardize the continued existence of federally listed species due to the protective provisions within SMCRA, and the associated State regulatory

programs which were developed to be consistent with SMCRA<sup>4</sup>. Some of these provisions include the following:

- The requirement that permit applications include site-specific information about listed and proposed, endangered and threatened species, as well as measures to minimize impacts on and enhance these resources.
- The requirement that the regulatory authority provide written notification to State and Federal fish and wildlife agencies whenever the State receives an application for a new permit, significant revisions of a permit, or permit renewal. Furthermore, the regulatory authority must document consideration of all comments received in response to the notifications.
- The requirement that the regulatory authority make a written finding that the proposed operation would not affect the continued existence of endangered or threatened species, or result in destruction or adverse modification of their critical habitats, as determined under the Endangered Species Act.
- The requirement that operators minimize disturbance of and adverse impacts on fish and wildlife.
- The requirement that operators enhance and restore habitats of high value for fish and wildlife.
- The requirement that the operator notify the regulatory authority of the presence of a protected species within the permit area.
- The requirement that the regulatory authority consult with State and Federal fish and wildlife agencies to determine whether and under what conditions a coal mining operation may proceed when listed species are present.

Sections 4(d) and 9 of the Endangered Species Act prohibit the taking of listed species of fish and wildlife without a special exemption. Under the terms of §§7(b)(4) and 7(o)(2) of the Act, a taking that is incidental to and not intended as part of the agency action is not a prohibited taking if the taking is in compliance with the terms and conditions of the incidental take statement in the Service's biological opinion. To be exempt from the take prohibitions of §9 of the Act, the SMCRA regulatory authorities must comply with the terms and conditions of the 1996 biological opinion, which require 1) implementation and compliance with species-specific protective measures<sup>5</sup>; 2) quantification of take, whenever possible; and 3) notification to the Service when

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<sup>4</sup> The scope of the 1996 biological opinion is limited to the implementation of SMCRA and State coal mining programs that OSM has determined are consistent with SMCRA. Therefore, incidental take coverage for State Regulatory Authorities (*e.g.*, PA DEP) and mining permit applicants under the Endangered Species Act is limited to the implementation of State coal mining programs that are consistent with SMCRA and that comply with the terms and conditions of the 1996 biological opinion.

<sup>5</sup> Species-specific protective measures are detailed in the Protection and Enhancement Plan (PEP), which is a component of the mining permit application, and an enforceable part of the mining permit.

dead or injured individuals of a listed species are found. The species-specific protective measures must be included in and enforceable under the State mining permit.

To minimize adverse effects on Indiana bats, the Service and CPCC have developed the enclosed *Indiana Bat Protection and Enhancement Plan*, which details species-specific protective measures. The species-specific protective measures detailed in the PEP include measures to limit the direct effects on Indiana bats, and measures to compensate for impacts through substantial and relevant habitat conservation, as well as measures to support research and monitoring addressing Indiana bat conservation needs. Incorporation of the PEP into the Pennsylvania Department of Environmental Protection (PADEP) mining permit for CRDA 5 and 6, and implementation of the PEP by Consol, will ensure that incidental take resulting from this project is in compliance with the terms and conditions of the 1996 biological opinion, and therefore not considered a prohibited taking.

Incidental take coverage is not in effect until such time as the permittee is in receipt of a valid State mining permit that incorporates the species-specific protective measures. Consequently, incidental take related to the cutting of approximately 200 acres of forest in CRDA 5 and 6 in March 2010 was not authorized under the Endangered Species Act. Pursuant to the 1996 biological opinion, incidental take coverage is conferred to coal mining permit applicants contingent upon their receipt of a State mining permit that is issued pursuant to a coal mining program that is consistent with SMCRA. Should CPCC obtain such a permit, CPCC's adherence to the species-specific protective measures detailed in the enclosed *Protection and Enhancement Plan* will be taken into consideration by the Service in light of our responsibilities under Section 11 of the Endangered Species Act.

Because incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an *otherwise lawful* activity (50 CRF 402.02), incidental take authorization is contingent upon the applicant's receipt of appropriate authorizations and permits from federal, State and local permitting authorities. This includes, but may not be limited to, a permit under section 404 of the Clean Water Act from the Corps of Engineers and a mining permit from the PADEP. Incidental take coverage (along with an exemption from the section 9 prohibitions of the Endangered Species Act) is valid *only* upon receipt of all required permits.

These comments relate only to endangered and threatened species under our jurisdiction. Consequently, this letter is not to be construed as addressing Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

Please contact Carole Copeyon of my staff at 814-234-4090 if you have any questions or require further assistance.

Sincerely,



Clinton Riley  
Field Office Supervisor

Enclosure

# Indiana Bat Protection and Enhancement Plan

Applicant: Consol Pennsylvania Coal Company

Project: Coal Refuse Disposal Area 5 – Slurry Pond (Phase 3)  
Coal Refuse Disposal Area 6 – Coarse Coal Refuse (Phase 4)

Project Location: Richhill Township, Greene County, Pennsylvania

USFWS Project: #2007-1928 PA DEP Permit: #30080701

To minimize adverse effects on Indiana bats, Consol Pennsylvania Coal Company (CPCC) will implement this Indiana Bat Protection and Enhancement Plan (PEP), which details species-specific protective measures. This PEP is part of the mining permit application for Coal Refuse Disposal Areas 5 and 6, and is an enforceable part of the mining permit. Implementation of the PEP by CPCC and its contractors will ensure that incidental take of Indiana bats resulting from this project is in compliance with the terms and conditions of the Fish and Wildlife Service's 1996 biological opinion<sup>1</sup>, and therefore not considered a prohibited taking.

Incidental take coverage is not in effect until such time as the permittee is in receipt of a valid State mining permit that incorporates this *Indiana Bat Protection and Enhancement Plan*. Incidental take coverage is conferred to coal mining permit applicants contingent upon their receipt of a State mining permit which is issued pursuant to a coal mining program found to be consistent with SMCRA.

## Species-Specific Protective Measures

- 1) *Avoid Impacts to Known Day Roosts.* Consol Pennsylvania Coal Company (CPCC) and its contractors will avoid all direct and indirect impacts to all known day roosts used by Indiana bats during project construction, operation and maintenance. The proposed removal of any known roosts will require an assessment of their use, and further consultation with the Fish and Wildlife Service.<sup>2</sup>
- 2) *Seasonal Tree-cutting Restriction.* No tree-cutting will occur between April 1 and September 30.

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<sup>1</sup> 1996 biological opinion = The programmatic biological opinion that the U.S. Fish and Wildlife Service issued to the Office of Surface Mining on the approval and implementation of surface coal mining and reclamation operations under State and Federal regulatory programs adopted and implemented pursuant to the Surface Mining Control and Reclamation Act of 1977 (SMCRA).

<sup>2</sup> A secondary roost (roost tree 241-1) was identified in the project area. This roost tree will be removed between October 1 and March 31.

- 3) *Phased Forest Removal.* Tree removal will be phased by permit stage. Trees in the CRDA 5 permit area will be removed first, followed by trees in the CRDA 6 permit area.
- 4) *Hazardous Materials.* Follow strict guidelines dictating the use and handling of hazardous materials and other contaminants, to minimize the potential for onsite or downstream impacts to water quality and/or the bat prey base. Project-specific spill prevention, control, and countermeasures (SPCC) plans are required by the USEPA, and the mining company will make these available upon request.
- 5) *E&S Controls.* Implement comprehensive sediment and erosion control measures in accordance with approved PADEP and U.S. Army Corps of Engineers permits for the project to minimize downstream impacts to waterways. Project-specific erosion and sediment control plans will be used, and the mining company will make these available upon request.
- 6) *Habitat Conservation.* To partially compensate for the long-term loss of Indiana bat habitat in the project area, CPCC will permanently protect Indiana bat habitat off-site. Conservation of 788 acres of off-site Indiana bat habitat will occur to partially compensate for the loss of on-site habitat due to the development of Phases 3 and 4 of CRDA 5 and 6 (2:1 compensation ratio for 350 acres of forest impacts, 0.5:1 compensation ratio for 176 acres of non-forest impacts).
  - a. CPCC will confer fee-simple ownership of the 209-acre land parcel containing CS&M Mine (Wayne Township, Lawrence County, Pennsylvania) to the Pennsylvania Game Commission (PGC). All surface and subsurface rights will be conferred to the PGC, with the exception of natural gas rights, which Consol may retain provided no surface disturbance of any kind will occur on this parcel in association with gas development (this will be documented in a deed restriction). This parcel will be transferred to PGC ownership no later than December 31, 2010. CPCC will be credited with 319 acres of Indiana bat habitat conservation for this 209-acre parcel (10:1 credit for the 11-acre hibernaculum and 1:1 credit for the 209 acres).
  - b. CPCC will contribute \$525,280 to the *Indiana Bat Conservation Fund* to compensate for impacts to 469 acres of habitat (469 acres x \$1120/acre). This contribution will be made by May 31, 2010. See the attached *Calculation Sheet for Indiana Bat Habitat Compensation*.
- 7) *Indiana Bat Conservation.* CPCC will contribute \$250,000 to an escrow account whose use will be established pursuant to an agreement between the Fish and Wildlife Service and Pennsylvania Game Commission. This contribution will be made by July 1, 2010, with documentation of the contribution provided to the Fish and Wildlife Service and Pennsylvania Game Commission by July 15, 2010. This contribution will be targeted exclusively or primarily for research, monitoring and treatment methods related to White Nose Syndrome, which is devastating bat populations throughout the northeastern United States.

- 8) *Restoration of CRDA 5 and 6.* Following the life of CRDA 5 and 6, CPCC will reclaim the area within guidelines and timeframes for coal refuse disposal area reclamation for bond release. Such reclamation will include the use of herbaceous vegetation rather than forest tree species, consistent with PADEP reclamation guidelines for coal refuse disposal areas.
- 9) *Water Quality.* Ensure discharges from CRDA 5 and 6 do not reduce the quality, diversity, or availability of Indiana bat prey generated from Owens Run. Adherence to the following criteria will reduce effects on aquatic life and ensure adequate and consistent prey for bats.
- a. **Conductivity.** The annual average specific conductance at Owens Run sampling stations BSW02 and BSW01<sup>3</sup> will remain below 500  $\mu\text{S}/\text{cm}$  (Pond *et al.* 2008) with monthly maximums not to exceed 750  $\mu\text{S}/\text{cm}$  (PADEP 500 mg/L TDS criterion in  $\mu\text{S}/\text{cm}$  equivalents). Sampling will be done monthly, and reported quarterly to the Fish and Wildlife Service. If either conductivity criteria are exceeded, CPCC will develop and implement corrective measures. If EPA or PADEP sets an aquatic life criterion for this ecoregion that differs from 500  $\mu\text{S}/\text{cm}$ , then this new value will be implemented.
  - b. **Selenium.** In addition to complying with chronic aquatic life criteria for dissolved selenium in the surface water at Owens Run sampling stations BSW02 and BSW01, sample emergent benthic macroinvertebrates in these reaches to ensure that selenium concentrations do not exceed the no effects level for bat prey of 1.568 mg/kg wet weight (Sample *et al.* 1996). Sampling will be done in May/June 2010 to establish baseline. If baseline exceeds the no effects level of 1.568 mg/kg wet weight, the Service will determine to what extent it may be appropriate to modify the selenium criterion. Thereafter, sampling will be done annually during peak emergence, and reported to the Fish and Wildlife Service. If the bat prey criterion is exceeded, CPCC will develop and implement corrective measures.
  - c. **PAHs.** The sediment threshold effects concentration for total PAHs of 1,610  $\mu\text{g}/\text{kg}$  dry weight in sediment at Owens Run BSW02 and BSW01 will not be exceeded (MacDonald *et al.* 2000). However, in May 2010, sampling will be done at Owens Run BSW01, BSW02, BSW02A, BSW03, BSW04<sup>4</sup>, SD01, SD02, SD03, and areas identified as potential PAH sources to further establish baseline PAH levels. The Service will evaluate these and other pre-project data to determine to what extent it may be appropriate to modify the PAH criterion. Sampling will be done quarterly, and reported to the Fish and Wildlife Service. If the criterion is exceeded, CPCC will develop and implement corrective measures.
  - d. **Biological Monitoring of Benthic Macroinvertebrates.** Biological monitoring will follow the guidance in the Pennsylvania Department of Environmental Protection Bureau of Mining and Reclamation Surface Water Protection – Underground

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<sup>3</sup> BSW01 (39° 57' 40.90" N, 80° 26' 22.48" W) and BSW02 (39° 57' 16.69" N, 80° 26' 7.68" W) are located downstream of the two proposed outfalls (discharge points) associated with CRDA 5 and 6.

<sup>4</sup> Considering BSW stations are riffle-run areas, samples will be taken at the nearest up-gradient depositional areas from these five stations and lat/longs of the actual sampling locations will be provided.

Bituminous Coal Mining Operations (Document Number 563-2000-655) to establish baseline biota and document any degradation from CRDA 5 and 6 discharges. Sampling will be conducted annually during the sampling period identified by PADEP to maximize the presence of larval emergents. Baseline requires two rounds of sampling with a relative percent difference of less than 16% at Owens Run BSW02 and BSW01. As the initial sampling demonstrates that Owens Run is a biologically diverse stream, a mean post-mining total biological score, generated from a minimum of two total biological scores with a relative percent difference that does not exceed a value of 16.0%, should be at least 88% of the mean of the total biological scores recorded prior to mining (before June 2010) to establish that the available prey base for bats has not been affected.

- 10) *Indiana Bat Monitoring.* CPCC will contract with a qualified Indiana bat surveyor to monitor the effects of project construction on Indiana bats and their use of foraging habitat, roosting habitat, and travel corridors for five years, beginning in 2009, which corresponds with the year site preparation and tree-clearing activities began. Monitoring will be done in accordance with a study plan to be reviewed and approved by the Fish and Wildlife Service. The monitoring study will include radio-telemetry of Indiana bats, and monitor an average of 5 to 10 Indiana bats annually. The study will also include the identification and monitoring of maternity roosts to determine maternity colony size, health and location. Reports will be submitted to the Fish and Wildlife Service and Pennsylvania Game Commission. To the degree studies and monitoring efforts for this project coincide with those for other coal mining projects affecting the same maternity colony, studies may be conducted concurrently.
- 11) *Take Reporting.* Any dead or injured Indiana bats must be reported to the Fish and Wildlife Service, Pennsylvania Game Commission, and PADEP within 48 hours of discovery.

### Literature Cited

- MacDonald, D.D., C. G. Ingersoll, and T. A. Berger. 2000. Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems. Arch. Environ. Contam. Toxicol. 39, 20–31.
- Pond, G.J., M. E. Passmore, F. A. Borsuk, L. Reynolds, and C. J. Rose. 2008. Downstream effects of mountaintop coal mining: comparing biological conditions using family- and genus-level macroinvertebrate bioassessment tools N. Am. Benthol. Soc., 2008, 27(3):717–737
- Sample, B. E., D. M. Opresko, and G. W. Suter II. 1996. Toxicological Benchmarks for Wildlife: 1996 Revision. ES/ER/TM-86/R3. Oak Ridge National Laboratory. U.S. Department of Energy. pp. 217.

PEP approved by Fish and Wildlife Service: May 24, 2010

**CALCULATION SHEET FOR  
INDIANA BAT HABITAT COMPENSATION**

USFWS Project # 2007-1928

Date: May 20, 2010

Project Name: Phases 3 & 4 of Consol's CRDA 5 & 6 (DEP permit #30080701)

Project Location (township and county): Richhill Township, Greene County, Pennsylvania

Project Type: coal mining (coal refuse disposal and associated mining activities)

Hibernaculum and/or Maternity Colony Affected: Greene County (Nebo) maternity colony

**Table 1. Calculation of Compensation Acres**

IMPACT TYPE	IMPACT ACRES	MULTIPLIER <sup>1</sup>	COMPENSATION ACRES
<b>Summer Habitat Loss<sup>2</sup></b>			
Known maternity habitat	350	2.0	700*
Known non-maternity habitat		1.0	
Non-forest habitat <sup>3</sup>	176	0.5	88*
<b>Swarming Habitat Loss<sup>4</sup></b>			
P2 or P3		1.5	
P4		1.0	
<b>Overlapping Habitat Loss<sup>5</sup></b>			
Known maternity and swarming habitat occur together	Choose highest multiplier from above (maternity or swarming) appropriate for the impact, and add 1.0 to the multiplier		

**\* 319 of the 788 acres of habitat compensation will occur via a fee-simple land transfer of the CS&M mine land parcel (mine + 209 acres) to the Pennsylvania Game Commission. The remaining 469 acres of compensation will take the form of an IBCF contribution (p. 2).**

<sup>1</sup> Multiplier assumes permanent habitat protection will occur in accordance with the *Indiana Bat Mitigation Guidance for Pennsylvania*.

<sup>2</sup> Loss of known summer habitat assumes such loss will occur when bats are NOT present (i.e., between October 15 and March 31). If this is not the case, a detailed risk assessment will be necessary to identify measures to minimize the risk of take, and a higher multiplier will be used due to the risk of direct impacts.

<sup>3</sup> Non-forest habitat includes fields, shrublands, and other areas that can be used for foraging by Indiana bats.

<sup>4</sup> Swarming habitat is suitable habitat within a 10-mile radius of Indiana bat hibernacula. Loss of swarming habitat assumes such loss will occur when bats are NOT present (i.e., between November 15 and March 31). If this is not the case, a detailed risk assessment will be necessary to identify measures to minimize the risk of take, and a higher multiplier will be used due to the risk of direct impacts.

<sup>5</sup> Loss of summer and swarming habitat assumes such loss will occur when bats are NOT present (i.e., between October 15 and March 31). If this is not the case, a detailed risk assessment will be necessary to identify measures to minimize the risk of take, and a higher multiplier will be used due to the risk of direct impacts.

**Table 2. Calculation of Deposit when using the Indiana Bat Conservation Fund**

Location of Impact (County)	Compensation Acres (from Table 1)	Cost/Acre <sup>6</sup>	IBCF Deposit <sup>7</sup>
Adams		TBD	
Armstrong/Butler		\$1890	
Beaver/Lawrence		\$2126	
Bedford		TBD	
Berks		TBD	
Blair		TBD	
Centre		TBD	
Fayette		\$1400	
Greene	469	\$1120	\$525,280
Huntingdon		TBD	
Luzerne		TBD	
Mifflin		TBD	
Somerset		TBD	
Washington		\$2530	
York		TBD	
Other areas (not listed above)		TBD	

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**USFWS use only**

Recovery Focus Area to be credited with the above IBCF Deposit:

Greene/Washington County maternity habitat

<sup>6</sup> Revised 11/09/09. Cost/acre subject to change, based on a periodic re-evaluation of land comparable values by the Pennsylvania Game Commission. Cost per acre reflects land cost per acre, plus 10% for expenses associated with land acquisition (e.g., title search, transfer taxes, land survey, recording fees, etc.)

<sup>7</sup> Multiply the number of Compensation Acres by the Cost/Acre to determine the amount to be submitted to the Indiana Bat Conservation Fund.

## FIGURES



**Consol Pennsylvania Coal Company LLC**  
CNX Center  
1000 Consol Energy Drive  
Canonsburg, PA 15317  
phone: 724-485-4267  
fax: 724-485-4015

Draft November 2009 Biological Assessment removed - Exemption #5  
Predecisional

April 15, 2010

Ms. Marcia Haberman  
Department of the Army  
Pittsburgh District, Corps of Engineers  
William S. Moorehead Federal Building  
1000 Liberty Avenue  
Pittsburgh, PA 15222-4186

RE: Bailey Refuse CRDA 5 and 6  
Biological Assessment

Dear Ms. Haberman:

As per our meeting on April 15, 2010 and per your request please find enclosed separate copies of Biological Assessments prepared for the U. S. Fish and Wildlife Service for the Bailey CRDA 5 and 6 areas. The Biological Assessment sent in November 2009 was a draft copy containing information that Carole Copeyon first requested. After Carole's first initial review she asked for some changes which were incorporated and a Final Copy was submitted to her on February 24, 2010. Also enclosed is a CD containing the electronic files of both Biological Assessment submittals.

If you require any additional information please feel free to contact my office at (724) 485-4267.

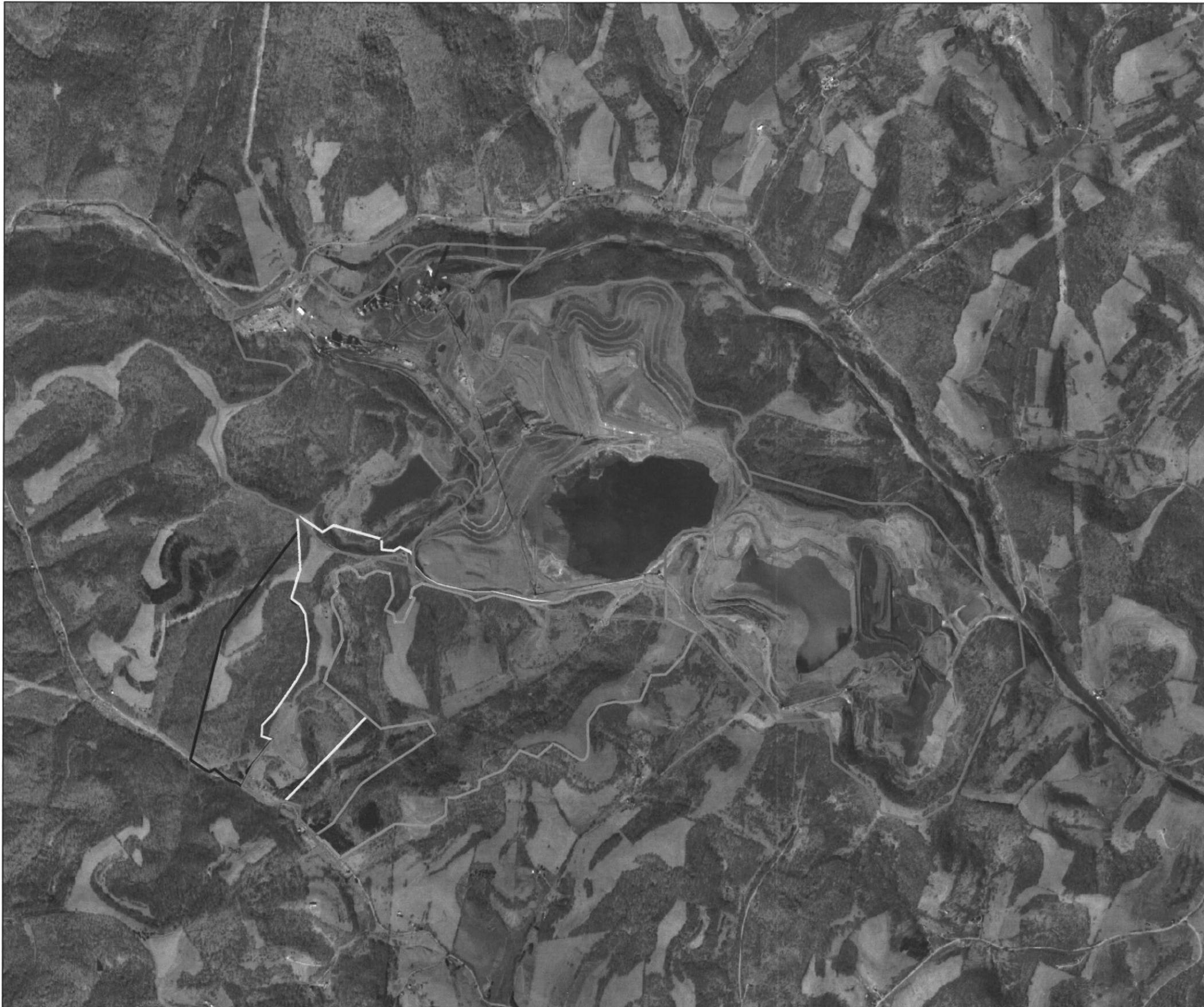
Sincerely,

A handwritten signature in cursive script that reads 'Kerry L. Goodballet'.

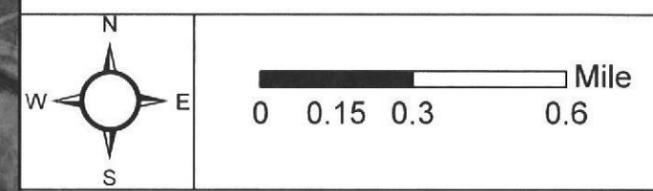
Kerry L. Goodballet, PE  
Environmental Engineer

Enclosures

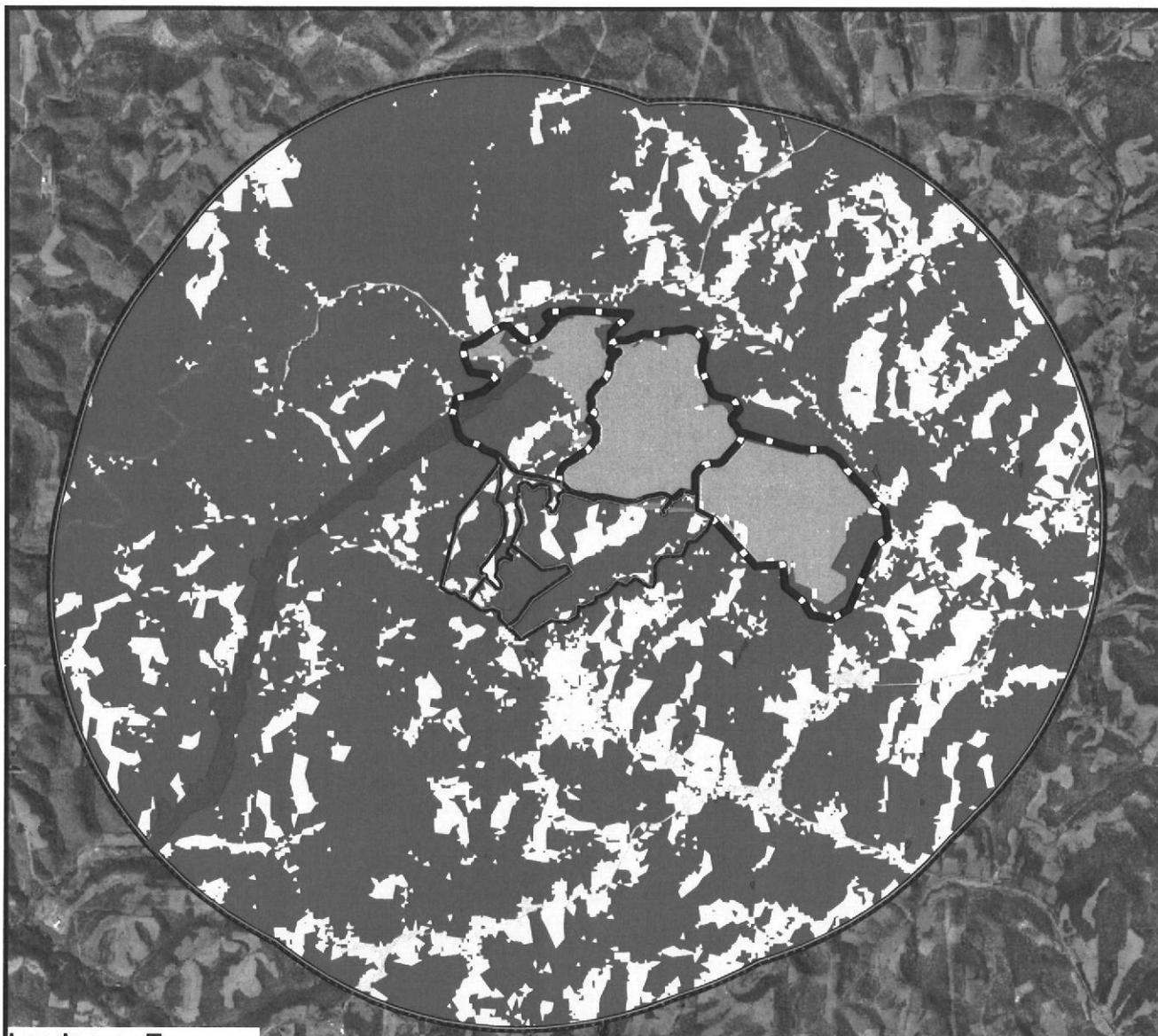
Figure 1. Location of CRDA 5 and 6 in Greene County, Pennsylvania.



-  CRDA5
-  Existing Consol Permits
-  Proposed Sediment Pond Permit Boundary
-  Approved Coal Refuse Conveyor Permit Boundary
-  CRDA6



Base Map: PAMAP Aerial Photography



**Landcover Type**

	Forest
	Urban/Built-Up Land
	Industrial/Mine Land
	Cropland/Pasture
	Emergent Wetland
	Barren Land
	Water

2.5 Mile Buffer  
 Existing CONSOL Facility  
 CRDA 5 and 6

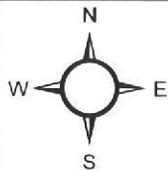


Figure 2. Action Area

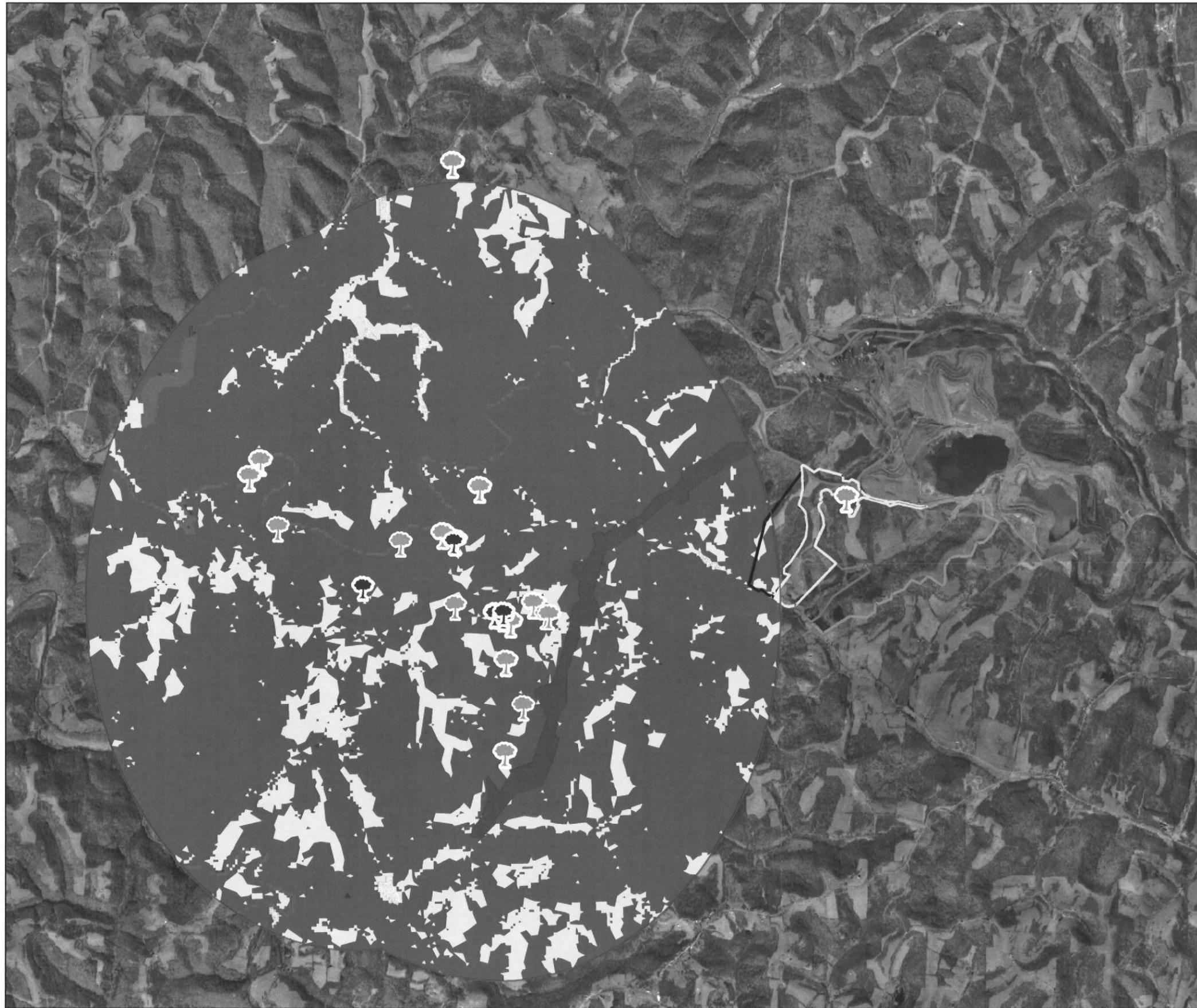


Base Map: PAMAP Aerial Photography

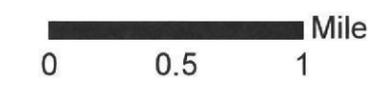
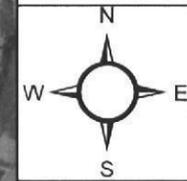


**ENVIRONMENTAL SOLUTIONS & INNOVATIONS, INC.**  
Project No. 213.19

Figure 3. Maternity Area



-  Maternity Roost
-  Secondary Roost
-  2.5 Mile Maternity Buffer
-  Approved Coal Refuse Conveyor Permit Boundary
-  Proposed Sediment Pond Permit Boundary
-  CRDA6
-  CRDA5
-  Existing Consol Permits
- Landcover Type**
-  Forest
-  Emergent Wetland
-  Built-Up Land
-  Cropland/Pasture
-  Barren Land
-  Water

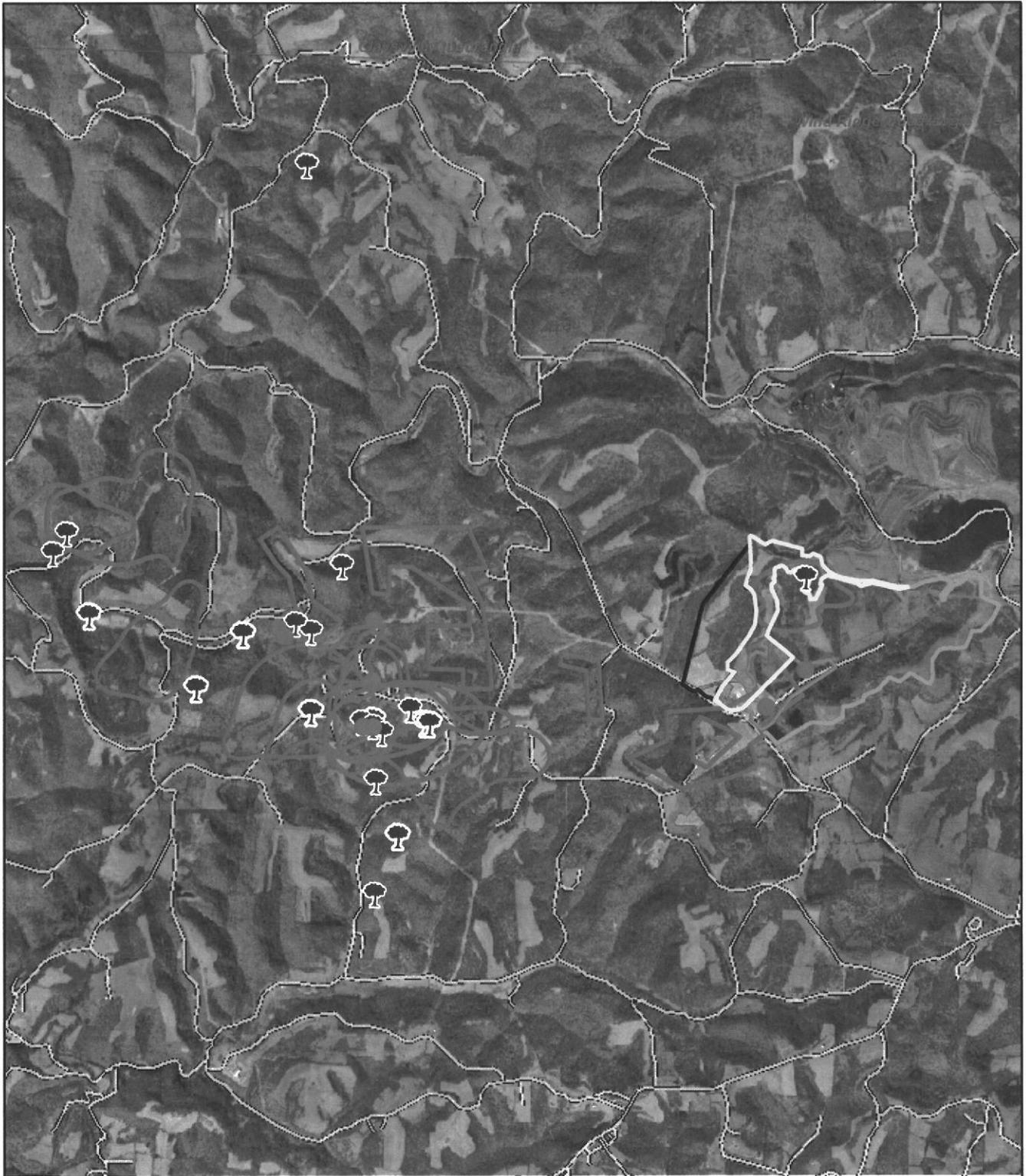


Base Map: PAMAP Aerial Photography, 2006



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& INNOVATIONS, INC

Project No. 213.19



● Capture Sites    🌳 Roost    □ 2007, 2008, 2009 Foraging

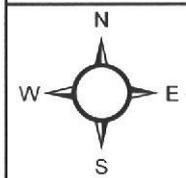


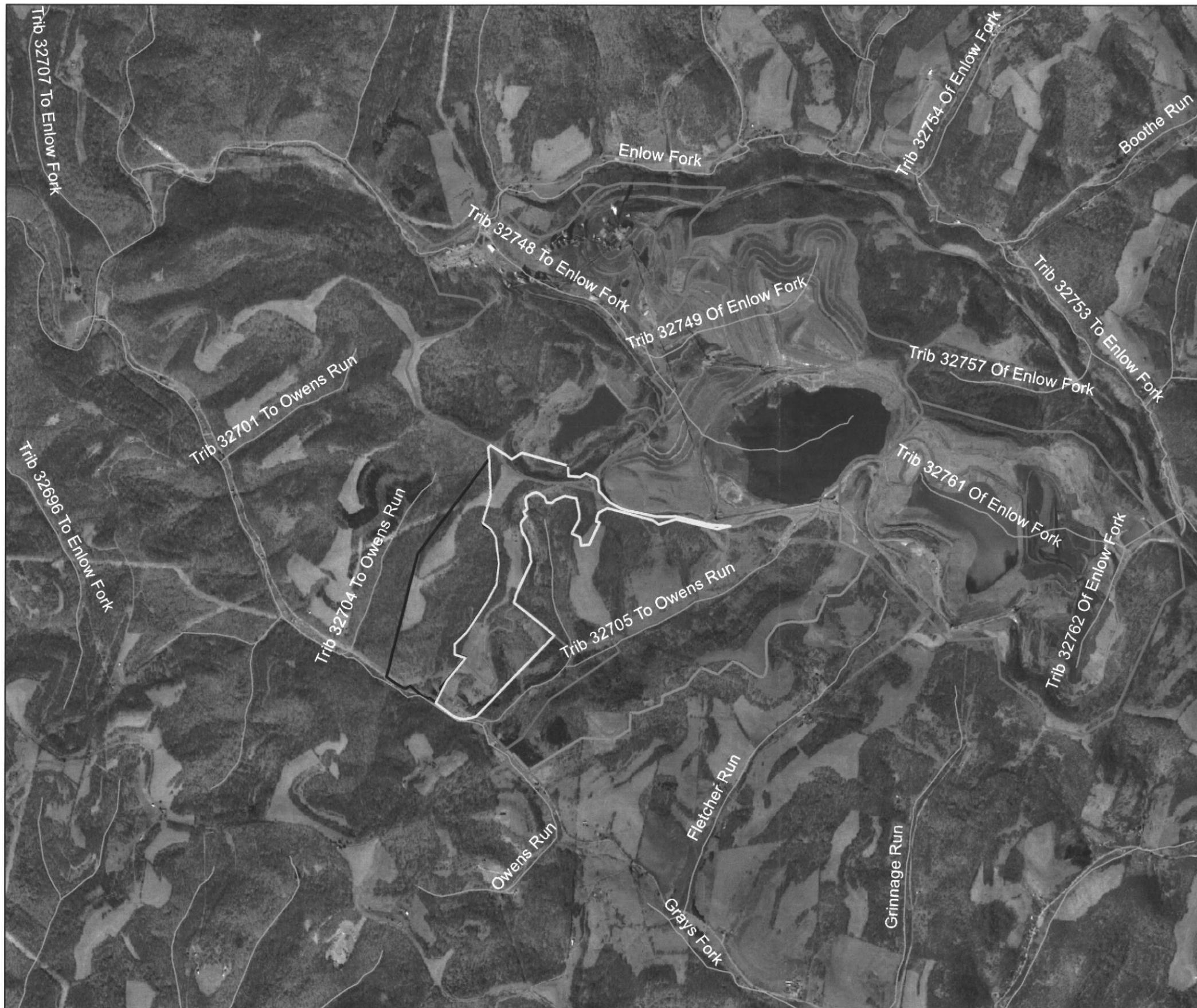
Figure 4. Species Occurrence

Project No. 213.19    0 0.25 0.5 1 Mile  
 Base Map: PAMAP Aerial Photography, 2006

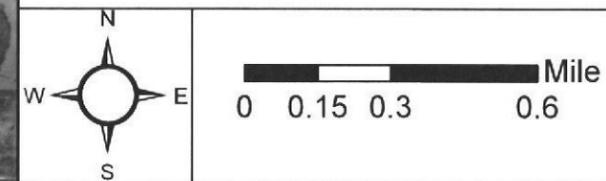


**ENVIRONMENTAL SOLUTIONS  
& INNOVATIONS, INC.**

Figure 5. Stream Effects



- Stream
- Approved Coal Refuse Conveyor Permit Boundary
- Proposed Sediment Pond Permit Boundary
- CRDA6
- CRDA5
- Existing Consol Permits



Base Map: PAMAP Aerial Photography, 2006

**Appendix A**  
**Correspondence**



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Pennsylvania Field Office  
315 South Allen Street, Suite 322  
State College, Pennsylvania 16801-4850

March 20, 2009

Craig Burda  
Pennsylvania Department of Environmental Protection  
25 Technology Drive  
California Technology Park  
Coal Center, Pennsylvania 15423

RE: USFWS Project #2007-1928  
Consol's Bailey Mine: Phases 1 and 2 of CRDA 5 and 6  
Coal Refuse Conveyor (DEP permit #30810703; CRDA 1 and 2) and Sedimentation  
Pond Development (CMAP #30080701)

Dear Mr. Burda:

This documents ongoing discussions between the Fish and Wildlife Service and Consol Pennsylvania Coal Company regarding the proposed coal refuse conveyor and sedimentation pond, which are being permitted as Phases 1 and 2, respectively, of Coal Refuse Disposal Areas (CRDA) 5 and 6. The subject mining activities are associated with the operation of Consol's Bailey Mine, located in Richhill Township, 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.

### Project Description

On March 6 and 11, 2009, project information was provided to this office by Consol's consultant, Environmental Solutions & Innovations, Inc. (hereinafter referred to as ESI). The 1.4-mile long coal refuse conveyor will transport coal refuse from the Bailey Processing Plant to CRDA 5 and 6, while the sedimentation pond will store runoff from CRDA 5 and 6. The permit areas associated with the conveyor and pond are 88 acres and 91.5 acres, respectively.

### Federally Listed Species

The proposed project areas contain Indiana bats and Indiana bat maternity habitat, as documented by mist-net and radio-telemetry studies conducted by Civil and Environmental Consultants, Inc., in the summer of 2007, and by ESI in the summer of 2008. Study methods and results are detailed in the reports entitled "Indiana Bat (*Myotis sodalis*) Survey Report – Bailey Coal Refuse Disposal Areas No. 5 & 6, Richhill Township, Greene County, Pennsylvania" and "Summer Mist Net and Radio-telemetry Studies of the Federally Endangered Indiana Bat on the Consol Pennsylvania Coal Company LLC Bailey Mine Crabapple Overland Belt Project in Greene County, Pennsylvania."

Based on the 2007 and 2008 study reports, Indiana bats have been documented to forage and roost within the permit areas associated with the proposed sediment pond and conveyor. Construction of these project phases will result in the loss of approximately 40 acres of forest within the 88-acre permit area associated with the conveyor, and approximately 72 acres of forest within the 91.5-acre permit area associated with the sedimentation pond. A roost-tree assessment of 130.5 acres of the 179.5-acre Phase 1 and Phase 2 project areas resulted in the identification of 627 potential roost trees, of which 15 percent was considered high quality. In total, 113.5 acres of forest habitat will be destroyed along with 66 acres of non-forest habitat (open fields, shrublands). The forest habitat is currently suitable for both foraging and roosting, although its quality for roosting ranges from low to moderate based on the density of high quality roost trees. The non-forest habitat is occasionally used for foraging, although obviously to a lesser extent than the forests.

Due to the destruction and fragmentation of occupied Indiana bat foraging and roosting habitat, it is our determination that take of Indiana bats will occur. This take is likely to occur in the form of harm and harassment, since tree-cutting and land-clearing in the project area will reduce habitat availability for individual Indiana bats and for the maternity colony as a whole. Considering only a small number of individuals associated with the maternity colony were radio-tracked in 2007 and 2008, and two of these individuals were documented to use forest habitat in the project area, it is likely that other females and their young use the project area as well. Consequently, several Indiana bats may experience the loss of at least a portion of their individual foraging and roosting areas as a result of the construction of Phases 1 and 2 of CRDA 5 and 6. Indiana bats that currently forage and roost in the project area will have to shift to nearby forest areas, potentially increasing competition or displacing other resident bats. Bats that lose a significant amount of foraging habitat may experience a reduction in fitness sufficient to compromise their survival or reduce their reproductive potential. Furthermore, habitat loss is not limited to these particular project phases. Past, ongoing, and future mining activities associated with the Bailey Mine are expected to further reduce habitat, resulting in cumulative adverse effects on this species.

The loss of forest in the conveyor and sediment pond project areas will also fragment and isolate the nearby foraging habitat that was identified within CRDA 5 and 6 in 2008. As a result, this habitat is likely to become unavailable for Indiana bat use well before it is proposed for clearing during Phases 3 and 4 of CRDA 5 and 6. A combination of habitat loss and fragmentation are expected to cause bats to increase travel distances or further shift their habitat use, negatively affecting survival and reproduction. In addition, noise from blasting, conveyor operation, and use of the associated mine lands will affect the use of foraging and roosting habitat nearby, unless or until bats eventually acclimate to the noise.

Although it is not possible to quantify take at this time, it is likely that the proposed project will adversely affect female Indiana bats and their young. Effects are expected to be most significant in the first year following tree-clearing as bats return to find portions of their foraging areas cut or fragmented. They will be facing the effects of habitat loss and fragmentation upon their arrival in the spring; this is a time when they are in relatively poor body condition, with depleted fat reserves following the winter hibernation period. Bats that lose a significant amount of foraging or roosting habitat are likely to experience an increased risk of mortality, as well as a

reduction in reproductive potential. While several individual members of the maternity colony are likely to be affected, we expect the maternity colony itself to persist. The implementation of species-specific protective measures will minimize the risk of taking individual bats, and reduce adverse effects on the maternity colony as a whole.

#### Incidental Take Authorization

In 1996, the Service issued a biological opinion to the Office of Surface Mining on the approval and implementation of surface coal mining and reclamation operations under State and Federal regulatory programs adopted pursuant to the Surface Mining Control and Reclamation Act of 1977 (SMCRA). In that opinion, the Service determined that mining operations conducted pursuant to SMCRA were not likely to jeopardize the continued existence of federally listed species due to the protective provisions within SMCRA, and the associated State regulatory programs which were developed to be consistent with SMCRA. Some of these provisions include the following:

- The requirement that permit applications include site-specific information about listed and proposed, endangered and threatened species, as well as measures to minimize impacts on and enhance these resources.
- The requirement that the regulatory authority provide written notification to State and Federal fish and wildlife agencies whenever the State receives an application for a new permit, significant revisions of a permit, or permit renewal. Furthermore, the regulatory authority must document consideration of all comments received in response to the notifications.
- The requirement that the regulatory authority make a written finding that the proposed operation would not affect the continued existence of endangered or threatened species, or result in destruction or adverse modification of their critical habitats, as determined under the Endangered Species Act.
- The requirement that operators minimize disturbance of and adverse impacts on fish and wildlife.
- The requirement that operators enhance and restore habitats of high value for fish and wildlife.
- The requirement that the operator notify the regulatory authority of the presence of a protected species within the permit area.
- The requirement that the regulatory authority consult with State and Federal fish and wildlife agencies to determine whether and under what conditions a coal mining operation may proceed when listed species are present.

Sections 4(d) and 9 of the Endangered Species Act prohibit the taking of listed species of fish and wildlife without a special exemption. Under the terms of §§7(b)(4) and 7(o)(2) of the Act, a taking that is incidental to and not intended as part of the agency action is not a prohibited taking if the taking is in compliance with the terms and conditions of the incidental take statement in the Service's biological opinion. To be exempt from the take prohibitions of §9 of the Act, the SMCRA regulatory authorities must comply with the terms and conditions of the 1996 biological opinion, which require 1) implementation and compliance with species-specific protective measures; 2) quantification of take, whenever possible; and 3) notification to the Service when dead or injured individuals of a listed species are found. The species-specific protective measures must be included in and enforceable under the State mining permit.

To minimize adverse effects on Indiana bats, we have developed the following species-specific protection and enhancement measures and Consol has agreed to implement them. Incorporation of these measures into the Pennsylvania Department of Environmental Protection (PADEP) mining permit for the coal refuse conveyor (Phase 1) and sedimentation pond (Phase 2) of CRDA 5 and 6, and implementation of these measures by Consol, will ensure that incidental take resulting from this project is in compliance with the terms and conditions of the 1996 biological opinion, and therefore not considered a prohibited taking:

- 1) *Avoid Impacts to Known Day Roosts.* Consol Pennsylvania Coal Company (CPCC) and its contractors will avoid all direct and indirect impacts to all known day roosts used by Indiana bats during project construction, operation and maintenance. The proposed removal of any *known* day roosts will require an assessment of their use, and further consultation with the Fish and Wildlife Service.
- 2) *Seasonal Tree-cutting Restriction.* Trees will not be cut between April 1 and September 30. During initial Project clearing (March 2009), CPCC will cut all of the 627 potential roost trees identified during the February 2009 roost tree inventory. CPCC may need to clear some of the remaining trees in the project area between April 1 and April 10 to meet Project deadlines and provide for human health and safety during clearing. If an extension beyond March 31 is required, CPCC will notify the Fish and Wildlife Service of the need for an extension in writing, and CPCC will partially compensate for the increased risk of harm to Indiana bats by increasing the amount of land protected in Item 5 below from 260 forest acres to 373.5 forest acres. This increase includes a 3:1 compensation ratio for the 113.5 acres of forest impacts and 0.5:1 ratio for the 66 acres of non-forest impacts. If an extension is not required, the ratio will remain at 2:1 for the 113.5 acres of forest impacts (see Item 5 below).
- 3) *Hazardous Materials.* Follow strict guidelines dictating the use and handling of hazardous materials and other contaminants, to minimize the potential for onsite or downstream impacts to water quality and/or the bat prey base. Project-specific spill prevention, control, and countermeasures (SPCC) plans are required by the USEPA, and the mining company will make these available upon request.

- 4) *E&S Controls.* Implement comprehensive sediment and erosion control measures in accordance with approved PADEP and U.S. Army Corps of Engineers permits for the project to minimize downstream impacts to waterways. Project-specific erosion and sediment control plans will be used, and the mining company will make these available upon request.
- 5) *Habitat Conservation.* To partially compensate for the long-term loss of Indiana bat habitat in the project area, permanently protect forest habitat off-site by conferring a permanent conservation easement or fee-simple land transfer to the Pennsylvania Game Commission or another land conservation entity approved by the U.S. Fish and Wildlife Service (e.g., Western Pennsylvania Conservancy, The Nature Conservancy). CPCC will permanently protect at least 260 acres of forest habitat off-site (2:1 ratio for the 113.5 acres of forest impacts, 0.5:1 ratio for the 66 acres of non-forest impacts).
  - a. In selecting properties for conservation, CPCC will consider contiguity to existing CPCC conservation easements (i.e., Crabapple Beltline Conservation Easements), State Game Lands, and other conservation features in the area. CPCC will also consider habitat quality (e.g., presence of high quality roost trees, wetlands, streams, mature forest, etc.) and Indiana bat habitat use as reflected in the Indiana bat study reports. CPCC will submit a map, and description of the parcels to be conferred to conservation easements, to the Fish and Wildlife Service for approval.
  - b. The conservation easements will be conferred prior to putting the coal refuse conveyor and sedimentation pond into operation (tentatively November 2011). CPCC will inform the Fish and Wildlife Service of any project delays.
  - c. The easements will confer the following rights to the easement holder: a) all recreational rights, including, but not limited to hunting, fishing, hiking, and bird watching; b) forest management consistent with a current management plan that has been reviewed and approved by the Fish and Wildlife Service, and determined by the Service to be beneficial to, and in the best interests of, Indiana bats; c) habitat management, including, but not limited to, management of forests, shrublands, and grasslands; and d) wildlife monitoring and management.
  - d. The easement will cover each land parcel in its entirety, except where lesser coverage is determined by the Fish and Wildlife Service and easement holder to be acceptable.
  - e. The easement will provide for access by the Pennsylvania Game Commission, the Fish and Wildlife Service, and their contractors or permittees for the purposes of studying, monitoring, and managing Indiana bats and their habitat.
  - f. The easement holder will have first right of refusal.
  - g. No subdivision of land parcels will occur within the easement area.

- h. Easement lands will be enrolled in the Pennsylvania Game Commission's Cooperative Public Access Program.
  - i. CPCC will provide funding to the easement holder for the purpose of monitoring, managing, and enforcing the conservation easement, as well as providing for the conservation needs of the resident Indiana bat maternity colony. Funding will be negotiated between CPCC and the easement holder for the purposes of managing the easement and the easement lands, which will dictate funding.
  - j. CPCC may remove up to 10 acres of forest within the easement area to address maintenance or operational needs associated with mining. This will be done in coordination with the Fish and Wildlife Service and easement holder. Forest habitat removal within the easement lands will be compensated at a 10:1 ratio.
  - k. CPCC agrees to use the same mitigation ratios for the remaining portions of CRDA 5 and 6 as those project phases are developed.
- 6) *Phased Forest Removal.* Because the entire CRDA 5 and 6 project is permitted in phases, timber removal will be staged by project phase (Phase 1 and 2 = refuse conveyor and sedimentation pond, Phase 3 = CRDA 5, Phase 4 = CRDA 6).
- 7) *Restoration of Conveyor Project Area.* Following the life of the coal refuse conveyor (conveyor use is estimated at 20 years), CPCC will remove the conveyor, and the conveyor area will be reclaimed and allowed to re-vegetate with native woody vegetation. The conveyor will be removed within two years after its use has ceased.
- 8) *Indiana Bat Monitoring.* CPCC will contract with a qualified Indiana bat surveyor to monitor the effects of project construction and operation on Indiana bats and their use of foraging habitat, roosting habitat, and travel corridors for five years post-construction. Monitoring will be done in accordance with a study plan to be reviewed and approved by the Fish and Wildlife Service. The monitoring study will include radio-telemetry of Indiana bats, and monitor an average of 5 to 10 Indiana bats annually. Reports will be submitted to the Service and PGC.
- 9) *Take Reporting.* Any dead or injured Indiana bats must be reported to the Fish and Wildlife Service, Pennsylvania Game Commission, and PADEP within 48 hours of discovery.
- 10) *Conservation Plan.* CPCC will prepare an Indiana bat conservation plan. The purpose of this plan is to identify the needs of the resident Indiana bat maternity colony, particularly with respect to foraging, roosting, and travel corridors. This plan is subject to review and approval by the Fish and Wildlife Service, and will assist CPCC, the Service, and the PGC in identifying and prioritizing habitat for conservation.

To complete our administrative file for this project, we request that you provide us with a copy of that portion of the PADEP mining permit(s) containing the species-specific protective measures, along with the PADEP permit number(s) for this project.

These comments relate only to endangered and threatened species under our jurisdiction. Consequently, this letter is not to be construed as addressing Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities. Additional comments related to anticipated stream impacts associated with CRDA 5 and 6 will be provided under separate cover.

Please contact Carole Copeyon of my staff at 814-234-4090 if you have any questions or require further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "David Densmore", followed by a long horizontal line extending to the right.

David Densmore  
Supervisor



# United States Department of the Interior



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

April 30, 2009

Colonel Michael P. Crall, District Engineer  
(ATTN: Marcia H. Haberman, Regulatory Branch)  
U.S. Army Corps of Engineers  
Pittsburgh District, Regulatory Branch  
1000 Liberty Avenue  
Pittsburgh, PA 15222-4186

RE: CELRP-OP-F-2007-463  
USFWS Project #2007-1928

Dear Colonel Crall:

This responds to the referenced Corps of Engineers Public Notice of March 16, 2009, requesting comments on Consol Pennsylvania Coal Company's proposed coal refuse disposal areas 5 and 6, 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, and in accordance with the requirements of the Fish and Wildlife Coordination Act (16 U.S.C. 661-667e), and are to be used in your determination of Section 404(b)(1) Guidelines compliance (40 CFR 230), and in your public interest review (33 CFR 320.4), as they relate to protection of fish and wildlife resources.

The subject disposal areas are intended to support operation of the Bailey Central Mine Complex, which processes coal from Consol's Bailey and Enlow Fork longwall coal mines in Washington and Greene Counties. Development of the proposed coal refuse disposal areas would affect 706 acres of land and its associated natural resources, including approximately 467 acres of forest, 4.9 miles of streams and 5.7 acres of wetlands. As compensatory mitigation, the applicant has proposed the construction of 5.68 acres of replacement wetlands/upland buffers in the Dunkard Creek watershed, and an acid mine drainage treatment project in the Chartiers Creek watershed.

### Federally Listed Species

The project area contains Indiana bats (*Myotis sodalis*) and Indiana bat maternity habitat (roosting and foraging), as documented by mist-net and radio-telemetry studies conducted by Civil and Environmental Consultants, Inc., in the summer of 2007, and by Environmental Solutions and Innovations, Inc., in the summer of 2008. Study methods and results are detailed in the reports entitled "Indiana Bat (*Myotis sodalis*) Survey Report - Bailey Coal Refuse Disposal Areas No. 5 & 6, Richhill Township, Greene County, Pennsylvania" and "Summer Mist Net and Radio-telemetry Studies of the Federally Endangered Indiana Bat on the Consol

Pennsylvania Coal Company LLC Bailey Mine Crabapple Overland Belt Project in Greene County, Pennsylvania." The Indiana bat is federally listed as endangered.

Construction of this project will result in the loss of approximately 467 acres of forest, as well as associated fields and shrublands. The forest habitat is suitable for both foraging and roosting, and the non-forest habitat is occasionally used for foraging, although to a lesser extent than the forests. Forest habitat along the unnamed tributaries of Owens Run appears to be of particularly high quality.

Due to the anticipated destruction and fragmentation of occupied Indiana bat foraging and roosting habitat, it is our determination that take of Indiana bats will occur. This take is likely to occur in the form of harm and harassment, since tree-cutting and land-clearing in the project area will reduce habitat availability for individual Indiana bats and for the maternity colony as a whole. Considering only a small number of individuals associated with the maternity colony were radio-tracked in 2007 and 2008 (5 or 6 out of the 200+ counted), and two of these individuals were documented to use forest habitat in the project area for foraging and roosting, it is likely that other females and their young use the project area as well. Consequently, several Indiana bats may experience the loss of at least a portion of their individual foraging and roosting areas as a result of the development of CRDA 5 and 6. Indiana bats that currently forage and roost in the project area will have to shift to nearby forest areas, potentially increasing competition or displacing other resident bats. Bats that lose a significant amount of foraging habitat may experience a reduction in fitness sufficient to compromise their survival or reduce their reproductive potential. Furthermore, habitat loss is not limited to this particular project. Past, ongoing, and future mining activities associated with the Bailey and Enlow Fork Mines are expected to further reduce habitat, resulting in cumulative adverse effects on this species.

A combination of habitat loss and fragmentation are expected to cause bats to increase travel distances or further shift their habitat use, negatively affecting survival and reproduction. In addition, noise from blasting, conveyor operation, and use of the associated mine lands will affect the use of foraging and roosting habitat nearby, unless or until bats eventually acclimate to these activities.

Although it is not possible to quantify take at this time, it is likely that the proposed project will adversely affect female Indiana bats and their young. Effects are expected to be most significant in the first year following tree-clearing as bats return to find portions of their foraging and roosting areas cut or fragmented. They will be facing the effects of habitat loss and fragmentation upon their arrival in the spring; this is a time when they are in relatively poor body condition, with depleted fat reserves following the winter hibernation period. Bats that lose a significant amount of foraging or roosting habitat are likely to experience an increased risk of mortality, as well as a reduction in reproductive potential.

We note further that the Corps' Public Notice identifies the subject disposal area as having been "accepted by the Pennsylvania Department of Environmental Protection, California District Mining Office, during the Alternatives Analysis & Site Selection Study as the preferred site of multiple areas that were considered."

It's not clear how the Department reached the conclusion that the proposed site is eligible for coal refuse disposal. Based on the Department's *Coal Refuse Disposal – Site Selection* criteria, the subject site is a "non-preferred site" on which coal refuse disposal is prohibited. Specifically, the *Site Selection* criteria state that:

*Section 4.1 (b) of CRDCA prohibits coal refuse disposal on non-preferred sites that contain federally listed threatened or endangered species. With respect to preferred sites, the Department will not approve (via the site selection process) or permit (via the permitting process) a site that is known or likely to contain federally listed threatened or endangered species, unless the Department concludes and the U.S. Fish and Wildlife Service concurs that the proposed activity is not likely to adversely affect federally listed threatened or endangered species or result in the "take" of federally listed threatened or endangered species in violation of Section 9 of the Endangered Species Act.*

The proposed disposal area clearly contains the Indiana bat, a federally-listed, endangered species. Furthermore, the proposed activity is likely to adversely affect this species via the destruction of several hundred acres of its foraging and roosting habitat. Therefore, it appears the subject site is not eligible for use as a coal refuse disposal area.

#### Aquatic Resources

The small, headwater streams proposed for filling by Consol are valuable components of downstream ecosystems, and our knowledge about such streams has greatly increased in recent years. Each headwater stream is an important source of clean water, nutrients, and food production (via the processing of organic matter by aquatic invertebrates) to larger water bodies downstream. Consequently, the chemical, physical, and biological quality of larger streams is greatly influenced by the overall health of headwater streams and their watersheds. The Consol project will require the destruction of approximately 4.9 miles of these headwater streams, permanently depriving Owens Run and Enlow Fork of 4.9 miles' worth of organic production.

The proposed project may also adversely affect the chemical water quality of Owens Run and Enlow Fork. Since 2004, Consol has been conducting quarterly water quality and sediment chemistry monitoring at its existing disposal facility's Talley Run discharge, and upstream and downstream of Talley Run in Enlow Fork. Copies of these quarterly monitoring reports have been provided to the Fish and Wildlife Service, as well as to the Corps (to Christina Schroeder's attention). Examination of the data reveals that sediment concentrations of polycyclic aromatic hydrocarbons (PAHs) and water conductivity are elevated in Talley Run, and in Enlow Fork downstream of Talley Run, relative to upstream Enlow Fork stations. Conductivity in Talley Run and the two stations in Enlow Fork downstream of Talley Run were typically greater than 1000 uS/cm; conductivity greater than 500 uS/cm is associated with impaired benthic invertebrate communities (Pond *et al.*, 2008). Adding another source of high-conductivity water and PAHs to the Enlow Fork watershed should not be authorized until the project's potential cumulative effects on water quality and aquatic life have been fully assessed.

For these reasons, we do not believe that the proposed destruction of headwater streams is consistent with the Clean Water Act's goals of maintaining the chemical, physical, and biological integrity of waters of the United States. Because of their unique position on the

landscape and unique ecological values, we also do not believe that the loss of headwater streams can ever be fully "mitigated," unless it is avoided. However, should the Corps decide to permit this project and accept compensatory mitigation, such mitigation should focus on replacing the water quality services of the lost streams and wetlands to the Enlow Fork watershed. Out-of-watershed compensation such as that proposed by the applicant is not appropriate in this case.

#### Recommendations

The proposed project would destroy valuable fish and wildlife habitat (including habitat containing a federally-listed, endangered species), it is non-water dependent, and its authorization would be inconsistent with the 404(b)(1) guidelines. Moreover, permit issuance would not be in the public interest with respect to fish and wildlife resources. If you believe there is not sufficient information to support permit denial, we recommend that further action on this permit application not be taken until an Environmental Impact Statement has been prepared that will address the full environmental, economic, and social effects of this project for its projected 25 years of operation, as well as its permanent effects beyond the life of the project.

In addition, should the Corps and Department of Environmental Protection determine it is lawful and appropriate to proceed with permitting CRDA 5 and 6, further consultation with the Service will be necessary prior to permit issuance due to anticipated adverse effects on Indiana bats. This consultation would be conducted with the State regulatory authority pursuant to the terms of the 1996 biological opinion on the approval and implementation of surface coal mining and reclamation operations under State and Federal regulatory programs adopted pursuant to the Surface Mining Control and Reclamation Act of 1977 (SMCRA).

Please contact Carole Copeyon or Cindy Tibbott of my staff at 814-234-4090 if you have any questions or require further assistance.

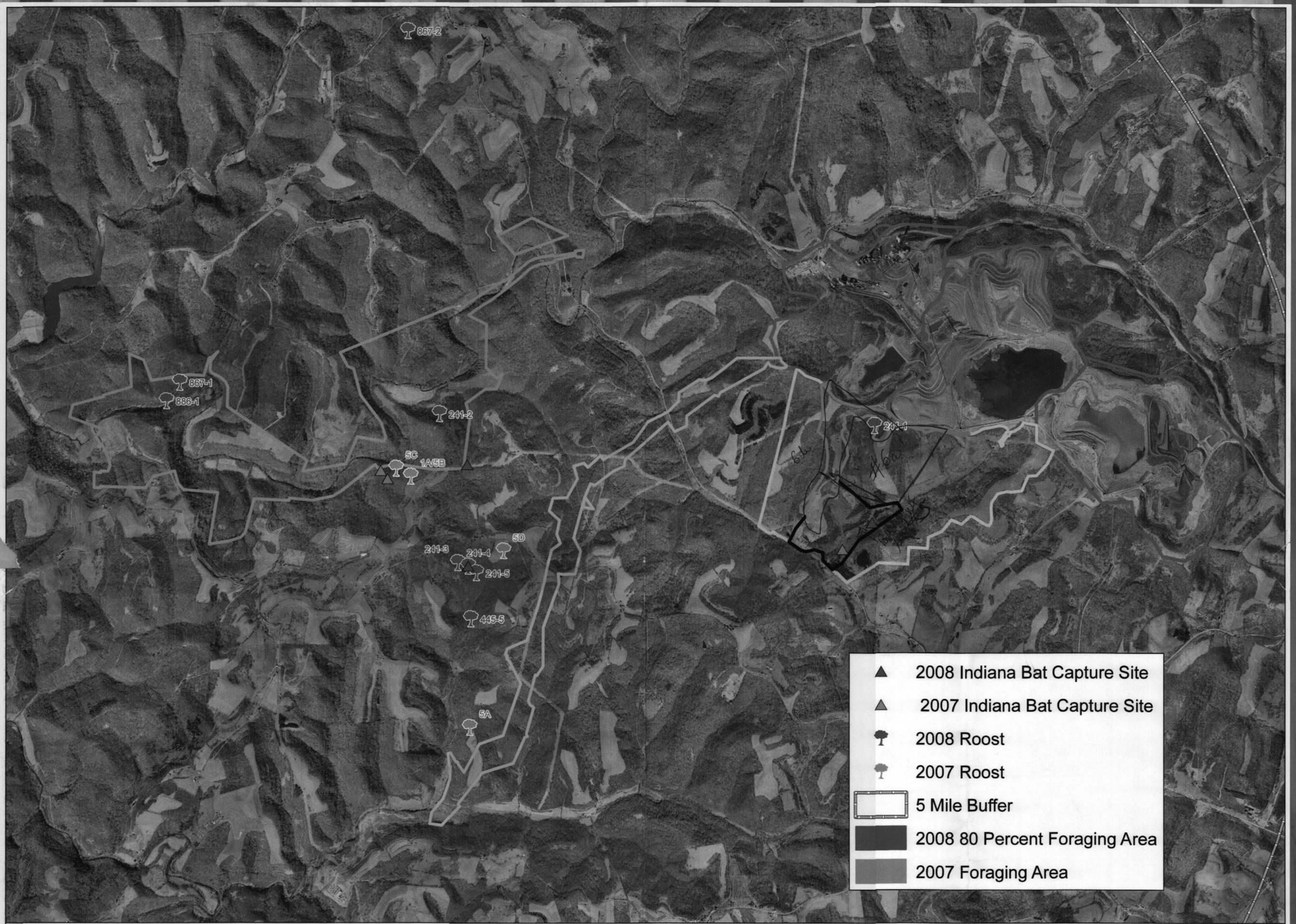
Sincerely,



David Densmore  
Supervisor

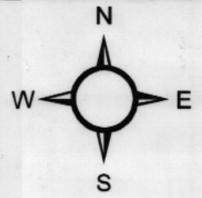
#### References

Pond, G. J., M. E. Passmore, F. A. Borsuk, L. Reynolds, and C. J. Rose. 2008. Downstream effects of mountaintop coal mining: comparing biological conditions using family- and genus-level macroinvertebrate bioassessment tools. *J. N. Am. Benthol. Soc.* 27(3):717-737.

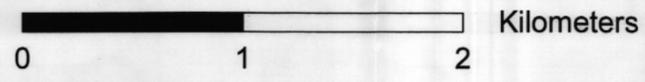


-  2008 Indiana Bat Capture Site
-  2007 Indiana Bat Capture Site
-  2008 Roost
-  2007 Roost
-  5 Mile Buffer
-  2008 80 Percent Foraging Area
-  2007 Foraging Area

 CRDA 5 Sedimentation Pond	 CRDA 5 Refuse Conveyor <sup>NO</sup> <sub>2011</sub>	 State Game Land
 Existing CONSOL Facilities	 Crabapple Overland Belt Permit	 CRDA 5 and 6



## CONSOL Project Area, Greene County, Pennsylvania.



Project No. 213, 2009

ESI

ENVIRONMENTAL SOLUTIONS  
& INNOVATIONS, INC.

## FINAL REPORT

# PROTECTION AND ENHANCEMENT PLAN (PEP) FOR FEDERALLY ENDANGERED INDIANA BATS ON THE CPCO BAILEY MINE LLC COAL REFUSE DISPOSAL AREAS 5 AND 6 GREENE COUNTY, PENNSYLVANIA

24 February 2010

*Prepared for:*



Kerry Goodballet, P.E.  
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CNX Center  
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Canonsburg, PA 15317-6506

*Prepared by:*

Jason Duffey, Dale W. Sparks, Ph.D., and Virgil Brack, Jr., Ph.D.



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Appendix B: Calculation of contributions to Pennsylvania’s Indiana Bat Conservation Fund in partial mitigation for construction of CRDA 5 & 6 Phases III and IV, CPCC Bailey Mine

Appendix C: Calculation of proposed contributions to Pennsylvania’s Indiana Bat Conservation Fund in partial mitigation for construction of CRDA 5 & 6 Phases I and II, CPCC Bailey Mine

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## **1.0 Introduction**

Section (§ hereafter) 4(d) and §9 of the Federal Endangered Species Act prohibit the taking of listed species of fish and wildlife without a special exemption. Under the terms of § 7(b)(4) and 7(o)(2) of the Act, a taking that is incidental to and not intended as part of the agency action is not prohibited if the taking is in compliance with the terms and conditions of the incidental take statement in a U.S. Fish and Wildlife Service (USFWS) biological opinion (BO).

The Bailey and Enlow Fork Mine Complexes directly employ approximately 1,500 people and is a vital part of the tri-state economy. An integral segment of this mining operation entails the disposal of refuse. For that reason, the timely expansion of refuse disposal facilities at this site is vital to the continued operation of this important energy supply.

The remaining fine coal refuse disposal capacity at the Bailey Mine Complex will be exhausted in 2013, and thus two new disposal areas (CRDA 5 and 6, Figure 1) are being built in four phases as outlined below:

- Phase I – Refuse Conveyor began summer 2009
- Phase II – Sediment Pond to begin winter 2010
- Phase III – Slurry Pond (CRDA 5) to begin summer 2010
- Phase IV – Coarse Refuse Disposal (CRDA 6) to begin autumn 2011

Clearing for Phases I and II (Coal Refuse Conveyor and Sedimentation Pond) occurred between 20 March and 31 March 2009, and resulted in the clearing of 179.5 acres (112 forested acres). Clearing was authorized by USFWS in a letter dated 20 March 2009 (Appendix A). Construction of Phase I began in late August 2009 following Permit approval by the Pennsylvania Department of Environmental Protection (PADEP). Approval of Phase II is pending; however, construction will begin as soon as permits are received.

### **1.1 1996 Biological Opinion**

In 1996, the USFWS issued a biological opinion (1996 BO) to the Federal Office of Surface Mining (OSM) on the approval and implementation of surface coal mining and reclamation operations under State and Federal regulatory programs adopted pursuant to the Surface Mining Control and Reclamation Act of 1977 (SMCRA). To be exempt from the take prohibitions of §9 of the Act, the SMCRA regulatory authorities must comply with the terms and conditions of the 1996 BO, which require:

- The regulatory authority, acting in accordance with the applicable SMCRA regulatory program, must implement and require compliance with any

species-specific protective measures (SSPM) developed by the USFWS field office and the regulatory authority (with the involvement, as appropriate, of the permittee and OSM).

- Whenever possible, the regulatory authority must quantify the take resulting from activities carried out under this program. Whenever a dead or impaired individual of a listed species is found, the local USFWS office must be notified within one (1) working day of the discovery.
- Whenever the regulatory authority decides not to implement one or more of the species-specific measures recommended by USFWS, it must provide a written explanation to USFWS. If the local USFWS field office concurs with the regulatory authority's action, it will provide a concurrence letter as soon as possible. However, if the USFWS does not concur, the issue must be elevated through the chain of command of the regulatory authority, USFWS, and (to the extent appropriate) OSM for resolution.

## **1.2 CRDA 5 and 6 Biological Assessment**

CONSOL Pennsylvania Coal Company, LLC, Bailey Mine (CPCC Bailey Mine) prepared the biological assessment: "Biological Assessment for CPCC Coal Refuse Disposal Areas 5 and 6, Greene County, Pennsylvania. Included in the Project Description were 10 SSPM, described in the following section. Incorporation of these measures into CPCC Bailey Mine's PADEP mining permit will ensure that incidental take resulting from mining projects is in compliance with the terms and conditions of the 1996 biological opinion, and therefore not considered a prohibited taking.

## **2.0 Species Specific Protective Measures**

The following measures have been modified from those requested by USFWS in a letter dated 20 March 2009 (Appendix A) relevant to Phases I and II and updated to include measures listed in the current draft of the Indiana bat Mitigation Guidance for Pennsylvania, and specific recommendation discussed with USFWS and Consol during a teleconference on 18 February 2010. Incorporation of these measures into CPCC Bailey Mine's PADEP mining permit will ensure that incidental take resulting from mining projects is in compliance with the terms and conditions of the 1996 BO, and therefore not considered a prohibited taking.

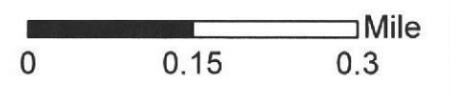
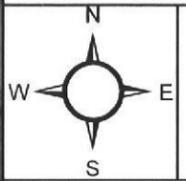
### **2.1 Phases I and II**

Consol and USFWS developed 10 SSPM to avoid and minimize adverse effects to Indiana bats as part of previous consultation on Phases I and II of CRDA 5 and 6.



FIGURE 1: Impact of CRDA 5 and 6 on forest and wetland resources.

-  CRDA 5 and 6 Boundary
-  Areas Previously Cleared for Phase I and II
-  Forested Area
-  Stream
-  National Wetland Inventory (NWI)



Base Map: PAMAP Aerial Photography, 2006

**ESI** ENVIRONMENTAL SOLUTIONS & INNOVATIONS, INC

Project No. 213.20

These SSPM were previously agreed upon, outlined in a 20 March 2009 letter from USFWS to PADEP (Appendix A), and incorporated into the PADEP mining permit for the Project. Implementation of the 10 SSPM will ensure any take of Indiana bats as a result of the Project is incidental and in compliance with the terms and conditions of the 1996 BO issued to OSM, and is therefore not a prohibited taking.

Specifically, Item 5 of the SSPM describes habitat compensation:

1. **Avoid Impacts to Known Day Roosts.** Escape roost 241-1 will be removed during Project construction. Effects of the loss of this roost are negligible and are discussed in Section 4.1.3.2 of the 20 March 2009 letter. CPCC Bailey Mine and its contractors will avoid all direct and indirect impacts to all other known day roosts used by Indiana bats during Project construction, operation, and maintenance. The proposed removal of any known day roosts will require an assessment of their use, and further consultation with USFWS.
2. **Seasonal Tree-cutting Restriction.** Trees will not be cut between 1 April and 30 September. Any suitable roost trees remaining uncut after 1 April will only be cut following emergence counts by a qualified Indiana bat surveyor.
3. **Hazardous Materials.** Follow strict guidelines dictating the use and handling of hazardous materials and other contaminants, to minimize the potential for onsite or downstream impacts to water quality and/or the bat prey base. Project-specific spill prevention, control, and countermeasures (SPCC) plans are required by U.S. Environmental Protection Agency (USEPA), and CPCC Bailey Mine will make these available upon request.
4. **E&S Controls.** Implement comprehensive sediment and erosion control measures in accordance with approved PADEP and U.S. Army Corps of Engineers (USACE) permits for the Project to minimize downstream impacts to waterways. Project-specific erosion and sediment control plans will be used, and CPCC Bailey Mine will make these available upon request.
5. **To partially compensate for the long-term loss of Indiana bat habitat in the Project Area, permanently protect forest habitat off-site by conferring a permanent conservation easement or fee-simple land transfer to the Pennsylvania Game Commission (PGC) or another land conservation entity approved by the USFWS (e.g., Western Pennsylvania Conservancy, The Nature Conservancy).** CPCC will permanently protect at least 260 acres of forest habitat off-site (2:1 ratio for the 113.5 acres of forest impacts, 0.5:1 ratio for the 66 acres of non-forest impacts).
  - In selecting properties for conservation, CPCC will consider contiguity to existing CPCC conservation easements (*i.e.*, Crabapple Beltline Conservation Easements), State Game Lands, and other conservation features in the area. CPCC will also consider habitat quality (*e.g.*, presence of high quality roost trees, wetlands, streams, mature forest, *etc.*) and Indiana bat habitat use as reflected in the Indiana bat study reports.

CPCC will submit a map, and description of the parcels to be conferred to conservation easements, to USFWS for approval.

- The conservation easements will be conferred prior to putting the coal refuse conveyor and sedimentation pond into operation (tentatively November 2011). CPCC will inform the USFWS of any project delays.
  - The easements will confer the following rights to the easement holder: a) all recreational rights, including, but not limited to hunting, fishing, hiking, and bird watching; b) forest management consistent with a current management plan that has been reviewed and approved by USFWS, and determined by USFWS to be beneficial to, and in the best interest of, Indiana bats; c) habitat management, including, but not limited to, management of forests, shrublands, and grasslands; and d) wildlife monitoring and management.
  - The easement will cover each land parcel in its entirety, except where lesser coverage is determined by USFWS and the easement holder to be acceptable.
  - The easement will provide for access by PGC, USFWS, and their contractors or permittees for the purposes of studying, monitoring, and managing Indiana bats and their habitat.
  - The easement holder will have first right of refusal.
  - No subdivision of land parcels will occur within the easement area.
  - Easement lands will be enrolled in the PGC's Cooperative Public Access Program.
  - CPCC will provide funding to the easement holder for the purpose of monitoring, managing, and enforcing the conservation easement, as well as providing for the conservation needs of the Indiana bat maternity colony. Funding will be negotiated between CPCC and the easement holder for the purposes of managing the easement and the easement lands, which will dictate funding.
  - CPCC may remove up to 10 acres of forest within the easement area to address maintenance or operational needs associated with mining. This will be done in coordination with USFWS and easement holder. Forest habitat removal within the easement lands will be compensated at a 10:1 ratio.
  - CPCC agrees to use the same mitigation ratios for the remaining portions of CRDA 5 and 6 as those project phases are developed.
6. Phased Forest Removal. Because the entire CRDA 5 and 6 project is permitted in phases, timber removal will be staged by Project phase (Phase I



and II = refuse conveyor and sedimentation pond, Phase III = CRDA 5, Phase IV = CRDA 6).

7. Reclamation. Following the life of CRDA 5 and 6, CPCC will reclaim the area within guidelines and timeframes for coal refuse disposal area reclamation for bond release.
8. Indiana Bat Monitoring. CPCC will contract with a qualified Indiana bat surveyor to monitor the effects of project construction and operation on Indiana bats and their use of foraging habitat, roosting habitat, and travel corridors for 5 years, post construction. Monitoring will be conducted in accordance with a study plan to be reviewed and approved by the USFWS. The monitoring study will include radio-telemetry of Indiana bats and monitoring an average of 5 to 10 Indiana bats annually. Reports will be submitted to USFWS and PGC. Monitoring will be conducted concurrently with monitoring for other Consol Projects.
9. Take Reporting. Any dead or injured Indiana bats must be reported to USFWS, PGC, and PADEP within 48 hours of discovery.
10. Water Quality Contingency Plan. CPCC will develop a contingency plan for effects of water quality degradation on Indiana bats.

For Phases I and II, CPCC Bailey Mine previously agreed to permanently protect at least 260 acres of forest habitat off-site by conferring a permanent conservation easement or fee-simple land transfer. However, this measure was agreed upon prior to development of the USFWS in-lieu fee program, the Indiana Bat Conservation Fund. CPCC Bailey Mine will compensate for the loss of habitat for Phases I and II through the Indiana Bat Conservation fund, in a similar method as Phases III and IV.

## **2.2 Phases III and IV**

The following 10 SSPM were developed by Consol to avoid and minimize adverse effects to Indiana bats. The SSPM will be incorporated in the PADEP mining permit for the Project. Implementation of 10 SSPM will ensure any take of Indiana bats as a result of the Project is incidental and in compliance with the terms and conditions of the 1996 BO issued to OSM, and is therefore not a prohibited taking.

1. Avoid Impacts to Known Day Roosts. Escape roost 241-1 will be removed during Project construction. Effects of the loss of this roost are negligible and are discussed in Section 4.1.3.2 of the CRDA 5 and 6 BA. CPCC Bailey Mine and its contractors will avoid all direct and indirect impacts to all other known day roosts used by Indiana bats during Project construction, operation, and maintenance. The proposed removal of any known day roosts will require an assessment of their use, and further consultation with USFWS.
2. Seasonal Tree Cutting. Trees will not be between 1 April and 30 September. During initial Project clearing (starting February 2010), CPCC may need to clear some of the remaining trees in the Project Area between 1 April and 15

April to meet Project deadlines and provide for human health and safety during clearing. If an extension beyond 31 March is required, and CPCC will partially compensate for the increased risk of harm to Indiana bats by increasing the ratio of land protected in Item 5 below from 2:1 to 3:1 for all forest cleared between 1 and 15 April. CPCC will notify the Fish and Wildlife Service of the need for an extension in writing, including the estimated amount of forest remaining, and an estimation of completion of clearing. If an extension is not required, the ratio will remain at 2:1 for the forest impacts (see 5 below).

3. **Hazardous Materials.** Follow strict guidelines dictating the use and handling of hazardous materials and other contaminants, to minimize the potential for onsite or downstream impacts to water quality and/or the bat prey base. Project-specific SPCC plans are required by USEPA, and CPCC Bailey Mine will make these available upon request.
4. **E&S Controls.** Implement comprehensive sediment and erosion control measures in accordance with approved PADEP and USACE permits for the Project to minimize downstream impacts to waterways. Project-specific erosion and sediment control plans will be used, and CPCC Bailey Mine will make these available upon request.
5. **Habitat Compensation.** Within the 526.4-acre permit area, 350 acres are forested of which 350 acres of forest will be removed. To partially compensate for the long-term loss and degradation of forest habitat in the permit area, forest habitat will be permanently protected off-site at a 2:1 compensation ratio for forest (700 acres) and a 0.5:1 (88.2 acres) ratio for nonforested habitat. Off-site habitat compensation will be accomplished via a monetary contribution to the Indiana Bat Conservation Fund in the amount of \$882,784.00 (\$1120.00/acre x 788.2 acres; Appendix B). These numbers are higher than the standard of \$588,000.00 (\$1120.00/acre x 525 mitigation acres) required by the current Indiana Bat Mitigation Guidelines for Greene County, Pennsylvania. Within two (2) weeks of the date of permit issuance, applicant will provide the PADEP and USFWS with documentation that the in-lieu-fee compensation has occurred. CPCC may clear trees between 1 April and 15 April, but this clearing will require compensation at the rate of 3:1. Any permit amendments or modifications that would result in forest impacts exceeding those detailed above will require further coordination with the PADEP and USFWS.
6. **Phased Forest Removal.** Because the entire CRDA 5 and 6 Project is permitted in phases, timber removal will be staged by Project phase (Phase I and II = refuse conveyor and sedimentation pond, Phase III = CRDA 5, Phase IV = CRDA 6).
7. **Reclamation.** Following the life of CRDA 5 and 6, CPCC will reclaim the area within guidelines and timeframes for coal refuse disposal area reclamation for bond release.

8. **Indiana Bat Monitoring.** CPCC will contract with a qualified Indiana bat surveyor to monitor the effects of Project construction and operation on Indiana bats and their use of foraging habitat, roosting habitat, and travel corridors for 5 years, post construction. Monitoring will be conducted in accordance with a study plan to be reviewed and approved by the USFWS. The monitoring study will include radio-telemetry of Indiana bats and monitoring an average of 5 to 10 Indiana bats annually. Reports will be submitted to USFWS and PGC. Monitoring will be conducted concurrently with monitoring for other CPCC Projects.
9. **Take Reporting.** Any dead or injured Indiana bats must be reported to USFWS, PGC, and PADEP within 48 hours of discovery.
10. **Water Quality Contingency Plan.** CPCC will develop a contingency plan for effects of water quality degradation on Indiana bats.
11. **Under SSPM #5 for Phases I and II of the project,** CPCC had offered to provide at least 260 acres of forest off-site to partially compensate for habitat lost due to construction. This proposal was made prior to the development of the current mitigation guidelines. This habitat transfer was to be made prior to putting CRDA 5 and 6 into operation. CPCC now offers to provide off-site habitat compensation via a monetary contribution to the Indiana Bat Conservation Fund in the amount of \$291,200 (\$1120.00/acre x 260 acres) for Phases III and IV (Appendix C).

### **3.0 Take Reporting**

CPCC Bailey Mine, through approval from PADEP, will quantify the take resulting from the Project. During construction, CPCC Bailey Mine will annually report to PADEP and USFWS the number of 1) dead Indiana bats found, 2) injured Indiana bats found, 3) forest acres cleared, 4) primary maternity roosts cut, and 5) alternate maternity roosts cut. After construction is complete, CPCC Bailey Mine will report PADEP and USFWS any dead or injured Indiana bats if they are found. The report will be in a table format and include the Project name and maternity colony affected.

## **4.0 Explanation of Concurrence**

If PADEP, the regulatory authority, decides not to implement one or more of the SSPM recommended by USFWS, it must provide a written explanation to USFWS. If the USFWS field office concurs with the regulatory authority's action, it will provide a concurrence letter as soon as possible. However, if USFWS does not concur, the issue must be elevated through the chain of command of the regulatory authority, USFWS, and (to the extent appropriate) OSM for resolution.

**APPENDIX A  
USFWS LETTER**





# United States Department of the Interior



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

March 20, 2009

Craig Burda  
Pennsylvania Department of Environmental Protection  
25 Technology Drive  
California Technology Park  
Coal Center, Pennsylvania 15423

RE: USFWS Project #2007-1928  
Consol's Bailey Mine: Phases 1 and 2 of CRDA 5 and 6  
Coal Refuse Conveyor (DEP permit #30810703; CRDA 1 and 2) and Sedimentation  
Pond Development (CMAP #30080701)

Dear Mr. Burda:

This documents ongoing discussions between the Fish and Wildlife Service and Consol Pennsylvania Coal Company regarding the proposed coal refuse conveyor and sedimentation pond, which are being permitted as Phases 1 and 2, respectively, of Coal Refuse Disposal Areas (CRDA) 5 and 6. The subject mining activities are associated with the operation of Consol's Bailey Mine, located in Richhill Township, 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.

### Project Description

On March 6 and 11, 2009, project information was provided to this office by Consol's consultant, Environmental Solutions & Innovations, Inc. (hereinafter referred to as ESI). The 1.4-mile long coal refuse conveyor will transport coal refuse from the Bailey Processing Plant to CRDA 5 and 6, while the sedimentation pond will store runoff from CRDA 5 and 6. The permit areas associated with the conveyor and pond are 88 acres and 91.5 acres, respectively.

### Federally Listed Species

The proposed project areas contain Indiana bats and Indiana bat maternity habitat, as documented by mist-net and radio-telemetry studies conducted by Civil and Environmental Consultants, Inc., in the summer of 2007, and by ESI in the summer of 2008. Study methods and results are detailed in the reports entitled "Indiana Bat (*Myotis sodalis*) Survey Report – Bailey Coal Refuse Disposal Areas No. 5 & 6, Richhill Township, Greene County, Pennsylvania" and "Summer Mist Net and Radio-telemetry Studies of the Federally Endangered Indiana Bat on the Consol Pennsylvania Coal Company LLC Bailey Mine Crabapple Overland Belt Project in Greene County, Pennsylvania."

Based on the 2007 and 2008 study reports, Indiana bats have been documented to forage and roost within the permit areas associated with the proposed sediment pond and conveyor. Construction of these project phases will result in the loss of approximately 40 acres of forest within the 88-acre permit area associated with the conveyor, and approximately 72 acres of forest within the 91.5-acre permit area associated with the sedimentation pond. A roost-tree assessment of 130.5 acres of the 179.5-acre Phase 1 and Phase 2 project areas resulted in the identification of 627 potential roost trees, of which 15 percent was considered high quality. In total, 113.5 acres of forest habitat will be destroyed along with 66 acres of non-forest habitat (open fields, shrublands). The forest habitat is currently suitable for both foraging and roosting, although its quality for roosting ranges from low to moderate based on the density of high quality roost trees. The non-forest habitat is occasionally used for foraging, although obviously to a lesser extent than the forests.

Due to the destruction and fragmentation of occupied Indiana bat foraging and roosting habitat, it is our determination that take of Indiana bats will occur. This take is likely to occur in the form of harm and harassment, since tree-cutting and land-clearing in the project area will reduce habitat availability for individual Indiana bats and for the maternity colony as a whole. Considering only a small number of individuals associated with the maternity colony were radio-tracked in 2007 and 2008, and two of these individuals were documented to use forest habitat in the project area, it is likely that other females and their young use the project area as well. Consequently, several Indiana bats may experience the loss of at least a portion of their individual foraging and roosting areas as a result of the construction of Phases 1 and 2 of CRDA 5 and 6. Indiana bats that currently forage and roost in the project area will have to shift to nearby forest areas, potentially increasing competition or displacing other resident bats. Bats that lose a significant amount of foraging habitat may experience a reduction in fitness sufficient to compromise their survival or reduce their reproductive potential. Furthermore, habitat loss is not limited to these particular project phases. Past, ongoing, and future mining activities associated with the Bailey Mine are expected to further reduce habitat, resulting in cumulative adverse effects on this species.

The loss of forest in the conveyor and sediment pond project areas will also fragment and isolate the nearby foraging habitat that was identified within CRDA 5 and 6 in 2008. As a result, this habitat is likely to become unavailable for Indiana bat use well before it is proposed for clearing during Phases 3 and 4 of CRDA 5 and 6. A combination of habitat loss and fragmentation are expected to cause bats to increase travel distances or further shift their habitat use, negatively affecting survival and reproduction. In addition, noise from blasting, conveyor operation, and use of the associated mine lands will affect the use of foraging and roosting habitat nearby, unless or until bats eventually acclimate to the noise.

Although it is not possible to quantify take at this time, it is likely that the proposed project will adversely affect female Indiana bats and their young. Effects are expected to be most significant in the first year following tree-clearing as bats return to find portions of their foraging areas cut or fragmented. They will be facing the effects of habitat loss and fragmentation upon their arrival in the spring; this is a time when they are in relatively poor body condition, with depleted fat reserves following the winter hibernation period. Bats that lose a significant amount of foraging or roosting habitat are likely to experience an increased risk of mortality, as well as a

reduction in reproductive potential. While several individual members of the maternity colony are likely to be affected, we expect the maternity colony itself to persist. The implementation of species-specific protective measures will minimize the risk of taking individual bats, and reduce adverse effects on the maternity colony as a whole.

#### Incidental Take Authorization

In 1996, the Service issued a biological opinion to the Office of Surface Mining on the approval and implementation of surface coal mining and reclamation operations under State and Federal regulatory programs adopted pursuant to the Surface Mining Control and Reclamation Act of 1977 (SMCRA). In that opinion, the Service determined that mining operations conducted pursuant to SMCRA were not likely to jeopardize the continued existence of federally listed species due to the protective provisions within SMCRA, and the associated State regulatory programs which were developed to be consistent with SMCRA. Some of these provisions include the following:

- The requirement that permit applications include site-specific information about listed and proposed, endangered and threatened species, as well as measures to minimize impacts on and enhance these resources.
- The requirement that the regulatory authority provide written notification to State and Federal fish and wildlife agencies whenever the State receives an application for a new permit, significant revisions of a permit, or permit renewal. Furthermore, the regulatory authority must document consideration of all comments received in response to the notifications.
- The requirement that the regulatory authority make a written finding that the proposed operation would not affect the continued existence of endangered or threatened species, or result in destruction or adverse modification of their critical habitats, as determined under the Endangered Species Act.
- The requirement that operators minimize disturbance of and adverse impacts on fish and wildlife.
- The requirement that operators enhance and restore habitats of high value for fish and wildlife.
- The requirement that the operator notify the regulatory authority of the presence of a protected species within the permit area.
- The requirement that the regulatory authority consult with State and Federal fish and wildlife agencies to determine whether and under what conditions a coal mining operation may proceed when listed species are present.

Sections 4(d) and 9 of the Endangered Species Act prohibit the taking of listed species of fish and wildlife without a special exemption. Under the terms of §§7(b)(4) and 7(o)(2) of the Act, a taking that is incidental to and not intended as part of the agency action is not a prohibited taking if the taking is in compliance with the terms and conditions of the incidental take statement in the Service's biological opinion. To be exempt from the take prohibitions of §9 of the Act, the SMCRA regulatory authorities must comply with the terms and conditions of the 1996 biological opinion, which require 1) implementation and compliance with species-specific protective measures; 2) quantification of take, whenever possible; and 3) notification to the Service when dead or injured individuals of a listed species are found. The species-specific protective measures must be included in and enforceable under the State mining permit.

To minimize adverse effects on Indiana bats, we have developed the following species-specific protection and enhancement measures and Consol has agreed to implement them. Incorporation of these measures into the Pennsylvania Department of Environmental Protection (PADEP) mining permit for the coal refuse conveyor (Phase 1) and sedimentation pond (Phase 2) of CRDA 5 and 6, and implementation of these measures by Consol, will ensure that incidental take resulting from this project is in compliance with the terms and conditions of the 1996 biological opinion, and therefore not considered a prohibited taking:

- 1) *Avoid Impacts to Known Day Roosts.* Consol Pennsylvania Coal Company (CPCC) and its contractors will avoid all direct and indirect impacts to all known day roosts used by Indiana bats during project construction, operation and maintenance. The proposed removal of any *known* day roosts will require an assessment of their use, and further consultation with the Fish and Wildlife Service.
- 2) *Seasonal Tree-cutting Restriction.* Trees will not be cut between April 1 and September 30. During initial Project clearing (March 2009), CPCC will cut all of the 627 potential roost trees identified during the February 2009 roost tree inventory. CPCC may need to clear some of the remaining trees in the project area between April 1 and April 10 to meet Project deadlines and provide for human health and safety during clearing. If an extension beyond March 31 is required, CPCC will notify the Fish and Wildlife Service of the need for an extension in writing, and CPCC will partially compensate for the increased risk of harm to Indiana bats by increasing the amount of land protected in Item 5 below from 260 forest acres to 373.5 forest acres. This increase includes a 3:1 compensation ratio for the 113.5 acres of forest impacts and 0.5:1 ratio for the 66 acres of non-forest impacts. If an extension is not required, the ratio will remain at 2:1 for the 113.5 acres of forest impacts (see Item 5 below).
- 3) *Hazardous Materials.* Follow strict guidelines dictating the use and handling of hazardous materials and other contaminants, to minimize the potential for onsite or downstream impacts to water quality and/or the bat prey base. Project-specific spill prevention, control, and countermeasures (SPCC) plans are required by the USEPA, and the mining company will make these available upon request.

- 4) ***E&S Controls.*** Implement comprehensive sediment and erosion control measures in accordance with approved PADEP and U.S. Army Corps of Engineers permits for the project to minimize downstream impacts to waterways. Project-specific erosion and sediment control plans will be used, and the mining company will make these available upon request.
- 5) ***Habitat Conservation.*** To partially compensate for the long-term loss of Indiana bat habitat in the project area, permanently protect forest habitat off-site by conferring a permanent conservation easement or fee-simple land transfer to the Pennsylvania Game Commission or another land conservation entity approved by the U.S. Fish and Wildlife Service (*e.g.*, Western Pennsylvania Conservancy, The Nature Conservancy). CPCC will permanently protect at least 260 acres of forest habitat off-site (2:1 ratio for the 113.5 acres of forest impacts, 0.5:1 ratio for the 66 acres of non-forest impacts).
  - a. In selecting properties for conservation, CPCC will consider contiguity to existing CPCC conservation easements (*i.e.*, Crabapple Beltline Conservation Easements), State Game Lands, and other conservation features in the area. CPCC will also consider habitat quality (*e.g.*, presence of high quality roost trees, wetlands, streams, mature forest, *etc.*) and Indiana bat habitat use as reflected in the Indiana bat study reports. CPCC will submit a map, and description of the parcels to be conferred to conservation easements, to the Fish and Wildlife Service for approval.
  - b. The conservation easements will be conferred prior to putting the coal refuse conveyor and sedimentation pond into operation (tentatively November 2011). CPCC will inform the Fish and Wildlife Service of any project delays.
  - c. The easements will confer the following rights to the easement holder: a) all recreational rights, including, but not limited to hunting, fishing, hiking, and bird watching; b) forest management consistent with a current management plan that has been reviewed and approved by the Fish and Wildlife Service, and determined by the Service to be beneficial to, and in the best interests of, Indiana bats; c) habitat management, including, but not limited to, management of forests, shrublands, and grasslands; and d) wildlife monitoring and management.
  - d. The easement will cover each land parcel in its entirety, except where lesser coverage is determined by the Fish and Wildlife Service and easement holder to be acceptable.
  - e. The easement will provide for access by the Pennsylvania Game Commission, the Fish and Wildlife Service, and their contractors or permittees for the purposes of studying, monitoring, and managing Indiana bats and their habitat.
  - f. The easement holder will have first right of refusal.
  - g. No subdivision of land parcels will occur within the easement area.

- h. Easement lands will be enrolled in the Pennsylvania Game Commission's Cooperative Public Access Program.
  - i. CPCC will provide funding to the easement holder for the purpose of monitoring, managing, and enforcing the conservation easement, as well as providing for the conservation needs of the resident Indiana bat maternity colony. Funding will be negotiated between CPCC and the easement holder for the purposes of managing the easement and the easement lands, which will dictate funding.
  - j. CPCC may remove up to 10 acres of forest within the easement area to address maintenance or operational needs associated with mining. This will be done in coordination with the Fish and Wildlife Service and easement holder. Forest habitat removal within the easement lands will be compensated at a 10:1 ratio.
  - k. CPCC agrees to use the same mitigation ratios for the remaining portions of CRDA 5 and 6 as those project phases are developed.
- 6) *Phased Forest Removal.* Because the entire CRDA 5 and 6 project is permitted in phases, timber removal will be staged by project phase (Phase 1 and 2 = refuse conveyor and sedimentation pond, Phase 3 = CRDA 5, Phase 4 = CRDA 6).
- 7) *Restoration of Conveyor Project Area.* Following the life of the coal refuse conveyor (conveyor use is estimated at 20 years), CPCC will remove the conveyor, and the conveyor area will be reclaimed and allowed to re-vegetate with native woody vegetation. The conveyor will be removed within two years after its use has ceased.
- 8) *Indiana Bat Monitoring.* CPCC will contract with a qualified Indiana bat surveyor to monitor the effects of project construction and operation on Indiana bats and their use of foraging habitat, roosting habitat, and travel corridors for five years post-construction. Monitoring will be done in accordance with a study plan to be reviewed and approved by the Fish and Wildlife Service. The monitoring study will include radio-telemetry of Indiana bats, and monitor an average of 5 to 10 Indiana bats annually. Reports will be submitted to the Service and PGC.
- 9) *Take Reporting.* Any dead or injured Indiana bats must be reported to the Fish and Wildlife Service, Pennsylvania Game Commission, and PADEP within 48 hours of discovery.
- 10) *Conservation Plan.* CPCC will prepare an Indiana bat conservation plan. The purpose of this plan is to identify the needs of the resident Indiana bat maternity colony, particularly with respect to foraging, roosting, and travel corridors. This plan is subject to review and approval by the Fish and Wildlife Service, and will assist CPCC, the Service, and the PGC in identifying and prioritizing habitat for conservation.

To complete our administrative file for this project, we request that you provide us with a copy of that portion of the PADEP mining permit(s) containing the species-specific protective measures, along with the PADEP permit number(s) for this project.

These comments relate only to endangered and threatened species under our jurisdiction. Consequently, this letter is not to be construed as addressing Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities. Additional comments related to anticipated stream impacts associated with CRDA 5 and 6 will be provided under separate cover.

Please contact Carole Copeyon of my staff at 814-234-4090 if you have any questions or require further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "David Densmore", followed by a long horizontal line extending to the right.

David Densmore  
Supervisor

**APPENDIX B  
CALCULATION OF CONTRIBUTIONS TO  
PENNSYLVANIA'S INDIANA BAT CONSERVATION FUND  
IN PARTIAL MITIGATION FOR CONSTRUCTION OF  
CRDA 5 & 6 PHASES III AND IV, CPCC BAILEY MINE**



**CALCULATION SHEET FOR  
INDIANA BAT HABITAT COMPENSATION**

USFWS Project # 2007-1928 Date 22 February 2010  
 Project Name: CPCCR Bailey Mine CRDA 5 and 6 Phases III and IV  
 Project Location (township and county): Richhill Township, Greene County  
 Project Type: Timber removal for coal refuse disposal area  
 Hibernaculum and/or Maternity Colony Affected: Greene County Maternity Colony

**Table 1. Calculation of Compensation Acres**

IMPACT TYPE	IMPACT ACRES	MULTIPLIER <sup>1</sup>	COMPENSATION ACRES
<b>Summer Habitat Loss<sup>2</sup></b>			
Known maternity habitat (forested)	350	<del>1.5</del> 2.0	700
Known non-maternity habitat		1.0	
<del>Potential habitat<sup>3</sup></del> Known open habitat	176.4	0.5	88.2
<b>Swarming Habitat Loss<sup>4</sup></b>			
P2 or P3		1.5	
P4		1.0	
<b>Overlapping Habitat Loss<sup>5</sup></b>			
Known maternity and swarming habitat occur together	Choose highest multiplier from above (maternity or swarming) appropriate for the impact, and add 1.0 to the multiplier		
788.2	Note: Compensation for this Project includes a higher compensation ratio for forest lands <b>AND</b> compensation for open lands		

<sup>1</sup> Multiplier assumes permanent habitat protection will occur in accordance with the *Indiana Bat Mitigation Guidance for Pennsylvania*.

<sup>2</sup> Loss of known summer habitat assumes such loss will occur when bats are NOT present (i.e., between October 15 and March 31). If this is not the case, a detailed risk assessment will be necessary to identify measures to minimize the risk of take, and a higher multiplier will be used due to the risk of direct impacts.

<sup>3</sup> For forest impacts ≥ 40 acres, applicants can either conduct mist-net surveys in accordance with the Service's mist-netting guidance OR assume presence. When assuming presence, a seasonal restriction will apply, along with a 0.5:1 compensation ratio for forest impacts. In the absence of a seasonal restriction, a 1:1 compensation ratio applies, and a risk assessment will be necessary.

<sup>4</sup> Swarming habitat is suitable habitat within a 10-mile radius of Indiana bat hibernacula. Loss of swarming habitat assumes such loss will occur when bats are NOT present (i.e., between November 15 and March 31). If this is not the case, a detailed risk assessment will be necessary to identify measures to minimize the risk of take, and a higher multiplier will be used due to the risk of direct impacts.

<sup>5</sup> Loss of summer and swarming habitat assumes such loss will occur when bats are NOT present (i.e., between October 15 and March 31). If this is not the case, a detailed risk assessment will be necessary to identify measures to minimize the risk of take, and a higher multiplier will be used due to the risk of direct impacts.

**Table 2. Calculation of Deposit when using the Indiana Bat Conservation Fund**

Location of Impact (County)	Compensation Acres (from Table 1)	Cost/Acre <sup>6</sup>	IBCF Deposit <sup>7</sup>
Adams		TBD	
Armstrong/Butler		\$1890	
Beaver/Lawrence		\$2126	
Bedford		TBD	
Berks		TBD	
Blair		TBD	
Centre		TBD	
Fayette		\$1400	
Greene	788.2	\$1120	\$882,784.00
Huntingdon		TBD	
Luzerne		TBD	
Mifflin		TBD	
Somerset		TBD	
Washington		\$2530	
York		TBD	
Other areas (not listed above)		TBD	

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**USFWS use only**

Recovery Focus Area to be credited with the above IBCF Deposit:

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<sup>6</sup> Revised 11/09/09. Cost/acre subject to change, based on a periodic re-evaluation of land comparable values by the Pennsylvania Game Commission. Cost per acre reflects land cost per acre, plus 10% for expenses associated with land acquisition (e.g., title search, transfer taxes, land survey, recording fees, etc.)

<sup>7</sup> Multiply the number of Compensation Acres by the Cost/Acre to determine the amount to be submitted to the Indiana Bat Conservation Fund.

**APPENDIX C  
CALCULATION OF PROPOSED CONTRIBUTIONS TO  
PENNSYLVANIA'S INDIANA BAT CONSERVATION FUND  
IN PARTIAL MITIGATION FOR CONSTRUCTION OF  
CRDA 5 & 6 PHASES I AND II, CPCC BAILEY MINE**



**CALCULATION SHEET FOR  
INDIANA BAT HABITAT COMPENSATION**

USFWS Project # 2007-1928 Date 22 February 2010  
 Project Name: CPCCC Bailey Mine CRDA 5 and 6 Phases I and II  
 Project Location (township and county): Richhill Township, Greene County  
 Project Type: Timber removal for coal refuse disposal area  
 Hibernaculum and/or Maternity Colony Affected: Greene County Maternity Colony

**Table 1. Calculation of Compensation Acres**

IMPACT TYPE	IMPACT ACRES	MULTIPLIER <sup>1</sup>	COMPENSATION ACRES
<b>Summer Habitat Loss<sup>2</sup></b>			
Known maternity habitat (forested)	113	<del>1.5</del> 2.0	226
Known non-maternity habitat		1.0	
<del>Potential habitat<sup>3</sup></del> Known open habitat	68	0.5	34
<b>Swarming Habitat Loss<sup>4</sup></b>			
P2 or P3		1.5	
P4		1.0	
<b>Overlapping Habitat Loss<sup>5</sup></b>			
Known maternity and swarming habitat occur together	Choose highest multiplier from above (maternity or swarming) appropriate for the impact, and add 1.0 to the multiplier		
260	<b>Note: Compensation for this Project includes a higher compensation ratio for forest lands AND compensation for open lands</b>		

<sup>1</sup> Multiplier assumes permanent habitat protection will occur in accordance with the *Indiana Bat Mitigation Guidance for Pennsylvania*.

<sup>2</sup> Loss of known summer habitat assumes such loss will occur when bats are NOT present (i.e., between October 15 and March 31). If this is not the case, a detailed risk assessment will be necessary to identify measures to minimize the risk of take, and a higher multiplier will be used due to the risk of direct impacts.

<sup>3</sup> For forest impacts ≥ 40 acres, applicants can either conduct mist-net surveys in accordance with the Service's mist-netting guidance OR assume presence. When assuming presence, a seasonal restriction will apply, along with a 0.5:1 compensation ratio for forest impacts. In the absence of a seasonal restriction, a 1:1 compensation ratio applies, and a risk assessment will be necessary.

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<sup>5</sup> Loss of summer and swarming habitat assumes such loss will occur when bats are NOT present (i.e., between October 15 and March 31). If this is not the case, a detailed risk assessment will be necessary to identify measures to minimize the risk of take, and a higher multiplier will be used due to the risk of direct impacts.

**Table 2. Calculation of Deposit when using the Indiana Bat Conservation Fund**

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Beaver/Lawrence		\$2126	
Bedford		TBD	
Berks		TBD	
Blair		TBD	
Centre		TBD	
Fayette		\$1400	
Greene	260	\$1120	\$291,200.00
Huntingdon		TBD	
Luzerne		TBD	
Mifflin		TBD	
Somerset		TBD	
Washington		\$2530	
York		TBD	
Other areas (not listed above)		TBD	

.....

**USFWS use only**

Recovery Focus Area to be credited with the above IBCF Deposit:

---

<sup>6</sup> Revised 11/09/09. Cost/acre subject to change, based on a periodic re-evaluation of land comparable values by the Pennsylvania Game Commission. Cost per acre reflects land cost per acre, plus 10% for expenses associated with land acquisition (e.g., title search, transfer taxes, land survey, recording fees, etc.)

<sup>7</sup> Multiply the number of Compensation Acres by the Cost/Acre to determine the amount to be submitted to the Indiana Bat Conservation Fund.



# United States Department of the Interior

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

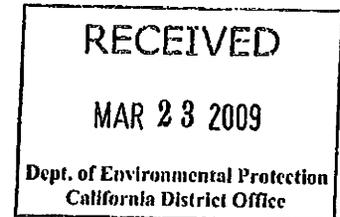
CC R. MANACK  
(PHASE I)



JOHN KEENE PHASE I/III

March 20, 2009

Craig Burda  
Pennsylvania Department of Environmental Protection  
25 Technology Drive  
California Technology Park  
Coal Center, Pennsylvania 15423



RE: USFWS Project #2007-1928  
Consol's Bailey Mine: Phases 1 and 2 of CRDA 5 and 6  
Coal Refuse Conveyor (DEP permit #30810703; CRDA 1 and 2) and Sedimentation  
Pond Development (CMAP #30080701)

Dear Mr. Burda:

This documents ongoing discussions between the Fish and Wildlife Service and Consol Pennsylvania Coal Company regarding the proposed coal refuse conveyor and sedimentation pond, which are being permitted as Phases 1 and 2, respectively, of Coal Refuse Disposal Areas (CRDA) 5 and 6. The subject mining activities are associated with the operation of Consol's Bailey Mine, located in Richhill Township, 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.

## Project Description

On March 6 and 11, 2009, project information was provided to this office by Consol's consultant, Environmental Solutions & Innovations, Inc. (hereinafter referred to as ESI). The 1.4-mile long coal refuse conveyor will transport coal refuse from the Bailey Processing Plant to CRDA 5 and 6, while the sedimentation pond will store runoff from CRDA 5 and 6. The permit areas associated with the conveyor and pond are 88 acres and 91.5 acres, respectively.

## Federally Listed Species

The proposed project areas contain Indiana bats and Indiana bat maternity habitat, as documented by mist-net and radio-telemetry studies conducted by Civil and Environmental Consultants, Inc., in the summer of 2007, and by ESI in the summer of 2008. Study methods and results are detailed in the reports entitled "Indiana Bat (*Myotis sodalis*) Survey Report – Bailey Coal Refuse Disposal Areas No. 5 & 6, Richhill Township, Greene County, Pennsylvania" and "Summer Mist Net and Radio-telemetry Studies of the Federally Endangered Indiana Bat on the Consol Pennsylvania Coal Company LLC Bailey Mine Crabapple Overland Belt Project in Greene County, Pennsylvania."

Based on the 2007 and 2008 study reports, Indiana bats have been documented to forage and roost within the permit areas associated with the proposed sediment pond and conveyor. Construction of these project phases will result in the loss of approximately 40 acres of forest within the 88-acre permit area associated with the conveyor, and approximately 72 acres of forest within the 91.5-acre permit area associated with the sedimentation pond. A roost-tree assessment of 130.5 acres of the 179.5-acre Phase 1 and Phase 2 project areas resulted in the identification of 627 potential roost trees, of which 15 percent was considered high quality. In total, 113.5 acres of forest habitat will be destroyed along with 66 acres of non-forest habitat (open fields, shrublands). The forest habitat is currently suitable for both foraging and roosting, although its quality for roosting ranges from low to moderate based on the density of high quality roost trees. The non-forest habitat is occasionally used for foraging, although obviously to a lesser extent than the forests.

Due to the destruction and fragmentation of occupied Indiana bat foraging and roosting habitat, it is our determination that take of Indiana bats will occur. This take is likely to occur in the form of harm and harassment, since tree-cutting and land-clearing in the project area will reduce habitat availability for individual Indiana bats and for the maternity colony as a whole. Considering only a small number of individuals associated with the maternity colony were radio-tracked in 2007 and 2008, and two of these individuals were documented to use forest habitat in the project area, it is likely that other females and their young use the project area as well. Consequently, several Indiana bats may experience the loss of at least a portion of their individual foraging and roosting areas as a result of the construction of Phases 1 and 2 of CRDA 5 and 6. Indiana bats that currently forage and roost in the project area will have to shift to nearby forest areas, potentially increasing competition or displacing other resident bats. Bats that lose a significant amount of foraging habitat may experience a reduction in fitness sufficient to compromise their survival or reduce their reproductive potential. Furthermore, habitat loss is not limited to these particular project phases. Past, ongoing, and future mining activities associated with the Bailey Mine are expected to further reduce habitat, resulting in cumulative adverse effects on this species.

The loss of forest in the conveyor and sediment pond project areas will also fragment and isolate the nearby foraging habitat that was identified within CRDA 5 and 6 in 2008. As a result, this habitat is likely to become unavailable for Indiana bat use well before it is proposed for clearing during Phases 3 and 4 of CRDA 5 and 6. A combination of habitat loss and fragmentation are expected to cause bats to increase travel distances or further shift their habitat use, negatively affecting survival and reproduction. In addition, noise from blasting, conveyor operation, and use of the associated mine lands will affect the use of foraging and roosting habitat nearby, unless or until bats eventually acclimate to the noise.

Although it is not possible to quantify take at this time, it is likely that the proposed project will adversely affect female Indiana bats and their young. Effects are expected to be most significant in the first year following tree-clearing as bats return to find portions of their foraging areas cut or fragmented. They will be facing the effects of habitat loss and fragmentation upon their arrival in the spring; this is a time when they are in relatively poor body condition, with depleted fat reserves following the winter hibernation period. Bats that lose a significant amount of foraging or roosting habitat are likely to experience an increased risk of mortality, as well as a

reduction in reproductive potential. While several individual members of the maternity colony are likely to be affected, we expect the maternity colony itself to persist. The implementation of species-specific protective measures will minimize the risk of taking individual bats, and reduce adverse effects on the maternity colony as a whole.

#### Incidental Take Authorization

In 1996, the Service issued a biological opinion to the Office of Surface Mining on the approval and implementation of surface coal mining and reclamation operations under State and Federal regulatory programs adopted pursuant to the Surface Mining Control and Reclamation Act of 1977 (SMCRA). In that opinion, the Service determined that mining operations conducted pursuant to SMCRA were not likely to jeopardize the continued existence of federally listed species due to the protective provisions within SMCRA, and the associated State regulatory programs which were developed to be consistent with SMCRA. Some of these provisions include the following:

- The requirement that permit applications include site-specific information about listed and proposed, endangered and threatened species, as well as measures to minimize impacts on and enhance these resources.
- The requirement that the regulatory authority provide written notification to State and Federal fish and wildlife agencies whenever the State receives an application for a new permit, significant revisions of a permit, or permit renewal. Furthermore, the regulatory authority must document consideration of all comments received in response to the notifications.
- The requirement that the regulatory authority make a written finding that the proposed operation would not affect the continued existence of endangered or threatened species, or result in destruction or adverse modification of their critical habitats, as determined under the Endangered Species Act.
- The requirement that operators minimize disturbance of and adverse impacts on fish and wildlife.
- The requirement that operators enhance and restore habitats of high value for fish and wildlife.
- The requirement that the operator notify the regulatory authority of the presence of a protected species within the permit area.
- The requirement that the regulatory authority consult with State and Federal fish and wildlife agencies to determine whether and under what conditions a coal mining operation may proceed when listed species are present.

Sections 4(d) and 9 of the Endangered Species Act prohibit the taking of listed species of fish and wildlife without a special exemption. Under the terms of §§7(b)(4) and 7(o)(2) of the Act, a taking that is incidental to and not intended as part of the agency action is not a prohibited taking if the taking is in compliance with the terms and conditions of the incidental take statement in the Service's biological opinion. To be exempt from the take prohibitions of §9 of the Act, the SMCRA regulatory authorities must comply with the terms and conditions of the 1996 biological opinion, which require 1) implementation and compliance with species-specific protective measures; 2) quantification of take, whenever possible; and 3) notification to the Service when dead or injured individuals of a listed species are found. The species-specific protective measures must be included in and enforceable under the State mining permit.

To minimize adverse effects on Indiana bats, we have developed the following species-specific protection and enhancement measures and Consol has agreed to implement them. Incorporation of these measures into the Pennsylvania Department of Environmental Protection (PADEP) mining permit for the coal refuse conveyor (Phase 1) and sedimentation pond (Phase 2) of CRDA 5 and 6, and implementation of these measures by Consol, will ensure that incidental take resulting from this project is in compliance with the terms and conditions of the 1996 biological opinion, and therefore not considered a prohibited taking:

- 1) *Avoid Impacts to Known Day Roosts.* Consol Pennsylvania Coal Company (CPCC) and its contractors will avoid all direct and indirect impacts to all known day roosts used by Indiana bats during project construction, operation and maintenance. The proposed removal of any *known* day roosts will require an assessment of their use, and further consultation with the Fish and Wildlife Service.
- 2) *Seasonal Tree-cutting Restriction.* Trees will not be cut between April 1 and September 30. During initial Project clearing (March 2009), CPCC will cut all of the 627 potential roost trees identified during the February 2009 roost tree inventory. CPCC may need to clear some of the remaining trees in the project area between April 1 and April 10 to meet Project deadlines and provide for human health and safety during clearing. If an extension beyond March 31 is required, CPCC will notify the Fish and Wildlife Service of the need for an extension in writing, and CPCC will partially compensate for the increased risk of harm to Indiana bats by increasing the amount of land protected in Item 5 below from 260 forest acres to 373.5 forest acres. This increase includes a 3:1 compensation ratio for the 113.5 acres of forest impacts and 0.5:1 ratio for the 66 acres of non-forest impacts. If an extension is not required, the ratio will remain at 2:1 for the 113.5 acres of forest impacts (see Item 5 below).
- 3) *Hazardous Materials.* Follow strict guidelines dictating the use and handling of hazardous materials and other contaminants, to minimize the potential for onsite or downstream impacts to water quality and/or the bat prey base. Project-specific spill prevention, control, and countermeasures (SPCC) plans are required by the USEPA, and the mining company will make these available upon request.

- 4) *E&S Controls*. Implement comprehensive sediment and erosion control measures in accordance with approved PADEP and U.S. Army Corps of Engineers permits for the project to minimize downstream impacts to waterways. Project-specific erosion and sediment control plans will be used, and the mining company will make these available upon request.
  
- 5) *Habitat Conservation*. To partially compensate for the long-term loss of Indiana bat habitat in the project area, permanently protect forest habitat off-site by conferring a permanent conservation easement or fee-simple land transfer to the Pennsylvania Game Commission or another land conservation entity approved by the U.S. Fish and Wildlife Service (*e.g.*, Western Pennsylvania Conservancy, The Nature Conservancy). CPCC will permanently protect at least 260 acres of forest habitat off-site (2:1 ratio for the 113.5 acres of forest impacts, 0.5:1 ratio for the 66 acres of non-forest impacts).
  - a. In selecting properties for conservation, CPCC will consider contiguity to existing CPCC conservation easements (*i.e.*, Crabapple Beltline Conservation Easements), State Game Lands, and other conservation features in the area. CPCC will also consider habitat quality (*e.g.*, presence of high quality roost trees, wetlands, streams, mature forest, *etc.*) and Indiana bat habitat use as reflected in the Indiana bat study reports. CPCC will submit a map, and description of the parcels to be conferred to conservation easements, to the Fish and Wildlife Service for approval.
  - b. The conservation easements will be conferred prior to putting the coal refuse conveyor and sedimentation pond into operation (tentatively November 2011). CPCC will inform the Fish and Wildlife Service of any project delays.
  - c. The easements will confer the following rights to the easement holder: a) all recreational rights, including, but not limited to hunting, fishing, hiking, and bird watching; b) forest management consistent with a current management plan that has been reviewed and approved by the Fish and Wildlife Service, and determined by the Service to be beneficial to, and in the best interests of, Indiana bats; c) habitat management, including, but not limited to, management of forests, shrublands, and grasslands; and d) wildlife monitoring and management.
  - d. The easement will cover each land parcel in its entirety, except where lesser coverage is determined by the Fish and Wildlife Service and easement holder to be acceptable.
  - e. The easement will provide for access by the Pennsylvania Game Commission, the Fish and Wildlife Service, and their contractors or permittees for the purposes of studying, monitoring, and managing Indiana bats and their habitat.
  - f. The easement holder will have first right of refusal.
  - g. No subdivision of land parcels will occur within the easement area.

- h. Easement lands will be enrolled in the Pennsylvania Game Commission's Cooperative Public Access Program.
  - i. CPCC will provide funding to the easement holder for the purpose of monitoring, managing, and enforcing the conservation easement, as well as providing for the conservation needs of the resident Indiana bat maternity colony. Funding will be negotiated between CPCC and the easement holder for the purposes of managing the easement and the easement lands, which will dictate funding.
  - j. CPCC may remove up to 10 acres of forest within the easement area to address maintenance or operational needs associated with mining. This will be done in coordination with the Fish and Wildlife Service and easement holder. Forest habitat removal within the easement lands will be compensated at a 10:1 ratio.
  - k. CPCC agrees to use the same mitigation ratios for the remaining portions of CRDA 5 and 6 as those project phases are developed.
- 6) *Phased Forest Removal.* Because the entire CRDA 5 and 6 project is permitted in phases, timber removal will be staged by project phase (Phase 1 and 2 = refuse conveyor and sedimentation pond, Phase 3 = CRDA 5, Phase 4 = CRDA 6).
- 7) *Restoration of Conveyor Project Area.* Following the life of the coal refuse conveyor (conveyor use is estimated at 20 years), CPCC will remove the conveyor, and the conveyor area will be reclaimed and allowed to re-vegetate with native woody vegetation. The conveyor will be removed within two years after its use has ceased.
- 8) *Indiana Bat Monitoring.* CPCC will contract with a qualified Indiana bat surveyor to monitor the effects of project construction and operation on Indiana bats and their use of foraging habitat, roosting habitat, and travel corridors for five years post-construction. Monitoring will be done in accordance with a study plan to be reviewed and approved by the Fish and Wildlife Service. The monitoring study will include radio-telemetry of Indiana bats, and monitor an average of 5 to 10 Indiana bats annually. Reports will be submitted to the Service and PGC.
- 9) *Take Reporting.* Any dead or injured Indiana bats must be reported to the Fish and Wildlife Service, Pennsylvania Game Commission, and PADEP within 48 hours of discovery.
- 10) *Conservation Plan.* CPCC will prepare an Indiana bat conservation plan. The purpose of this plan is to identify the needs of the resident Indiana bat maternity colony, particularly with respect to foraging, roosting, and travel corridors. This plan is subject to review and approval by the Fish and Wildlife Service, and will assist CPCC, the Service, and the PGC in identifying and prioritizing habitat for conservation.

To complete our administrative file for this project, we request that you provide us with a copy of that portion of the PADEP mining permit(s) containing the species-specific protective measures, along with the PADEP permit number(s) for this project.

These comments relate only to endangered and threatened species under our jurisdiction. Consequently, this letter is not to be construed as addressing Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities. Additional comments related to anticipated stream impacts associated with CRDA 5 and 6 will be provided under separate cover.

Please contact Carole Copeyon of my staff at 814-234-4090 if you have any questions or require further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "David Densmore", followed by a long horizontal line extending to the right.

David Densmore  
Supervisor